DISCUSSION OF HEC-2 MODELS
2-15-01

This is to briefly discuss the method used for starting water-surface elevations in the FEMA provided HEC-2 models for the Congaree River, and to detail the revisions made to the Columbia Venture, LLC, HEC-2 models since the October 26, 2000 submission date.

HEC-2 Starting Water Surface Elevation

All HEC-2 multiple models (and the base profile for all HEC-2 floodway models) prepared thus far in the revision process have used the slope-area method (normal depth) for computation of the starting water-surface elevation (WSEL) for the Congaree River. This method uses the estimated energy-grade line slope (STRT variable in the J1 record of the HEC-2 model) and the Manning's equation to compute a starting water-surface elevation at the model's first downstream cross-section. The energy-grade line slope for this starting WSEL computation has not been revised since this revision process began, and remains the same as presented by the original study contractor.

FEMA 37, page 5-7, recommends that the starting WSEL for a given profile should be based on normal depth calculations, unless known water-surface elevations are available from other (reliable) sources. When using the normal depth procedure for computation of the starting WSEL, FEMA 37 requires that the model be started several cross-sections downstream of the corporate limits. For the Congaree River the limit of detailed study (downstream) and the starting cross-section are the same, River Station 212950. Additionally, only one intermediate cross-section (RS 215700) is located between this starting cross-section and the next two upstream cross-sections, published sections A (RS 226700) and B (RS 234100).

FEMA 37 requires the computation of starting normal depth to be several cross-sections downstream of the corporate limits of a study to allow the model to reach "equilibrium" before results obtained from the HEC-2 model may be considered legitimate. The computed normal depth elevation is very sensitive to the given energy-grade line slope value, and using several different slopes will result in several different starting WSELs. Further hindering the ability of this model to reach "equilibrium" is the frequency of cross-sections at the beginning (downstream) of the model. As discussed earlier, only four cross-sections are present in the first 21,150 feet (4.0 miles) of the HEC-2 models.

Revisions to the HEC-2 models since 10-26-00

The HEC-2 models presented as part of this submission are based on the Lexington multiple and floodway HEC-2 models submitted to FEMA (on behalf of Columbia Venture, LLC) on 10-26-00. All of the revisions to the HEC-2 models as described in the 10-26-00 submissions are incorporated as well in the HEC-2 models presented and discussed within this report. The multiple HEC-2 model submitted within **(LXMUL259.DAT)** is revised from the multiple model of 10-26-00 **(LXMUL.DAT)** in that the flowrates of the model have been changed for the 1% annual-chance (100-year) event. The flowrates now used in the model are 259,000 CFS (from the gage location at RS 266750 and above) and 264,700 CFS (all sections downstream of RS 266750). The revised flowrate of 259,000 CFS is based upon computations (included within this submission) by Dr. Leo Beard incorporating new analyses complying with the provisions of the SCANA letter to FEMA of December 15, 2000. The flowrate of 264,700 CFS is based on the same ratio (as a percentage) of flow between upstream and downstream sections of the Congaree River that has been used in previous HEC-2 modeling efforts by

FEMA and Columbia Venture, LLC. No additional changes have been made to the HEC-2 multiple model since the 10-26-00 submissions.

The floodway model **(LXFW259.DAT)** has been modified with respect to flowrates as described for the multiple model above, and this model has additionally been modified as to floodway boundaries. The floodway boundaries were adjusted to reflect the lower 1% annual-chance (100-year) flowrates. In no case does this revised HEC-2 model set floodway boundaries outside of delineated floodway limits set by the 9-26-00 FEMA Appeal Resolution (HEC-2 models and Preliminary FIRM) or the 10-26-00 Columbia Venture, LLC, floodway HEC-2 model **(LXFW.DAT)**.

Conclusion

The HEC-2 models included with this submission are virtually identical to the models submitted by Columbia Venture, LLC, on 10-26-00. Flowrates for the 1% annual-chance (100-year) storm event have been revised per [redacted] and the floodway boundaries have been slightly revised to reflect the new flowrate condition. In light of the results of the extended RMA-2 modeling (included within this submission), these updated HEC-2 models are the most technically correct and appropriate for use in determining Base Flood Elevation (BFE) and Floodway for the Congaree River, in both Lexington and Richland Counties.

Lexington HEC-2 Multiple Model

This sheet compares BFE's for the Lexington HEC-2 models. The comparisons shown here are for the FEMA 10-18-00 Lexington BFE model, the revised Lexington multiple HEC-2 model , and the revised Lexington floodway model. The Lexington models are physically equal to the Lexington models submitted on 10-26-00, with the change in flowrates to 259K at the gage location (266750).

	Model Results			Differences	
River Station	10/18/00 FEMA Lexington BFE	Revised Lexington Multiple BFE	Revised Lexington Floodway BFE	10/18/00 Multiple BFE	Revised Mult to Floodway BFE
212950	127.96	127.03	127.03	-0.93	0.00
215700	129.52	128.59	128.59	-0.93	0.00
226700	132.48	131.59	131.59	-0.89	0.00
234100	135.06	134.11	134.11	-0.95	0.00
238900	136.75	135.70	135.70	-1.05	0.00
239370	136.89	135.83	135.83	-1.06	0.00
239800	136.93	135.88	135.88	-1.05	0.00
241500	137.50	136.40	136.40	-1.10	0.00
241850	137.59	136.49	136.49	-1.10	0.00
242049	138.17	136.99	136.99	-1.18	0.00
242050	138.17	136.98	136.98	-1.19	0.00
242120	138.18	137.00	137.00	-1.18	0.00
242121	138.19	137.01	137.01	-1.18	0.00
242169	138.21	137.02	137.02	-1.19	0.00
242170	138.20	137.02	137.02	-1.18	0.00
242240	138.22	137.04	137.04	-1.18	0.00
242241	138.23	137.05	137.05	-1.18	0.00
242440	138.10	136.93	136.93	-1.17	0.00
243000	138.54	137.33	137.33	-1.21	0.00
245800	139.59	138.34	138.34	-1.25	0.00
246000	139.79	138.53	138.53	-1.26	0.00
246700	139.80	138.50	138.50	-1.30	0.00
247000	140.76	138.95	138.95	-1.81	0.00
247200	140.26	138.97	138.97	-1.29	0.00
248200	140.62	139.34	139.34	-1.28	0.00
249300	141.56	140.21	140.21	-1.35	0.00
249590	141.35	140.02	140.02	-1.33	0.00
250770	142.07	140.24	140.24	-1.83	0.00
253400	140.03	141.38	141.38	1.35	0.00
254500	141.38	142.27	142.27	0.89	0.00
254600	141.67	142.48	142.48	0.81	0.00
255100	142.51	143.05	143.05	0.54	0.00
256100	143.79	143.96	143.96	0.17	0.00
257200	144.97	144.82	144.82	-0.15	0.00
258400	145.36	145.13	145.13	-0.23	0.00
259600	146.65	146.13	146.13	-0.52	0.00
260100	147.14	146.52	146.52	-0.62	0.00

Lexington HEC-2 Multiple Model

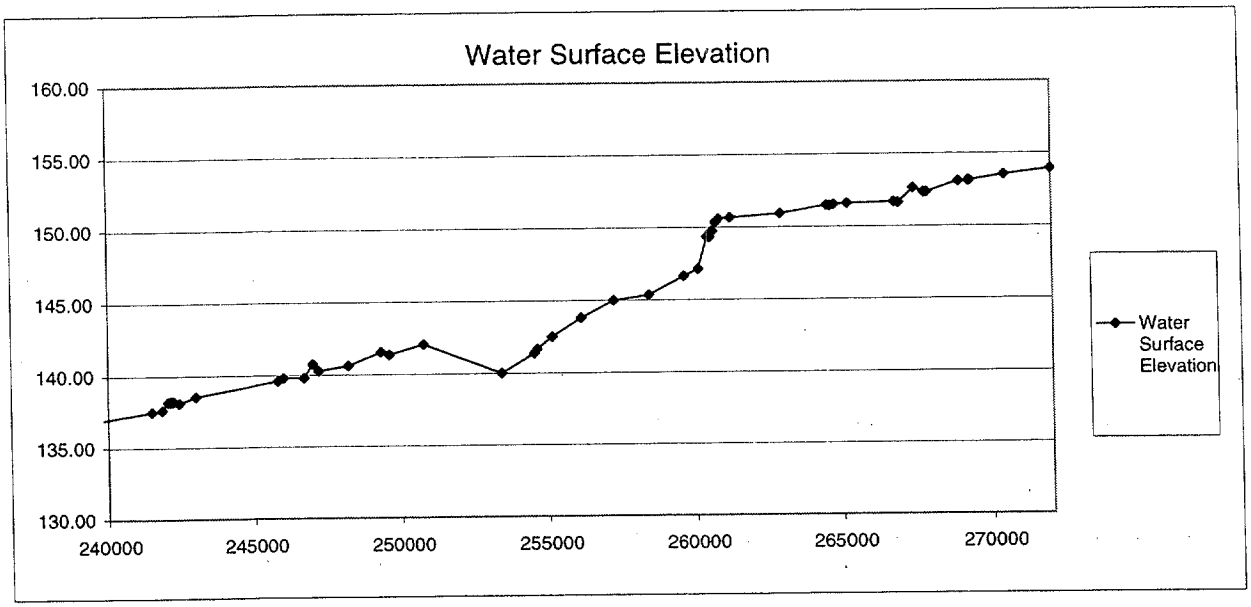
This sheet compares BFE's for the Lexington HEC-2 models. The comparisons shown here are for the FEMA 10-18-00 Lexington BFE model, the revised Lexington multiple HEC-2 model , and the revised Lexington floodway model. The Lexington models are physically equal to the Lexington models submitted on 10-26-00, with the change in flowrates to 259K at the gage location (266750).

	Model Results			Differences	
River Station	10/18/00 FEMA Lexington BFE	Revised Lexington Multiple BFE	Revised Lexington Floodway BFE	10/18/00 Multiple BFE	Revised Mult to Floodway BFE
260400	149.36	148.29	148.29	-1.07	0.00
260500	149.32	148.26	148.26	-1.06	0.00
260550	149.72	148.58	148.58	-1.14	0.00
260600	149.74	148.60	148.60	-1.14	0.00
260700	150.38	149.12	149.12	-1.26	0.00
260730	150.38	149.13	149.13	-1.25	0.00
260800	150.59	149.30	149.30	-1.29	0.00
261200	150.66	149.36	149.36	-1.30	0.00
262900	150.94	149.61	149.61	-1.33	0.00
264500	151.48	150.09	150.09	-1.39	0.00
264600	151.45	150.07	150.07	-1.38	0.00
264750	151.53	150.14	150.14	-1.39	0.00
265200	151.59	150.19	150.19	-1.40	0.00
266750	151.69	150.30	150.30	-1.39	0.00
266900	151.63	150.25	150.25	-1.38	0.00
267400	152.64	151.13	151.13	-1.51	0.00
267750	152.36	150.89	150.89	-1.47	0.00
267850	152.36	150.89	150.89	-1.47	0.00
268920	153.08	151.51	151.51	-1.57	0.00
269250	153.14	151.56	151.56	-1.58	0.00
269300	153.15	151.58	151.58	-1.57	0.00
270450	153.53	151.91	151.91	-1.62	0.00
272010	153.93	152.31	152.31	-1.62	0.00

Model Left Overbank flowrates and WSEL tabulation

Base model for this comparison is the Lexington multiple HEC-2 model, presented by FEMA in Atlanta on 10-18-00. This HEC-2 model assumes the levee has not breached, and conveyance will not occur landward of the levee.

River Station	Computed WSEL (ft)	Computed EGL (ft)	Slope EGL X 10,000	.01 X Conveyance	Total Flowrate (CFS)	Left Overbank Flowrate (CFS)	Channel Flowrate (CFS)	Right Overbank Flowrate (CFS)	% total flow in LOB
212950	127.96	128.42	6.13	120548	298400	167757	120858	9785	56.2%
215700	129.52	129.85	4.42	141905	298400	174506	113106	10788	58.5%
226700	132.48	132.82	3.48	159960	298400	12256	124991	161153	4.1%
234100	135.06	135.66	3.96	149939	298400	27576	197561	73263	9.2%
238900	136.75	137.29	3.40	161795	298400	25820	196034	76546	8.7%
239370	136.89	137.46	3.51	159218	298400	26550	200135	71715	8.9%
239800	136.93	137.69	4.53	140220	298400	5910	217283	75207	2.0%
241500	137.50	138.25	3.14	168381	298400	2651	225389	70360	0.9%
241850	137.59	138.38	3.23	166055	298400	2357	229605	66438	0.8%
242049	138.17	138.55	2.70	181733	298400	1901	146411	150088	0.6%
242050	138.17	138.56	2.59	185521	298400	467	149621	148312	0.2%
242120	138.18	138.58	2.58	185693	298400	467	149572	148361	0.2%
242121	138.19	138.58	2.56	186578	298400	1827	148868	147705	0.6%
242169	138.21	138.59	2.55	186806	298400	1829	148734	147837	0.6%
242170	138.20	138.59	2.57	185964	298400	467	149426	148507	0.2%
242240	138.22	138.61	2.58	185851	298400	468	149562	148370	0.2%
242241	138.23	138.62	2.54	187085	298400	1788	148619	147994	0.6%
242440	138.10	138.88	4.17	146213	298400	2594	218972	76834	0.9%
243000	138.54	139.13	4.11	147263	298400	3913	192536	101951	1.3%
245800	139.59	140.17	3.81	152934	298400	3524	196150	98726	1.2%
246000	139.79	140.25	3.20	166861	298400	3587	181734	113079	1.2%
246700	139.80	140.70	6.81	114359	298400	5321	214107	78973	1.8%
247000	140.76	140.79	0.00	**********	298400	134970	58944	104486	45.2%
247200	140.26	141.01	4.31	143744	298400	2721	216127	79552	0.9%
248200	140.62	141.49	4.69	137715	298400	4805	207302	86294	1.6%
249300	141.56	141.89	2.25	199097	298400	4303	142497	151600	1.4%
249590	141.35	142.11	4.35	143074	298400	6911	195983	95506	2.3%
250770	142.07	142.17	0.00	**********	298400	125926	82058	90416	42.2%
253400	140.03	143.05	12.21	85399	298400	2597	290353	5450	0.9%
254500	141.38	144.40	12.22	85373	298400	1	294251	4148	0.0%
254600	141.67	144.55	11.68	87325	298400	2	291635	6764	0.0%
255100	142.51	145.18	10.62	91580	298400	5	288402	9994	0.0%
256100	143.79	146.24	9.37	97484	298400	1985	287266	9149	0.7%
257200	144.97	147.26	8.46	102584	298400	3014	287240	8146	1.0%
258400	145.36	148.60	9.07	99061	298400	5571	276752	16077	1.9%
259600	146.65	149.65	8.10	104818	298400	6183	275542	16674	2.1%
260100	147.14	150.05	7.77	107041	298400	6420	275088	16892	2.2%
260400	149.36	150.35	2.01	210534	298400	40551	256520	1330	13.6%
260500	149.32	150.64	2.93	174314	298400	0	298400	0	0.0%
260550	149.72	151.01	2.82	177545	298400	0	298400	0	0.0%
260600	149.74	151.03	2.82	177661	298400	0	298400	0	0.0%
260700	150.38	151.11	2.02	209730	298400	0	298400	0	0.0%
260730	150.38	151.11	2.02	209802	298400	0	298400	0	0.0%
260800	150.59	151.31	1.98	211984	298400	0	298400	0	0.0%
261200	150.66	151.40	1.86	219076	298400	6046	270048	22306	2.0%
262900	150.94	151.78	2.27	198055	298400	5119	271922	21359	1.7%
264500	151.48	152.13	1.92	215236	298400	10400	287948	53	3.5%
264600	151.45	152.17	2.07	207333	298400	0	298400	0	0.0%
264750	151.53	152.25	2.05	208329	298400	0	298400	0	0.0%
265200	151.59	152.36	2.10	206112	298400	34667	263733	0	11.6%
266750	151.69	152.83	2.59	181336	292000	4400	286138	1462	1.5%
266900	151.63	152.92	2.76	175842	292000	4466	285077	2457	1.5%
267400	152.64	153.08	0.90	306962	292000	4326	285587	2087	1.5%
267750	152.36	153.46	2.76	175733	292000	0	292000	0	0.0%
267850	152.36	153.46	1.34	252673	292000	0	292000	0	0.0%
268920	153.08	153.62	1.63	228867	292000	0	288337	3663	0.0%
269250	153.14	153.71	3.12	165403	292000	11730	279875	395	4.0%
269300	153.15	153.72	3.11	165561	292000	11737	279867	396	4.0%
270450	153.53	154.04	2.18	197709	292000	0	291831	169	0.0%
272010	153.93	154.37	1.79	218104	292000	1697	285930	4373	0.6%


Water Surface Elevation
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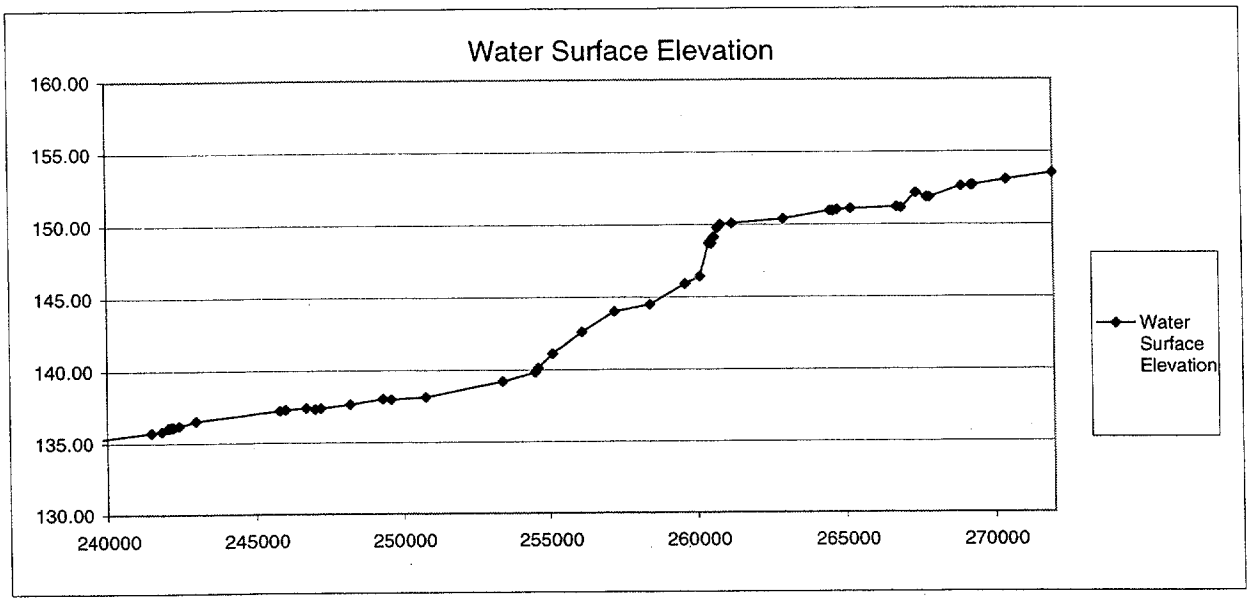
Water Surface Elevation

Model Left Overbank flowrates and WSEL tabulation

Base model for this comparison is the Richland multiple HEC-2 model, presented by FEMA in Atlanta on 10-18-00. This HEC-2 model assumes the levee has breached, and conveyance will occur landward of the levee.

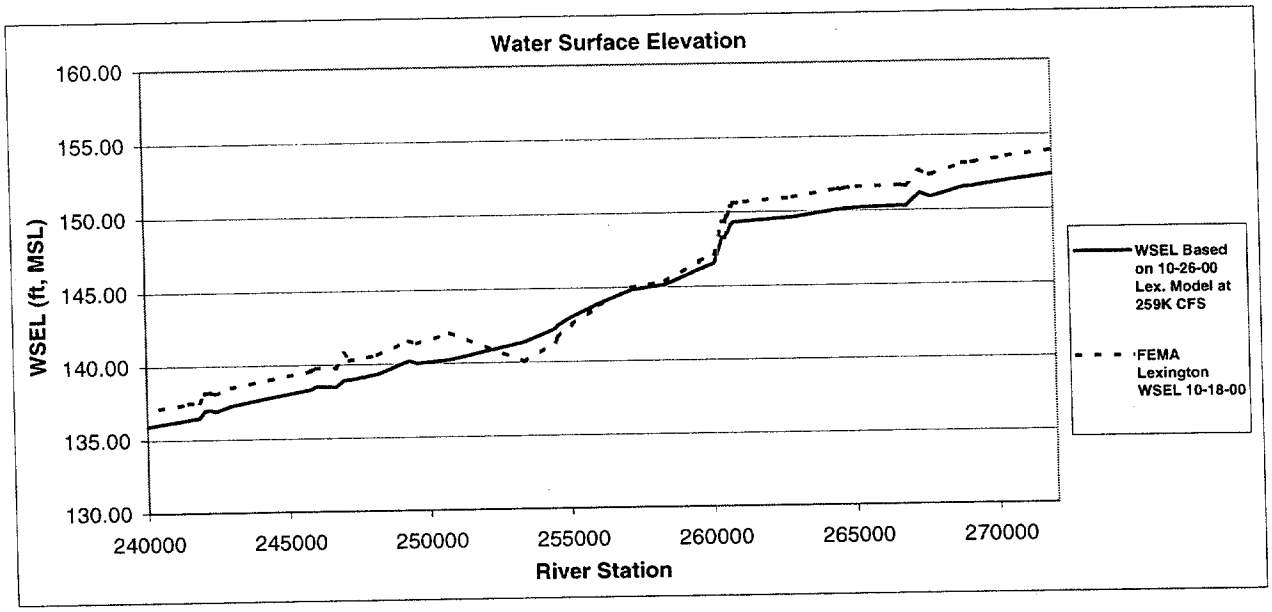
River Station	Computed WSEL (ft)	Computed EGL (ft)	Slope EGL X 10,000	.01 X Conveyance	Total Flowrate (CFS)	Left Overbank Flowrate (CFS)	Channel Flowrate (CFS)	Right Overbank Flowrate (CFS)	% total flow in LOB
212950	127.24	127.67	6.20	119871	298400	173978	115986	8435	58.3%
215700	128.82	129.18	4.84	135699	298400	174728	113349	10323	58.6%
226700	131.70	131.94	3.02	171743	298400	57171	111079	130150	19.2%
234100	133.74	134.19	3.53	158826	298400	66336	173511	58552	22.2%
238900	135.18	135.44	2.27	198029	298400	101246	147503	49651	33.9%
239370	135.27	135.56	2.49	189001	298400	96109	154839	47452	32.2%
239800	135.31	135.72	3.35	163034	298400	73674	170994	53732	24.7%
241500	135.73	136.23	2.71	181425	298400	57205	191046	50149	19.2%
241850	135.82	136.33	2.70	181617	298400	59742	191760	46899	20.0%
242049	136.04	136.42	3.09	169736	298400	33211	140651	124539	11.1%
242050	136.04	136.42	2.94	174044	298400	33894	142005	122501	11.4%
242120	136.06	136.45	2.93	174327	298400	33905	141914	122581	11.4%
242121	136.07	136.45	2.93	174294	298400	33807	141951	122642	11.3%
242169	136.10	136.46	2.86	176600	298400	36749	140208	121444	12.3%
242170	136.09	136.47	2.91	174864	298400	33936	141678	122787	11.4%
242240	136.11	136.49	2.91	174844	298400	33992	141728	122680	11.4%
242241	136.09	136.52	3.17	167679	298400	22894	147597	127909	7.7%
242440	136.21	136.60	3.69	155264	298400	80480	164693	53227	27.0%
243000	136.53	136.78	2.69	181917	298400	96998	139084	62318	32.5%
245800	137.22	137.36	1.66	231897	298400	136984	113578	47838	45.9%
246000	137.28	137.39	1.38	253841	298400	141602	104075	52723	47.5%
246700	137.40	137.50	1.70	228609	298400	179583	92606	26211	60.2%
247000	137.34	137.61	2.60	185060	298400	109637	143302	45461	36.7%
247200	137.38	137.67	2.69	182047	298400	114092	146030	38278	38.2%
248200	137.64	137.95	2.80	178465	298400	114418	137561	46421	38.3%
249300	138.03	138.22	1.92	215132	298400	95088	109971	93341	31.9%
249590	137.98	138.34	3.30	164312	298400	99585	143342	55474	33.4%
250770	138.14	138.98	5.49	127401	298400	75515	183284	39601	25.3%
253400	139.20	141.22	9.80	95341	298400	42629	249604	6167	14.3%
254500	139.82	143.18	14.30	78901	298400	0	295576	2824	0.0%
254600	140.11	143.35	13.75	80474	298400	0	293907	4493	0.0%
255100	141.12	144.09	12.28	85169	298400	1	290790	7610	0.0%
256100	142.59	145.31	10.68	91310	298400	768	290687	6945	0.3%
257200	144.00	146.47	9.35	97612	298400	1773	289459	7168	0.6%
258400	144.50	147.90	9.81	95268	298400	5170	277573	15657	1.7%
259600	145.90	149.03	8.65	101451	298400	5825	276244	16331	2.0%
260100	146.43	149.47	8.26	103815	298400	6077	275750	16574	2.0%
260400	148.74	149.78	2.14	203942	298400	38603	258475	1322	12.9%
260500	148.70	150.06	3.11	169336	298400	0	298400	0	0.0%
260550	149.12	150.46	2.99	172703	298400	0	298400	0	0.0%
260600	149.14	150.47	2.98	172825	298400	0	298400	0	0.0%
260700	149.79	150.55	2.15	203690	298400	0	298400	0	0.0%
260730	149.80	150.56	2.14	203764	298400	0	298400	0	0.0%
260800	150.02	150.77	2.10	206041	298400	0	298400	0	0.0%
261200	150.09	150.86	1.97	212774	298400	5764	270622	22014	1.9%
262900	150.39	151.26	2.41	192259	298400	4861	272453	21086	1.6%
264500	150.96	151.63	2.04	208698	298400	9994	288361	46	3.3%
264600	150.93	151.68	2.20	201333	298400	0	298400	0	0.0%
264750	151.02	151.76	2.17	202367	298400	0	298400	0	0.0%
265200	151.08	151.88	2.21	200535	298400	33952	264448	0	11.4%
266750	151.19	152.37	2.72	176961	292000	3911	286756	1334	1.3%
266900	151.13	152.46	2.90	171592	292000	3963	285779	2258	1.4%
267400	152.18	152.62	0.94	300510	292000	4166	285834	2000	1.4%
267750	151.89	153.02	2.90	171578	292000	0	292000	0	0.0%
267850	151.89	153.02	1.40	246996	292000	0	292000	0	0.0%
268920	152.63	153.19	1.71	223100	292000	0	288377	3623	0.0%
269250	152.69	153.28	3.26	161804	292000	11570	280059	372	4.0%
269300	152.71	153.30	3.25	161969	292000	11577	280050	373	4.0%
270450	153.10	153.63	2.33	191425	292000	0	291848	152	0.0%
272010	153.53	153.98	1.90	211822	292000	1636	286055	4309	0.6%


Water Surface Elevation
160.00
155.00
150.00
145.00
140.00
135.00
130.00
240000
245000
250000
255000
260000
265000
270000
Water Surface Elevation

odel Left Overbank flowrates and WSEL tabulation

Base model for this comparison is the revised Lexington multiple HEC-2 model, based on the revised Lexington multiple HEC-2 model presented by FEMA on 10-18-00. The changes made to the FEMA Lexington model provide a much more stable HEC-2 model with the levee in place. Note the removal of the instabilities in WSEL when comparing the FEMA Lexington multiple model with the revised Lexington multiple model. This model has been revised from the 10-26-00 submission to FEMA in the reduction of flowrates to 259K at the gage location (266750).

River Station	Computed WSEL (ft)	Computed EGL (ft)	Slope EGL X 10,000	.01 X Conveyance	Total Flowrate (CFS)	Left Overbank Flowrate (CFS)	Channel Flowrate (CFS)	Right Overbank Flowrate (CFS)	% total flow in LOB
212950	127.03	127.49	6.20	106335	264700	142344	114327	8029	53.8%
215700	128.59	128.93	4.38	126544	264700	148886	106287	9527	56.2%
226700	131.59	131.93	3.47	142118	264700	9724	118285	136691	3.7%
234100	134.11	134.67	3.69	137763	264700	20678	181156	62866	7.8%
238900	135.70	136.20	3.18	148398	264700	21618	179464	63619	8.2%
239370	135.83	136.36	3.28	146120	264700	22214	183060	59426	8.4%
239800	135.88	136.56	4.14	130118	264700	4554	196239	63907	1.7%
241500	136.40	137.07	2.90	155306	264700	2081	204954	57665	0.8%
241850	136.49	137.19	2.97	153495	264700	1905	208317	54478	0.7%
242049	136.99	137.35	2.58	164678	264700	1601	135011	128089	0.6%
242050	136.98	137.35	2.49	167899	264700	405	137579	126716	0.2%
242120	137.00	137.37	2.48	168065	264700	405	137529	126766	0.2%
242121	137.01	137.37	2.46	168815	264700	1538	136924	126238	0.6%
242169	137.02	137.38	2.45	169011	264700	1539	136801	126360	0.6%
242170	137.02	137.39	2.47	168299	264700	406	137395	126900	0.2%
242240	137.04	137.41	2.48	168232	264700	406	137490	126804	0.2%
242241	137.05	137.41	2.45	169256	264700	1503	136693	126504	0.6%
242440	136.93	137.65	3.94	133334	264700	2106	198728	63865	0.8%
243000	137.33	137.88	3.95	133138	264700	3249	176557	84894	1.2%
245800	138.34	138.89	3.64	138821	264700	2904	179237	82559	1.1%
246000	138.53	138.96	3.10	150261	264700	2975	167263	94462	1.1%
246700	138.50	139.40	6.21	106250	264700	4297	199278	61125	1.6%
247000	138.95	139.57	3.81	135628	264700	687	189667	74346	0.3%
247200	138.97	139.68	4.18	129422	264700	2183	198909	63608	0.8%
248200	139.34	140.13	4.41	126020	264700	3966	188621	72113	1.5%
249300	140.21	140.52	2.20	178637	264700	3580	131696	129423	1.4%
249590	140.02	140.72	4.14	130171	264700	5740	178761	80198	2.2%
250770	140.24	141.44	5.75	110388	264700	2697	208131	53872	1.0%
253400	141.38	143.52	8.25	92158	264700	2615	254846	7239	1.0%
254500	142.27	144.50	8.79	89273	264700	3	260191	4506	0.0%
254600	142.48	144.62	8.45	91071	264700	4	257495	7201	0.0%
255100	143.05	145.06	7.90	94195	264700	7	254875	9818	0.0%
256100	143.96	145.85	7.24	98362	264700	1952	254357	8391	0.7%
257200	144.82	146.64	6.76	101781	264700	2479	255133	7089	0.9%
258400	145.13	147.71	7.29	98041	264700	4846	245691	14163	1.8%
259600	146.13	148.56	6.67	102478	264700	5264	244855	14581	2.0%
260100	146.52	148.90	6.45	104223	264700	5429	244533	14738	2.1%
260400	148.29	149.14	1.76	199379	264700	33011	230522	1167	12.5%
260500	148.26	149.36	2.55	165887	264700	0	264700	0	0.0%
260550	148.58	149.67	2.47	168423	264700	0	264700	0	0.0%
260600	148.60	149.68	2.47	168523	264700	0	264700	0	0.0%
260700	149.12	149.74	1.81	196783	264700	0	264700	0	0.0%
260730	149.13	149.75	1.81	196846	264700	0	264700	0	0.0%
260800	149.30	149.92	1.78	198640	264700	0	264700	0	0.0%
261200	149.36	149.99	1.67	204811	264700	4805	240678	19218	1.8%
262900	149.61	150.34	2.06	184222	264700	3993	242354	18353	1.5%
264500	150.09	150.66	1.79	198024	264700	8257	256412	30	3.1%
264600	150.07	150.70	1.91	191586	264700	0	264700	0	0.0%
264750	150.14	150.77	1.89	192410	264700	0	264700	0	0.0%
265200	150.19	150.87	1.92	191088	264700	28991	235709	0	11.0%
266750	150.30	151.29	2.34	169360	259000	2749	255265	986	1.1%
266900	150.25	151.36	2.48	164329	259000	2788	254513	1699	1.1%
267400	151.13	151.50	0.82	286098	259000	3380	254022	1597	1.3%
267750	150.89	151.84	2.53	162875	259000	0	259000	0	0.0%
267850	150.89	151.84	1.22	234160	259000	0	259000	0	0.0%
268920	151.51	151.98	1.53	209085	259000	0	255877	3123	0.0%
269250	151.56	152.06	2.87	152794	259000	9902	248813	285	3.8%
269300	151.58	152.08	2.87	152938	259000	9908	248806	286	3.8%
270450	151.91	152.38	2.20	174517	259000	0	258905	95	0.0%
272010	152.31	152.71	1.80	193145	259000	1281	254079	3640	0.5%


Water Surface Elevation
160.00
155.00
150.00
145.00
140.00
135.00
130.00
WSEL (ft, MSL)
240000
245000
250000
255000
260000
265000
270000
River Station
WSEL Based on 10-26-00 Lex. Model at 259K CFS
FEMA Lexington WSEL 10-18-00

HEC-2 Modeling Summary of Results

	FEMA RESULTS				REVISED LEXINGTON MODEL RESULTS 10-26-00 LEXINGTON MODEL AT 259K GAGE CFS					DIFFERENCE; FEMA TO REVISED			
		Congaree Floodway Boundary per FEMA 10-18-00					Congaree Floodway Boundary Lex. Multiple Base; Levee at FW				Congaree Floodway Boundary Lex. Multiple Base; Levee at FW		
River Station	Lexington BFE per FEMA (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)	Lexington Multiple LXMUL259 BFE (ft, MSL)	Lexington BFE per LXFW259 Model (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)	Lexington BFE (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)
212950	127.96	9139.38	22974.60	0.95	127.03	127.03	10970.52	22750.00	1.00	-0.93	-1831.14	-224.60	0.05
215700	129.52	8030.57	22914.93	0.90	128.59	128.59	9900.00	22910.00	0.90	-0.93	-1869.43	-4.93	0.00
226700	132.48	10079.12	25766.09	0.62	131.59	131.59	19000.00	25766.09	0.73	-0.89	-8920.88	0.00	0.11
234100	135.06	5550.00	22656.00	0.66	134.11	134.11	15014.00	22656.00	0.70	-0.95	-9464.00	0.00	0.04
238900	136.75	19835.00	35900.00	0.88	135.70	135.70	28331.00	35900.00	0.86	-1.05	-8496.00	0.00	-0.02
239370	136.89	21160.00	35900.00	0.88	135.83	135.83	28331.00	35900.00	0.86	-1.06	-7171.00	0.00	-0.02
239800	136.93	560.00	15700.00	0.93	135.88	135.88	9030.00	15700.00	0.93	-1.05	-8470.00	0.00	0.00
241500	137.50	6342.05	18692.54	0.85	136.40	136.40	12061.00	18692.54	0.83	-1.10	-5718.95	0.00	-0.02
241850	137.59	6399.08	18865.33	0.86	136.49	136.49	12104.00	18865.33	0.83	-1.10	-5704.92	0.00	-0.03
242049	138.17	5540.00	17240.00	0.90	136.99	136.99	10815.00	17240.00	0.88	-1.18	-5275.00	0.00	-0.02
242050	138.17	5540.00	17240.00	0.90	136.98	136.98	10815.00	17240.00	0.89	-1.19	-5275.00	0.00	-0.01
242120	138.18	5540.00	17240.00	0.90	137.00	137.00	10815.00	17240.00	0.89	-1.18	-5275.00	0.00	-0.01
242121	138.19	5540.00	17240.00	0.91	137.01	137.01	10815.00	17240.00	0.88	-1.18	-5275.00	0.00	-0.03
242169	138.21	5540.00	17240.00	0.91	137.02	137.02	10793.00	17240.00	0.88	-1.19	-5253.00	0.00	-0.03
242170	138.20	5540.00	17240.00	0.91	137.02	137.02	10793.00	17240.00	0.88	-1.18	-5253.00	0.00	-0.03
242240	138.22	5540.00	17240.00	0.91	137.04	137.04	10806.00	17240.00	0.88	-1.18	-5266.00	0.00	-0.03
242241	138.23	5540.00	17240.00	0.91	137.05	137.05	10806.00	17240.00	0.87	-1.18	-5266.00	0.00	-0.04
242440	138.10	5540.00	17600.00	0.89	136.93	136.93	11800.00	17600.00	0.82	-1.17	-6260.00	0.00	-0.07
243000	138.54	6452.90	17859.61	0.83	137.33	137.33	11830.00	17859.61	0.80	-1.21	-5377.10	0.00	-0.03
245800	139.59	5580.00	17300.00	0.92	138.34	138.34	11800.00	17300.00	0.97	-1.25	-6220.00	0.00	0.05
246000	139.79	5589.08	17131.80	0.89	138.53	138.53	11815.00	17131.80	0.88	-1.26	-6225.92	0.00	-0.01
246700	139.80	8900.00	18800.00	0.87	138.50	138.50	14467.00	19000.00	0.92	-1.30	-5567.00	200.00	0.05
247000	140.76	12729.02	23282.54	0.91	138.95	138.95	18790.00	23380.00	0.95	-1.81	-6060.98	97.46	0.04
247200	140.26	12445.06	23301.65	0.94	138.97	138.97	18800.00	23400.00	0.98	-1.29	-6354.94	98.35	0.04
248200	140.62	6340.41	17582.96	0.94	139.34	139.34	12860.00	17582.96	1.00	-1.28	-6519.59	0.00	0.06
249300	141.56	4222.68	13994.81	0.85	140.21	140.21	9390.00	13994.81	0.91	-1.35	-5167.32	0.00	0.06
249590	141.35	7576.92	17206.01	0.85	140.02	140.02	12740.00	17206.01	0.87	-1.33	-5163.08	0.00	0.02
250770	142.07	1620.16	10222.71	0.87	140.24	140.24	5910.00	10222.71	0.93	-1.83	-4289.84	0.00	0.06
253400	140.03	7628.00	12000.00	0.94	141.38	141.38	9590.00	12000.00	1.03	1.35	-1962.00	0.00	0.09
254500	141.38	4685.00	5315.00	0.82	142.27	142.27	4685.00	5315.00	0.94	0.89	0.00	0.00	0.12
254600	141.67	4685.00	5315.00	0.72	142.48	142.48	4685.00	5315.00	0.84	0.81	0.00	0.00	0.12
255100	142.51	4685.00	5315.00	0.56	143.05	143.05	4685.00	5315.00	0.76	0.54	0.00	0.00	0.20
256100	143.79	4685.00	5315.00	0.61	143.96	143.96	4685.00	5315.00	0.79	0.17	0.00	0.00	0.18
257200	144.97	4685.00	5316.53	0.60	144.82	144.82	4685.00	5316.53	0.84	-0.15	0.00	0.00	0.24
258400	145.36	6172.70	6774.11	0.63	145.13	145.13	6207.84	6749.11	0.79	-0.23	-35.14	-25.00	0.16
259600	146.65	6166.49	6778.74	0.61	146.13	146.13	6196.67	6753.59	0.82	-0.52	-30.18	-25.15	0.21

HEC-2 Modeling Summary of Results

	FEMA RESULTS				REVISED LEXINGTON MODEL RESULTS 10-26-00 LEXINGTON MODEL AT 259K GAGE CFS					DIFFERENCE; FEMA TO REVISED			
		Congaree Floodway Boundary per FEMA 10-18-00					Congaree Floodway Boundary Lex. Multiple Base; Levee at FW				Congaree Floodway Boundary Lex. Multiple Base; Levee at FW		
River Station	Lexington BFE per FEMA (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)	Lexington Multiple LXMUL259 BFE (ft, MSL)	Lexington BFE per LXFW259 Model (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)	Lexington BFE (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)
260100	147.14	6168.58	6773.78	0.58	146.52	146.52	6192.78	6755.25	0.83	-0.62	-24.20	-18.53	0.25
260400	149.36	5607.88	6689.00	0.41	148.29	148.29	5607.88	6689.00	0.80	-1.07	0.00	0.00	0.39
260500	149.32	1570.00	2465.00	0.50	148.26	148.26	1570.00	2465.00	0.87	-1.06	0.00	0.00	0.37
260550	149.72	1570.00	2465.00	0.48	148.58	148.58	1570.00	2465.00	0.85	-1.14	0.00	0.00	0.37
260600	149.74	1570.00	2465.00	0.48	148.60	148.60	1570.00	2465.00	0.85	-1.14	0.00	0.00	0.37
260700	150.38	1510.00	2730.00	0.35	149.12	149.12	1510.00	2730.00	0.74	-1.26	0.00	0.00	0.39
260730	150.38	1510.00	2730.00	0.35	149.13	149.13	1510.00	2730.00	0.74	-1.25	0.00	0.00	0.39
260800	150.59	1510.00	2730.00	0.38	149.30	149.30	1510.00	2730.00	0.75	-1.29	0.00	0.00	0.37
261200	150.66	370.00	1684.83	0.38	149.36	149.36	370.00	1673.06	0.75	-1.30	0.00	-11.77	0.37
262900	150.94	323.30	1710.50	0.41	149.61	149.61	370.00	1638.20	0.75	-1.33	-46.70	-72.30	0.34
264500	151.48	1660.00	3130.00	0.43	150.09	150.09	1660.00	3130.00	0.80	-1.39	0.00	0.00	0.37
264600	151.45	1660.00	3130.00	0.48	150.07	150.07	1660.00	3130.00	0.84	-1.38	0.00	0.00	0.36
264750	151.53	1660.00	3130.00	0.48	150.14	150.14	1660.00	3130.00	0.83	-1.39	0.00	0.00	0.35
265200	151.59	1175.73	2285.00	0.25	150.19	150.19	1175.73	2285.00	0.65	-1.40	0.00	0.00	0.40
266750	151.69	4287.44	5471.00	0.51	150.30	150.30	4595.00	5471.00	0.84	-1.39	-307.56	0.00	0.33
266900	151.63	4595.00	5405.00	0.47	150.25	150.25	4595.00	5405.00	0.83	-1.38	0.00	0.00	0.36
267400	152.64	821.50	2231.30	0.52	151.13	151.13	821.50	2231.30	0.83	-1.51	0.00	0.00	0.31
267750	152.36	4475.00	5525.00	0.54	150.89	150.89	4475.00	5525.00	0.86	-1.47	0.00	0.00	0.32
267850	152.36	563.00	2000.00	0.54	150.89	150.89	563.00	2000.00	0.86	-1.47	0.00	0.00	0.32
268920	153.08	4260.00	5915.00	0.50	151.51	151.51	4260.00	5915.00	0.81	-1.57	0.00	0.00	0.31
269250	153.14	600.00	2248.00	0.48	151.56	151.56	600.00	2248.00	0.79	-1.58	0.00	0.00	0.31
269300	153.15	600.00	2248.00	0.48	151.58	151.58	600.00	2248.00	0.79	-1.57	0.00	0.00	0.31
270450	153.53	3835.00	6165.00	0.58	151.91	151.91	3835.00	6165.00	0.86	-1.62	0.00	0.00	0.28
272010	153.93	2970.00	5300.00	0.52	152.31	152.31	2970.00	5300.00	0.80	-1.62	0.00	0.00	0.28

Levee Top Elevation Adjustment

This is a brief calculation of the overall fill required to bring the levee top elevation to the required height to maintain FEMA freeboard requirements.

Freeboard Requirement (per FEMA 37) ==>

1) A minimum freeboard requirement of three (3) feet is necessary along the entire levee.

2) An additional one (1) foot of freeboard is required within 100' of strucutures within the levee or wherever flow is restricted, such as bridges (in this case, I-77).

3) An additional one-half (0.5) foot of freeboard is required at the upstream end of the levee.

Richland County Requirements ==>

1) Top of levee elevation must be equal or greater than the 500-year elevation plus three (3) feet.

River Station	100 yr. HEC-2 WSEL	500 yr. HEC-2 WSEL	Existing Levee Top Elevation	Present Freeboard 100-year (feet)	Present Freeboard 500-year (feet)	100-year Freeboard Required (feet)	500-year Freeboard Required (feet)	Min.Elev. for 100-year (ft, MSL)	Min.Elev. for 500-year (ft, MSL)	Calc'd New Min. Levee Top Elevation	Levee top input to HEC-2 Model	Comments	Levee Increase
234100	134.11	138.48	142.70	8.59	4.22	3.00	3.00	137.11	141.48	same	**same**	End of Levee	0.00
238900	135.70	140.54	142.80	7.10	2.26	3.00	3.00	138.70	143.54	143.54	**143.60**		0.80
239370	135.83	140.71	137.30	1.47	-3.41	3.00	3.00	138.83	143.71	143.71	**143.80**		6.50
239800	135.88	140.68	137.10	1.22	-3.58	3.00	3.00	138.88	143.68	143.68	**143.80**		6.70
241500	136.40	141.49	142.30	5.90	0.81	3.00	3.00	139.40	144.49	144.49	**144.50**		2.20
241850	136.49	141.60	148.00	11.51	6.40	3.00	3.00	139.49	144.60	same	**same**		0.00
242049	136.99	142.48	153.00	16.01	10.52	4.00	3.00	140.99	145.48	same	**same**	I-77 Section	0.00
242050	136.98	142.47	153.00	16.02	10.53	4.00	3.00	140.98	145.47	same	**same**	I-77 Section	0.00
242120	137.00	142.49	153.00	16.00	10.51	4.00	3.00	141.00	145.49	same	**same**	I-77 Section	0.00
242121	137.01	142.50	153.00	15.99	10.50	4.00	3.00	141.01	145.50	same	**same**	I-77 Section	0.00
242169	137.02	142.52	153.00	15.98	10.48	4.00	3.00	141.02	145.52	same	**same**	I-77 Section	0.00
242170	137.02	142.51	153.00	15.98	10.49	4.00	3.00	141.02	145.51	same	**same**	I-77 Section	0.00
242240	137.04	142.53	150.60	13.56	8.07	4.00	3.00	141.04	145.53	same	**same**	I-77 Section	0.00
242241	137.05	142.56	150.60	13.55	8.04	4.00	3.00	141.05	145.56	same	**same**	I-77 Section	0.00

River Station	100 yr. HEC-2 WSEL	500 yr. HEC-2 WSEL	Existing Levee Top Elevation	Present Freeboard 100-year (feet)	Present Freeboard 500-year (feet)	100-year Freeboard Required (feet)	500-year Freeboard Required (feet)	Min.Elev. for 100-year (ft, MSL)	Min.Elev. for 500-year (ft, MSL)	Calc'd New Min. Levee Top Elevation	Levee top input to HEC-2 Model	Comments	Levee Increase
242440	136.93	142.35	147.20	10.27	4.85	3.00	3.00	139.93	145.35	same	**same**		0.00
243000	137.33	142.97	147.10	9.77	4.13	3.00	3.00	140.33	145.97	same	**same**		0.00
245800	138.34	144.14	145.40	7.06	1.26	3.00	3.00	141.34	147.14	147.14	**147.20**		1.80
246000	138.53	144.43	144.80	6.27	0.37	3.00	3.00	141.53	147.43	147.43	**147.50**		2.70
246700	138.50	144.35	140.70	2.20	-3.65	3.00	3.00	141.50	147.35	147.35	**147.50**		6.80
247000	138.95	144.98	142.40	3.45	-2.58	3.00	3.00	141.95	147.98	147.98	**148.00**		5.60
247200	138.97	144.95	142.20	3.23	-2.75	3.00	3.00	141.97	147.95	147.95	**148.00**		5.80
248200	139.34	145.27	145.40	6.06	0.13	3.00	3.00	142.34	148.27	148.27	**148.30**		2.90
249300	140.21	146.50	142.00	1.79	-4.50	3.00	3.00	143.21	149.50	149.50	**149.50**		7.50
249590	140.02	146.19	145.40	5.38	-0.79	3.00	3.00	143.02	149.19	149.19	**149.50**		4.10
250770	140.24	146.41	149.30	9.06	2.89	3.00	3.00	143.24	149.41	149.41	**149.50**		0.20
253400	141.38	147.51	147.80	6.42	0.29	3.00	3.00	144.38	150.51	150.51	**150.60**		2.80
254500	142.27	148.68	151.00	8.73	2.32	3.50	3.00	145.77	151.68	151.68	**151.70**	End Levee	0.70

NOTE: 500 year elevation unadjusted in these comparisons. Therefore, new top of levee elevation is based on the old design 500-year top of levee elevations.

Comparison of Levee elevations versus revised Lexington BFE HEC-2 Model

This sheet shows levee top elevations versus BFE elevations for two different HEC-2 models. The top of levee is compared to the FEMA 10/18/00 Lexington HEC-2 model BFE elevation in one column, and the 10-26-00 revised Lexington multiple HEC-2 model using 259K CFS as the 100-year flowrate at the gage location (266750) in the other column.

River Station	Field Survey top of levee EL	FEMA 10/18/00 Lexington Multiple BFE HEC-2 WSEL	LXMUL259 Revised Multiple BFE HEC-2 WSEL	Freeboard to FEMA 10/18/00 Lex. BFE	Freeboard to revised LXMUL259 Lex. BFE
234100	142.70	135.06	134.11	7.64	8.59
238900	142.80	136.75	135.70	6.05	7.10
239370	137.30	136.89	135.83	0.41	1.47
239800	137.10	136.93	135.88	0.17	1.22
241500	142.30	137.50	136.40	4.80	5.90
241850	***148.00***	137.59	136.49	10.41	11.51
242049	***153.00***	138.17	136.99	14.83	16.01
242050	***153.00***	138.17	136.98	14.83	16.02
242120	***153.00***	138.18	137.00	14.82	16.00
242121	***153.00***	138.19	137.01	14.81	15.99
242169	***153.00***	138.21	137.02	14.79	15.98
242170	***153.00***	138.20	137.02	14.80	15.98
242240	***150.60***	138.22	137.04	12.38	13.56
242241	***150.60***	138.23	137.05	12.37	13.55
242440	147.20	138.10	136.93	9.10	10.27
243000	147.10	138.54	137.33	8.56	9.77
245800	145.40	139.59	138.34	5.81	7.06
246000	144.80	139.79	138.53	5.01	6.27
246700	140.70	139.80	138.50	0.90	2.20
247000	142.40	140.76	138.95	1.64	3.45
247200	142.20	140.26	138.97	1.94	3.23
248200	145.40	140.62	139.34	4.78	6.06
249300	142.00	141.56	140.21	0.44	1.79
249590	145.40	141.35	140.02	4.05	5.38
250770	149.30	142.07	140.24	7.23	9.06
253400	147.80	140.03	141.38	7.77	6.42
254500	***151.00***	141.38	142.27	9.62	8.73

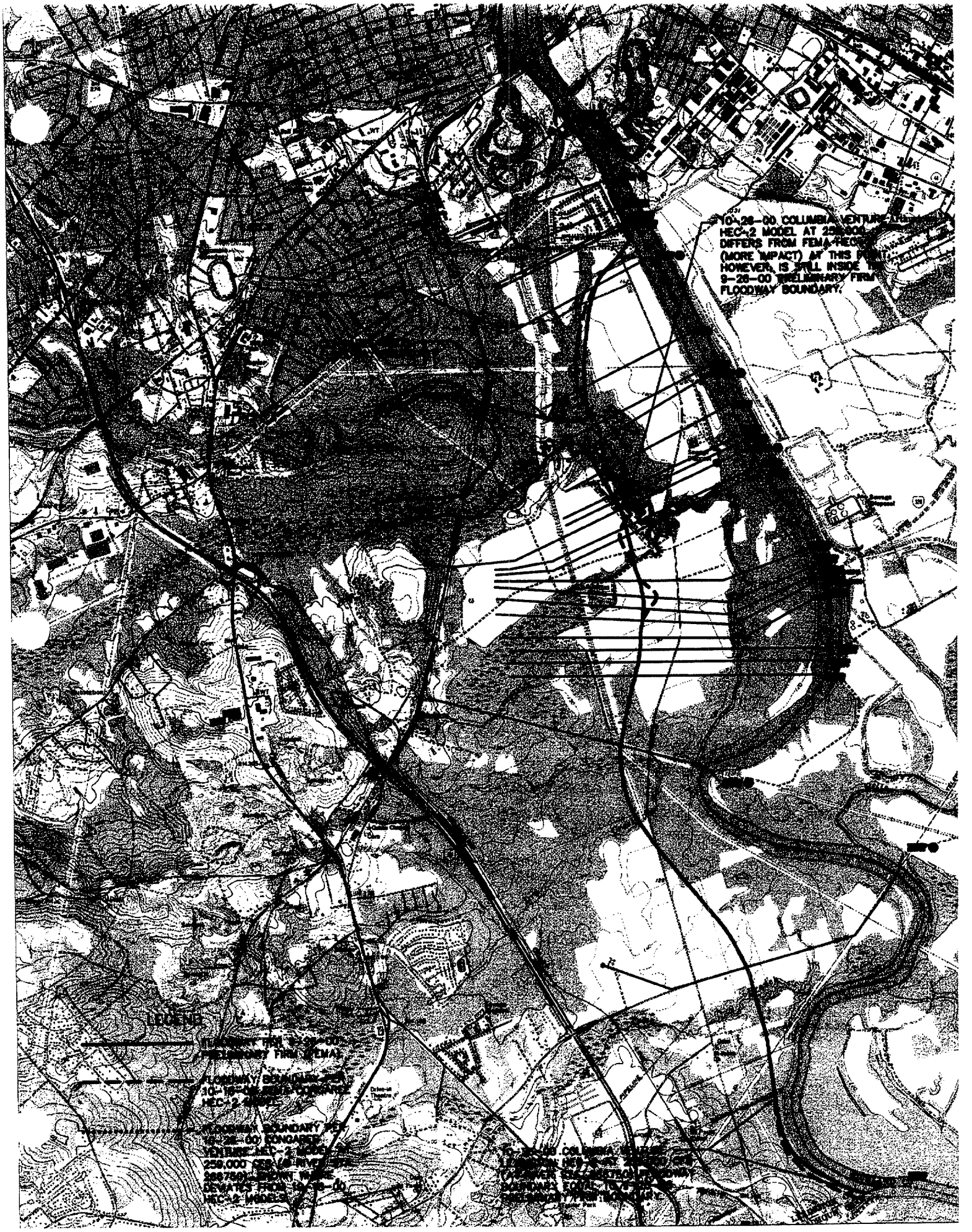
Note: ***Bold numbers under levee top elevation are elevations taken from HEC-2 model (aerial topo information). All others are field verified top elevations.***

HEC-2 Modeling Summary of Results

	FEMA RESULTS				CLOMR READY RESULTS 10-26-00 LEXINGTON MODEL AT 259K GAGE CFS					DIFFERENCE; FEMA TO CLOMR READY				
		Congaree Floodway Boundary per FEMA 10-18-00					Congaree Floodway Boundary Lex. Multiple Base; Levee at FW				Congaree Floodway Boundary Lex. Multiple Base; Levee at FW			
River Station	Lexington BFE per FEMA (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)	Lexington Multiple LXMUL259 BFE (ft, MSL)	Lexington BFE per LFW259C Model (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)	Lexington BFE (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)	Difference; Corrected Lex. To CLOMR Lex. BFE (with new levee EL) (feet)
212950	127.96	9139.38	22974.60	0.95	127.03	127.03	10970.52	22750.00	1.00	-0.93	-1831.14	-224.60	0.05	0.00
215700	129.52	8030.57	22914.93	0.90	128.59	128.59	9900.00	22910.00	0.90	-0.93	-1869.43	-4.93	0.00	0.00
226700	132.48	10079.12	25766.09	0.62	131.59	131.59	19000.00	25766.09	0.73	-0.89	-8920.88	0.00	0.11	0.00
234100	135.06	5550.00	22656.00	0.66	134.11	134.11	15014.00	22656.00	0.70	-0.95	-9464.00	0.00	0.04	0.00
238900	136.75	19835.00	35900.00	0.88	135.70	135.70	28331.00	35900.00	0.86	-1.05	-8496.00	0.00	-0.02	0.00
239370	136.89	21160.00	35900.00	0.88	135.83	135.83	28331.00	35900.00	0.86	-1.06	-7171.00	0.00	-0.02	0.00
239800	136.93	560.00	15700.00	0.93	135.88	135.88	9030.00	15700.00	0.93	-1.05	-8470.00	0.00	0.00	0.00
241500	137.50	6342.05	18692.54	0.85	136.40	136.40	12061.00	18692.54	0.83	-1.10	-5718.95	0.00	-0.02	0.00
241850	137.59	6399.08	18865.33	0.86	136.49	136.49	12104.00	18865.33	0.83	-1.10	-5704.92	0.00	-0.03	0.00
242049	138.17	5540.00	17240.00	0.90	136.99	136.99	10815.00	17240.00	0.88	-1.18	-5275.00	0.00	-0.02	0.00
242050	138.17	5540.00	17240.00	0.90	136.98	136.98	10815.00	17240.00	0.89	-1.19	-5275.00	0.00	-0.01	0.00
242120	138.18	5540.00	17240.00	0.90	137.00	137.00	10815.00	17240.00	0.89	-1.18	-5275.00	0.00	-0.01	0.00
242121	138.19	5540.00	17240.00	0.91	137.01	137.01	10815.00	17240.00	0.88	-1.18	-5275.00	0.00	-0.03	0.00
242169	138.21	5540.00	17240.00	0.91	137.02	137.02	10793.00	17240.00	0.88	-1.19	-5253.00	0.00	-0.03	0.00
242170	138.20	5540.00	17240.00	0.91	137.02	137.02	10793.00	17240.00	0.88	-1.18	-5253.00	0.00	-0.03	0.00
242240	138.22	5540.00	17240.00	0.91	137.04	137.04	10806.00	17240.00	0.88	-1.18	-5266.00	0.00	-0.03	0.00
242241	138.23	5540.00	17240.00	0.91	137.05	137.05	10806.00	17240.00	0.87	-1.18	-5266.00	0.00	-0.04	0.00
242440	138.10	5540.00	17600.00	0.89	136.93	136.93	11800.00	17600.00	0.82	-1.17	-6260.00	0.00	-0.07	0.00
243000	138.54	6452.90	17859.61	0.83	137.33	137.33	11830.00	17859.61	0.80	-1.21	-5377.10	0.00	-0.03	0.00
245800	139.59	5580.00	17300.00	0.92	138.34	138.34	11800.00	17300.00	0.97	-1.25	-6220.00	0.00	0.05	0.00
246000	139.79	5589.08	17131.80	0.89	138.53	138.53	11815.00	17131.80	0.88	-1.26	-6225.92	0.00	-0.01	0.00
246700	139.80	8900.00	18800.00	0.87	138.50	138.50	14467.00	19000.00	0.92	-1.30	-5567.00	200.00	0.05	0.00
247000	140.76	12729.02	23282.54	0.91	138.95	138.95	18790.00	23380.00	0.95	-1.81	-6060.98	97.46	0.04	0.00
247200	140.26	12445.06	23301.65	0.94	138.97	138.97	18800.00	23400.00	0.98	-1.29	-6354.94	98.35	0.04	0.00
248200	140.62	6340.41	17582.96	0.94	139.34	139.34	12860.00	17582.96	1.00	-1.28	-6519.59	0.00	0.06	0.00
249300	141.56	4222.68	13994.81	0.85	140.21	140.21	9390.00	13994.81	0.91	-1.35	-5167.32	0.00	0.06	0.00
249590	141.35	7576.92	17206.01	0.85	140.02	140.02	12740.00	17206.01	0.87	-1.33	-5163.08	0.00	0.02	0.00
250770	142.07	1620.16	10222.71	0.87	140.24	140.24	5910.00	10222.71	0.93	-1.83	-4289.84	0.00	0.06	0.00
253400	140.03	7628.00	12000.00	0.94	141.38	141.38	9590.00	12000.00	1.03	1.35	-1962.00	0.00	0.09	0.00
254500	141.38	4685.00	5315.00	0.82	142.27	142.27	4685.00	5315.00	0.94	0.89	0.00	0.00	0.12	0.00
254600	141.67	4685.00	5315.00	0.72	142.48	142.48	4685.00	5315.00	0.84	0.81	0.00	0.00	0.12	0.00
255100	142.51	4685.00	5315.00	0.56	143.05	143.05	4685.00	5315.00	0.76	0.54	0.00	0.00	0.20	0.00
256100	143.79	4685.00	5315.00	0.61	143.96	143.96	4685.00	5315.00	0.79	0.17	0.00	0.00	0.18	0.00
257200	144.97	4685.00	5316.53	0.60	144.82	144.82	4685.00	5316.53	0.84	-0.15	0.00	0.00	0.24	0.00
258400	145.36	6172.70	6774.11	0.63	145.13	145.13	6207.84	6749.11	0.79	-0.23	-35.14	-25.00	0.16	0.00
259600	146.65	6166.49	6778.74	0.61	146.13	146.13	6196.67	6753.59	0.82	-0.52	-30.18	-25.15	0.21	0.00
260100	147.14	6168.58	6773.78	0.58	146.52	146.52	6192.78	6755.25	0.83	-0.62	-24.20	-18.53	0.25	0.00
260400	149.36	5607.88	6689.00	0.41	148.29	148.29	5607.88	6689.00	0.80	-1.07	0.00	0.00	0.39	0.00
260500	149.32	1570.00	2465.00	0.50	148.26	148.26	1570.00	2465.00	0.87	-1.06	0.00	0.00	0.37	0.00
260550	149.72	1570.00	2465.00	0.48	148.58	148.58	1570.00	2465.00	0.85	-1.14	0.00	0.00	0.37	0.00
260600	149.74	1570.00	2465.00	0.48	148.60	148.60	1570.00	2465.00	0.85	-1.14	0.00	0.00	0.37	0.00
260700	150.38	1510.00	2730.00	0.35	149.12	149.12	1510.00	2730.00	0.74	-1.26	0.00	0.00	0.39	0.00

HEC-2 Modeling Summary of Results

	FEMA RESULTS				CLOMR READY RESULTS 10-26-00 LEXINGTON MODEL AT 259K GAGE CFS					DIFFERENCE; FEMA TO CLOMR READY				
		Congaree Floodway Boundary per FEMA 10-18-00					Congaree Floodway Boundary Lex. Multiple Base; Levee at FW				Congaree Floodway Boundary Lex. Multiple Base; Levee at FW			
River Station	Lexington BFE per FEMA (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)	Lexington Multiple LXMUL259 BFE (ft, MSL)	Lexington BFE per LFW259C Model (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)	Lexington BFE (ft, MSL)	Left Encr. Station (Richland)	Right Encr. Station (Lexington)	Floodway Surcharge (ft)	Difference; Corrected Lex. To CLOMR Lex. BFE (with new levee EL) (feet)
260730	150.38	1510.00	2730.00	0.35	149.13	149.13	1510.00	2730.00	0.74	-1.25	0.00	0.00	0.39	0.00
260800	150.59	1510.00	2730.00	0.38	149.30	149.30	1510.00	2730.00	0.75	-1.29	0.00	0.00	0.37	0.00
261200	150.66	370.00	1684.83	0.38	149.36	149.36	370.00	1673.06	0.75	-1.30	0.00	-11.77	0.37	0.00
262900	150.94	323.30	1710.50	0.41	149.61	149.61	370.00	1638.20	0.75	-1.33	-46.70	-72.30	0.34	0.00
264500	151.48	1660.00	3130.00	0.43	150.09	150.09	1660.00	3130.00	0.80	-1.39	0.00	0.00	0.37	0.00
264600	151.45	1660.00	3130.00	0.48	150.07	150.07	1660.00	3130.00	0.84	-1.38	0.00	0.00	0.36	0.00
264750	151.53	1660.00	3130.00	0.48	150.14	150.14	1660.00	3130.00	0.83	-1.39	0.00	0.00	0.35	0.00
265200	151.59	1175.73	2285.00	0.25	150.19	150.19	1175.73	2285.00	0.65	-1.40	0.00	0.00	0.40	0.00
266750	151.69	4287.44	5471.00	0.51	150.30	150.30	4595.00	5471.00	0.84	-1.39	-307.56	0.00	0.33	0.00
266900	151.63	4595.00	5405.00	0.47	150.25	150.25	4595.00	5405.00	0.83	-1.38	0.00	0.00	0.36	0.00
267400	152.64	821.50	2231.30	0.52	151.13	151.13	821.50	2231.30	0.83	-1.51	0.00	0.00	0.31	0.00
267750	152.36	4475.00	5525.00	0.54	150.89	150.89	4475.00	5525.00	0.86	-1.47	0.00	0.00	0.32	0.00
267850	152.36	563.00	2000.00	0.54	150.89	150.89	563.00	2000.00	0.86	-1.47	0.00	0.00	0.32	0.00
268920	153.08	4260.00	5915.00	0.50	151.51	151.51	4260.00	5915.00	0.81	-1.57	0.00	0.00	0.31	0.00
269250	153.14	600.00	2248.00	0.48	151.56	151.56	600.00	2248.00	0.79	-1.58	0.00	0.00	0.31	0.00
269300	153.15	600.00	2248.00	0.48	151.58	151.58	600.00	2248.00	0.79	-1.57	0.00	0.00	0.31	0.00
270450	153.53	3835.00	6165.00	0.58	151.91	151.91	3835.00	6165.00	0.86	-1.62	0.00	0.00	0.28	0.00
272010	153.93	2970.00	5300.00	0.52	152.31	152.31	2970.00	5300.00	0.80	-1.62	0.00	0.00	0.28	0.00


10-26-00 COLUMBIA VENTURE
HEC-2 MODEL AT 25
DIFFERS FROM FEMA HEC
(MORE IMPACT) AT THIS
HOWEVER, IS STILL INSIDE
9-26-00 PRELIMINARY FIRM
FLOODWAY BOUNDARY.
LEGEND
FLOODWAY BOUNDARY PER
10-26-00 CONGARER
VENTURE HEC-2 MODEL
259,000 CFS
DEVIATES FROM
HEC-2 MODELS
Drive-in Theatre