River Segment	High Water	Low Water	Notes:
		24	
LMR 171-361	High Water: Trigger point of 43' FT and falling on the Natchez Gauge.	Low Water: Trigger point 20' FT and falling on the Natchez Gauge for CGC GREENBRIER reference	
361 - 353	High Water: 3 Red Buoys: 1 on dike and 2 beLow at 1/2 mile spacing. 6 Green	Low Water: 4 Red, 6 Green.	RDB has 6 dikes, LDB has 2 Dikes. Buoys set at 1/2 mile spacing
352 - 349	High Water: 4 Red buoys: 4 on dikes; 1 mile spacing	Low Water: 4 Red buoys: 4 on dikes spaced 1 mile spacing	
348 - 343	High Water: 4 Green Buoys ,3 dikes; Green buoy at lead in Lower at MM 343.7; 1/2 mile spacing	Same as High Water	Glasslock LT is lead-in for bend at Lower end of bar. Low Water: Shoaling in the area requiring placement of buoy.
343-338	High Water: No consistent buoy lay down for stretch.	Low Water: No consistent buoy lay down for stretch.	
338-333	High Water: 9 Green, 5 red; 1/2 mile spacing; 4 dikes; lay down remains the same High/Low Water	Same as High water	
332-327 (Grand Bend)	High Water: 10 red, no Green; 1/2 mile spacing	Low Water: 10 red, no Green; 1/4 spacing. Recommend 1/4 mile spacing above Grand Bend Light; 1/2 mile beLow.	
321-330	High Water: 5 Green; no red; same lay down High or Low Water; 1/2 mile spacing.	Same as High Water	
321 - 318	High Water: No Green; 3 red.	Low Water: 4 Green buoys; 3 Red, 1/2 mile spacing.	
318 - 316	High Water: No Green; 4 red 1/2 mile spacing.	Low Water: No Green buoys; 4 Red, 1/2 mile spacing.	
311 - 315	High Water: 2 Green Buoys, 1 mile spacing.	Low Water: 9 Green buoys; 5 Red; 1/4 mile spacing. Establish point way and bend way. Two channels due to bar in middle of channel.	Do not see a junction buoy on the river. Like seeing 1 red and 1 Green. This area is a problem area due to surveying middle bar.

River Segment	High Water	Low Water	Notes:
311 - 305	High Water: 5 Green; No Red, 3/4 mile spacing. Pile up stock of buoys at this location when buoys need to be pulled due to rise of river. Widen Green up to Lump Point Plantation, LA	Low Water: 5 Green Buoys; no Red; 3/4 mile spacing.	
300 - 305	High Water: 1 Green on trail dike; 4 Red, 1/2 mile spacing. Remove Red below Shreve Cut-off due to back channel.	Low Water: 1 Green buoy; 6 red; 1/2 mile spacing.	
300 - 297	High Water: 1 Green, 4 Red on dikes.	Low Water: High Water: 1 Green, 4 Red on dikes,	Recommend add 1 Green on Trail Dike just beLow Smithland Lower Light at both High and Low Water
297 - 289	High Water: 4 Green, 3 Red, 1/2 mile spacing. Recommend pushing in Green buoys below Leatherman point for slack water.	Low Water: 6 Green, 5 Red; 1/2 mile spacing. Recommend adding a point way and bend way channel MM 293 Leatherman Point comprised of 6 Green, 6 Red.	
289 - 287	High Water: No Green, no Red.	Low Water: 3 Green, No Red; 1/2 mile spacing.	Pilots discuss: During High Water virtual buoys could work over dikes due to diving buoys and high risk evolution for CG recovery of buoy. Rose point system has large buoy markers that cover large part of river and sometime limit view of channel.
285 - 282	High Water: 1 Green, 2 Red. 1/2 mile spacing	Low Water: 1 Green, 2 Red; 1/2 mile spacing	
282 - 274	High Water: No Green, 8 Red. 1/4 mile and 1/2 mile spacing. Recommend removing 2 Red above turn.	Low Water: No Green, 8 Red; 1/4 mile, 1/2 mile spacing.	
274 - 265	High Water: 6 Green, No Red. 1/2 mile and 1/4 mile in center for spacing. Recommend widen channel as much as possible.	Same a High Water	

River Segment	High Water	Low Water	Notes:
265 - 261	High Water: 3 Green, 1 Red. 1/2 mile spacing.	Low Water: 7 Green, 7 Red. 1/4 mile spacing. Area prone to shoaling. Establish point way and bend way when needed due to bar in middle of channel.	
261	High Water: No Green, no Red.	Low Water: 2 Green, 1/2 mile spacing	
260 - 254	High Water: No Green, 6 Red; 1/4 and 1/2 mile spacing.	Low Water: No Green, 8 Red; 1/4 mile, 1/2 mile spacing.	Thomson Creek prone to shoaling after flash flooding and may require additional red buoys due to shoaling.
254 - 250	High Water: 5 Green, 1 Red; 3/4 mile spacing	Low Water: 6 Green, 1 Red; 1/2 mile spacing.	
250 - 245	High Water: 3 Green, 4 Red; 1/2 mile spacing	Low Water: 3 Green, 8 Red; 1/2 mile spacing.	
245 - 238	High Water: 5 Green, 3 Red; 3/4 mile spacing	Low Water: 5 Green, 4 Red; 3/4 mile spacing. May require additional Red(s) at lower water conditions.	
238 - 233	High Water: No Green, no Red.	Low Water: 5 Green, No Red; 1/4 mile spacing. Above Baton Rouge 17' FT try to remove 2 Green.	When Baton Rouge gauge above 17' FT, may need to remove 2 Green.
233 - 223	High Water: No aids set by Greenbrier	Low Water: No Aids set by Greenbrier	
223 - 220 (Missouri Bend)	High Water: 4-5 Red; no Green; 1/2 mile spacing	Low Water: 7-8 Red; 1/4-1/2 mile spacing	Leave chute clear when Baton Rouge gauge reads 20-feet or more.
220-215 (Manchaca)	High Water: No Red; 8 Green; 1/2 miles spacing	Low Water: No Red; 8 Green; 1/2 mile spacing	No buoys or sail line reflected in Corps download buoy lines.
215-208 (Plaquemines)	High Water: 5 Red; no Green; 1/2 mile	Low Water: no Green; 4 Red; 1/2 mile spacing	Critical lower red buoy routinely off station.
208-192 (Point Clair)	High Water: 2 Green	Same a as High Water	
192-190 (White Castle)	High Water; 4 Red; no Green; 1/2 mile spacing	Low Water: 4 Red; no Green; 1/2 mile spacing	
188-190 (81-mile Point)	High Water: 3 Green; no Red	Low Water; 3 Green; no Red	
190-179	High Water: 2 Green; 2 Red	Low Water: 2 Green; 2 Red	
179-171 (Point Houmas)	High Water: 1 Red; 2 Green	Low Water: 1 Red; 2 Green	

River Segment	HIGH WATER	LOW WATER	Notes:
LMR 363-480 AHP	KICKAPOO uses Vicksburg Guage for Buoy Placement		
	HIGH GAUGE: 32-FT and Falling	LOW GAUGE: 15-FT	
480-472	HIGH: 6 Green; 3 Red; 1/2 mile spacing	LOW: 0 Red, add 1-2 Green, 1/4-1/2 mile spacing	
472-467	HIGH: 1 Green; 5 Red; 1/2 mile spacing	LOW: 1 Green; add 1 Red; 1/4-1/2 spacing as needed	Add one Green VIRTUAL BUOY at Klondike Landing if possible
467-463	HIGH: 0 Green; 4 Red; 1/2 mile spacing	Low: No real change during low water	
463-458	HIGH: 5 Green; 0 Red; 1/2 miles spacing	LOW: add 2 Green	
458-455	HIGH: 2 Green; 3 Red; 1/2 mile spacing	LOW: no significant change at low water	
455-450	HIGH: 0 Green; 4 Red; 1/2 mile spacing	LOW: no significant change at low water	
450-445	HIGH: 5 Green; 1 Red; 1/2 miles spacing	LOW: add 2 Green at low water	Add virtual buoy on lower dike Red side
445-440	HIGH: 0 Green; 3 Red; 1/2 mile spacing	LOW: add 1 Green at low water.	
440-435	HIGH: 2 Green; no Red; 1/2 mile spacing	LOW: add 7-8 Green at low water	Middle Bar at 437 : marked at 20-ft
435-430	HIGH: 0 Green; 2 Red; 1/2 mile spacing	LOW: add 3 Green; add 1 Red at low.	
430-425	HIGH: 1 Green; 5 Red; 1/2 mile spacing	LOW: add 3 Red at low water.	
425-420	HIGH: 1 Green; 2 Red; 1/2 mile spacing	LOW: add one 1 Red low water	
420-415	HIGH: 2 Green; 1 Red; 1/2 mile spacing	LOW: add 1 Green; add 1 Red at low water	
415-410	HIGH: 2 Green; 7 Red; 1/4 mile spacing	LOW: add 3-4 Red; Reduce spacing to 1/4 mile	Point building at Buckridge Lt on LDB
410-405	HIGH: 4 Green; no Red 1/2 mile spacing	LOW: add 2 Green at low water.	
405-400	HIGH: 4 Green; 0 Red; 1/2 mile spacing	LOW: add 2 Green at low water	Bar builds at 401 on RDB

River Segment	HIGH WATER	LOW WATER	Notes:
400-395	HIGH: 0 Green; 3 Red; 1/2 mile spacing	LOW: add 2 Red at low water.	
395-390	HIGH: 4 Green; 0 Red, 1/2 mile spacing	LOW: add 2 Green and several Red (as needed) at low water	394-395 Split Channel as Required
390-385	HIGH: 3 Green; 1 Red; 1/2 mile spacing	LOW: add 1 Red at low water	Rock pile on LDB at 389 Revetment
385-380	HIGH: 0 Green; 4 Red; 1/2 mile spacing	LOW: add 1 Green; add 1 Red at low water	
380-375	HIGH: 2 Green; 0 Red; 1/2 mile spacing	LOW: add 2 Green at low water.	Consider Red at 389 on LDB
375-370	HIGH: 0 Green; 0 Red; 1/2 mile spacing	LOW: add 1 Green; add 6 Red at low water.	
370-365	HIGH: 1 Green; 2 Red; 1/2 mile spacing	LOW: add 2 Green; add 2 Red at low water.	
365-363	IHGH: 0 Green; 0 Red	LOW: Rock pile Red buoynorth side LDB of bridge	
		***** Pilots noted that not all dikes are present on "updated charts". Pilots would also like to see "set depth" of buoy reflected in coding data of buoy**	*****Pilots would like to see cutters drop a virtual buoy on areas in which buoys will not hold when coming off high water periods.**

River Segment	HIGH WATER	LOW WATER	Notes:
LMR 480-598 AHP	**PATOKA uses Greenville and Helena guages for buoy placement**		
	High Water Set Gauge: 38-feet and falling	**Low Water Gauge: 16-feet**	
480-485	HIGH: 5 Red; 0 Green; 1/2 mile spacing	LOW: May require up to 30 buoys to mark Pointway/Bendway at Lake Providence depending on severity of low water	483-485: Middle bar exisits; may have split channel with numerous buoys at low water when Greenville Gauge reaches. 12
485-490	HIGH: 5 Red; 0 Green; 1/2 mile spacing	LOW: Add 3 Red during low water	May have to Add string of Green between Stack Island Lights at lower water.
490-495	HIGH: 4 Red; 1 Green; 1/2 mile spacing	LOW: Add 2-3 Red; Add 2 Green lead-in buoys at low water.	Verify presence of Dike #1 at Shoreline Construction facility.
495-500	HIGH: 0 Red; 6 Green; 1/2 mile spacing	LOW: Add 3 Green at low water.	
500-505	HIGH: 9 Red; 0 Green ; 1/2 mile spacing	LOW: Add 1-2 Red at low water; Reduce to 1/8 mile spacing	Move lead-in buoys shoreward IVO MM 501-502
505-510	HIGH: 0 Red; 3 Green; 1/2 mile spacing	LOW: Add 2 Red on Corregador Dikes; Add 2 Green lead-in's on RDB	
510-515	HIGH: 5 Red; 1 Green; 1/2 mile spacing	LOW: Add 1 Green at Grande Lake during low water	
515-520	HIGH: 0 Red; 4 Green; 1/2 mile spacing	LOW: Add 3-4 Green at Lower Kentucky Bend during low water	
520-525	HIGH: 0 Red; 4 Green; 1/2 mile spacing	LOW: Add 1 Green; Add 3 Red duing low water	
525-530	HIGH: 2 Red; 1 Green; 1/2 mile spacing	LOW: Add 6 Red on American Bar; Add 2 Green on dikes at low water	Verify bank and shallow areas at 529.5
530-535	HIGH: 5 Red; 0 Green; 1/2 mile spacing	LOW: Add 4 Red during low water	
535-540	HIGH: 4 Red; 5 Green; 1/2 mile spacing	LOW: Add 4 Green; Add 1 Red lead-in at Leland Cutoff during low water	Consider virtual buoy on Tarpley Cutoff Dike (Dike 3R)
540-545	HIGH: 1 Red; 6 Green; 1/2 mile spacing	LOW: Add 2 Red at low water	Rock Pile below Miller Bend Lower Light
545-550	HIGH: 2 Red; 4 Green; 1/2 mile spacing	LOW: Add 5 Red on dikes during low water	
550-555	HIGH: 6 Red; 0 Green; 1/2 mile spcing	LOW: Add 2 Red during low water	

River Segment	HIGH WATER	LOW WATER	Notes:
555-560	HIGH: 0 Red, 7 Green; 1/2 mile spacing	LOW: Add 1 Green lead in lower Choctaw bend during low water	
560-565	HIGH: 0 Red; 8 Green; 1/2 mile spacing	LOW: No significant changes during low water	
565-570	HIGH: 7 Red; 1 Green; 1/2 mile spacing	LOW: No signifcant changes during low water	
570-575	HIGH: 1 Red; 4 Green; 1/2 mile spacing	LOW: Add 1 Red on dike at 571 during low water	
575-580	HIGH: 6 Red; 0 Green; 1/2 mile spacing	LOW: Add 1 Red during low water	
580-585	HIGH: 0 Red, 5 Green; 1/2 mile spacing	LOW: Add 1 Green at 581 during low water	
585-590	HIGH: 6 Red; 2 Green; 1/2 mile spacing	LOW: Add 1 Red during low water.	
590-595	HIGH: 2 Red; 7 Green; 1/2 mile spacing	LOW: Add 1 Green lead-in at 594 during low water	Consider virtual buoy for northern dike on LDB at Victoria Bend
595-598	HIGH: 0 Red; 4 Green; 1/2 mile spacing	LOW: No significant changes	
		***** Pilots noted that not all dikes are present on "updated charts". Pilots would also like to see "set depth" of buoys reflected in coding data of buoy overlays.**	*****Pilots would like to see cutters drop a virtual buoy on areas in which buoys will not hold when coming off high water periods.**

River Segment	HIGH WATER	LOW WATER	Notes:
LMR 683-813.6 AHP	**KANKAKEE uses the Memphis guage for buoy placement**		
	High Water Set Gauge: 26-feet and falling	**Low Water Set Gauge: 0-feet**	
683-685	HIGH: 3 Green; 0 Red; 3/4 mile spacing	LOW: No Significant Changes for Low Water	
685-690	HIGH: 5 Green; 0 Red; 1/2 mile spacing	LOW: Add 1 Green	Bluff bar at 686-687
690-695	HIGH: 0 Green; 6 Red; 1/2 mile spacing	LOW: Add 2 Red	
695-700	HIGH: 6 Green; 0 Red; 1/2 mile spacing	LOW: Add 3 Green	Add virtual buoy at dike 693
700-705	HIGH: 2 Green; 9 Red; 1/2 mile spacing	LOW: Add 1 Red above 703	Bar building south below below 702 - Add virtual buoys at Finley & Desoto Front.
705-710	HIGH: 8 Green; 0 Red; 1/2 mile spacing	LOW: Add Green at 705; Add Green at 709	
710-715	HIGH: 4 Green; 3 Red; 1/2 mile spacing	LOW: Add Green 710.5; Add Red at 712.5	
715-720	HIGH: 3 Green; 7 Red; 1/2 mile spacing	LOW: Add 2 Red; Reduce to 1/4 mile spacing	
720-725	HIGH: 10 Green; 0 Red; 1/2 mile	LOW: Add Green at 719.5, 720.5, 723.5	
725-730	HIGH: 4 Green; 6 Red; 1/2 mile spacing	LOW: Add Green 726.5; Add 3 Red	
730-735	HIGH: 5 Green; 0 Red; 1/2 mile spacing	LOW: Add 1 Green at 732.5.	
735-740	HIGH: 5 Green; 0 Red; 1/2 mile spacing	LOW: No Significant Changes at Low Water	
740-745	HIGH: 3 Green; 4 Red; 1/2 mile spacing	LOW: Add 4 Green; Add 3-4 Red	
745-750	HIGH: 1 Green; 8 Red; 1/2 mile spacing	LOW: Add 2 Red	
750-755	HIGH: 5 Green; 5 Red; 1/2 mile pacing	LOW: Add 2 Green; Add 2 virtual buoys on Corona Bar Dikes.	

River Segment	HIGH WATER	LOW WATER	Notes:
755-760	HIGH: 5 Green; 2 Red; 1/2 mile spacing	LOW: Add 2 Green; Reduce to 1/4 spacing; Add virtual buoy at Cedar PT Upper	Possible Point Way / Bend Way needed at 757-758 when Memphis Gauge -7.
760-765	HIGH: 3 Green; 5 Red, spacing 1/4-1/2 mile	LOW: Add 1 Green; Add one Red	
765-770	HIGH: 0 Green; 6 Red; 1/2 mil spacing	LOW: Add 1 Red; 2 Green	Mark Sunken Barge at Reverie when memphis Gauge -7. Rock Pile at Beer Joint.
770-775	HIGH: 9 Green; 4 Red; 1/2 mile spacing	LOW: Add 3 Green; Add 3 Red	Add Virtual Buoy at Randolph.
775-780	HIGH: 4 Green; 3 Red; 1/4-1/2 mile spacing	LOW: Add 2 Red	
780-785	HIGH: 3 Green; 6 Red, 1/2 mile	LOW: Add 2 Red	
785-790	HIGH: 0 Green; 7 Red; 1/2 mile spacing	LOW: Add 2 Red	Add virtual buoys on dikes south of Kate Audbrey.
790-795	HIGH: 9 Green; 4 Red; 1/2 mil spacing	LOW: Add 2 Red; Add 2 Green	
795-800	HIGH: 3 Green; 5 Red; 1/4 mile spacing at 797, 1/2 mile elsewhere	LOW: Add 1 Red at 797.5.	Add virtual boy at 796 to protect lead-in at 797
800-805	HIGH: 7 Green; 0 Red; 1/2 mile spacing	LOW: Add 1 Green	
805-810	HIGH: 0 Green; 11 Red; 1/4-1/2 mile spacing	LOW: Add 3 Red.	Hump Building mid-channel at 808.5. Mark when Memphis Gauge 5.
810-814	HIGH: 0 Green; 6 Red, 1/2 mile spacing	LOW: Add 2 Red.	
		***** Pilots noted that not all dikes are present on "updated charts". Pilots would also like to see "set depth" of buoy reflected in coding data of buoy overlays.**	*****Pilots would like to see cutters drop a virtual buoy on areas in which buoys will not hold when coming off high water periods.**

River Segment	HIGH WATER	LOW WATER	Notes:
LMR 598-683 AHP	**KANAWHA uses Helena guage for buoy placement**		
	High Water Set Gauge: 32-feet and falling	**Low Water Set Gauge: 7-feet**	
598-600	HIGH: 0 Green; 4 Red; 1/2 mile spacing	LOW: Add 2 Red, Reduce to 1/4 mile spacing.	Widen upper lead-in buoys channelward to roundoff turn.
600-605	HIGH: 4 Green; 4 Red; 1/2 mile spacing	LOW: Add 2 Green; Reduce to 1/4 mile spacing	
605-610	HIGH: 0 Green; 7 Red; 1/2 mile spacing	LOW: Reduce spacing to 1/4 mile at shoal at 608.	Shoal at 608
610-615	HIGH: 6 Green; 0 Red; 1/2 mile spacing	LOW: Add 1 Green; maintain 1/4 mile spacing	
615-620	HIGH: 3 Green; 3 Red; 3/4 mile spacing	LOW: Add 2 Red; Reduce to 1/2 mile spacing	Shoal between 615-616; Table-top building 619-620
620-625	HIGH: 2 Green; 7 Red; 1/2 mile spacing	LOW: No significant changes for low water.	
625-630	HIGH: 5 Green; 3 Red; 1/2 mile spacing	LOW: Add 1-2 Red; 2 Green	Added lead-in Green between 626-627 & marked dikes
630-635	HIGH: 1 Green; 6 Red; 1/2 mile spacing to 632; 1/4 mile spacing around bend	LOW: Add 1 Red; Maintain 1/4 mile spacing	Bar building at 632.5; Added Red at 632.5; Beware submerged rockpile at 633.5
635-640	HIGH: 9 Green; 2 Red; 1/4 mile spacing to 638, 1/2 mile spacing above 638	LOW: Add 1-2 Green during low water at Huey Upper.	
640-645	HIGH: 0 Green; 9 Red; 1/2 mile spacing	LOW: No significant changes at low water.	
645-650	HIGH: 5 Green, 0 Red; 1/2 mile spacing	LOW: Add 2 Green	Kangaroo Point Dike Buoy Will Not hold. Add Vitural Buoy.
650-655	HIGH: 0 Green; 6 Red; 1/2 mile lead-in spacing, then 1/4 mile spacing	LOW: Add 2 Red; 1-2 Green	
655-660	HIGH: 3 Green; 6 Red; 1/2 mile spacing	LOW: Add 1 Red; maintain 1/2 mile spacing	
660-665	HIGH: 0 Green; 2 Red; 1/2 mile spacing	LOW: Add 2 Red 662-663; Add 1 Green at 663.5.	
665-670	HIGH: 8 Green, 2 Red; 1/2 mile spacing; 1/4 mile spacing 665-667	LOW: Add VIRTUAL Red at Helena Island Dike	Shoal at 666.5 moving in and out at Fryer Lake Bar

River Segment	HIGH WATER	LOW WATER	Notes:
670-675	HIGH: 0 Green; 7 Red; 1/2 mile spacing	LOW: No significant change at low water	
675-680	HIGH: 4 Green; 3 Red; 1/2 mile spacing	LOW: Add 1 geen at 675; Add 1-2 Red; Reduce to 1/4 mile spacing	
680-683	HIGH: 3 Green; 6 Red; 1/4 mile spacing below 680, then 1/2 mile	LOW: Add 1 Red on lower end	Shelf building at 680.
		***** Pilots noted that not all dikes are present on "updated charts". Pilots would also like to see "set depth" of buoy reflected in coding data of buoy**	*****Pilots would like to see cutters drop a virtual buoy on areas in which buoys will not hold when coming off high water periods.**

River Segment	Normal/Mid-Water	Adjustment for HIGH WATER	Adjustment for LOW WATER	Notes:
LMR 813 - 953	CHENA utilizes Cairo gage for buoy placement	High Water Gage: Cairo: 32-Ft	Low Water Gage: Cairo 15-Ft	
	Normal/Mid-Water approximartley 20 feet on the Cairo gage.	Does not get underway when Cairo Gage above 40		
		None		
813 - 820	11 Green: no Red 1/2 mile	None	Add 3 Green	
820 - 825	3 Green 1/2 mile	None	Add 3 Green: Add 1 Red at 823.3	Shoal building at 823 durning Low water
825 - 830	6 Red: 4 Green 1/2 mile	None	Add 1 Green: Add 3 Red	Mark dikes at Skull bones @829
830 - 835	3 Green: 4 Red 1/2 mile	None	Add 1 Green: Add 1 Red: slide lead in buoy down	
835 - 840	4 Red: 2 Green 1/2 mile	None	Add 1 Green: Add 1 Red	Bar building LDB below bridge
840- 845	9 Green: No Red 1/2 mile	None	Add 2 Green: Add 1 Red	Southern most dike sticks out past trail dike wall Add 1 Red at tip.
845 - 850	8 Red: 2 Green mile	None	No buoys Added: Adjust Spacing of exsiting	Shoal building across at ship yard
850 - 855	6 Red: 4 Green 1/2 mile	None	Add 2 Red @ 853	Gate dikes @ 852 priorty
855 - 860	8 Green: no Red 1/4-1/2 mile	None	Add 2 Green: adjust spacing	
860 - 865	9 Red: no Green 1/4-1/2 mile	None	Add 1 Red: Move 861.8 Red to 862	
865 - 870	2 Red, 7 Green; 1/4 to 1/2 mile spacing	None	move top 2 Red at 866 towards channel and Add 1 Red / adjust spacing on Green, Add 1 Green @ 869.5	
870 - 875	7 Green, no Red; 1/4 to 1/2 mile spacing	None	Add 2 Green @ 871.5 and 873	
875 - 880	4 Red, 4 Green, 1/4 to 1/2 mile spacing	None	Add 2 from 875 to 876, add Green at 878	Add permanent Green at 878
880 - 885	2 Red, 4 Green; 1/4 to 1/2 mile spacing	None	Add 1 Green at 882.3 and 2-3 Red from 882 to 883	
885 - 890	8 Red, 1 Green; 1/4 to 1/2 mile spacing	None	Adjust as needed	Watch channel conditons towards head of New Madrid and buoy as per survey

River Segment	Normal/Mid-Water	Adjustment for HIGH WATER	Adjustment for LOW WATER	Notes:
890 - 895	5 Red, 1 Green; 1/4 to 1/2 mile spacing	None	Add 3 from 892 to 894; Add Green at 893.6	
895 - 900	2 Red, 5 Green; 1/4 to 1/2 mile spacing	None	Add 4 Green from 896 to 900	
900 - 905	0 Red, 6 Green; 1/4 to 1/2 mile spacing	None	Add 4 Green	
905 - 910	4 Red, 2 Green; 1/4 to 1/2 mile spacing	None	Add 4 Red	
910 - 915	5 Red, 2 Green; 1/4 to 1/2 mile spacing	None	Add 2 from 914 to 915	
915 - 920	1 Red, 7 Green; 1/4 to 1/2 mile spacing	None	Add 2 Green from 918 to 920	
920 - 925	3 Red, 5 Green; 1/4 to 1/2 mile spacing	None	Add 2 Red for sandbar and 1 Green	
925 - 930	6 Red, 4 Green; 1/4 to 1/2 mile spacing	None	None	
930 - 935	6 Red, 2 Green; 1/4 to 1/2 mile spacing	None	Add 2-3 Red	
935 - 940	2 Red, 2 Green; 1/4 to 1/2 mile spacing	None	Add 2 Red and 1 Green at 937	
940 - 945	4 Red, 3 Green; 1/4 to 1/2 mile spacing	None	Add 1 Green	
945 - 950	5 Red, 1 Green; 1/4 to 1/2 mile spacing	None	None	
950 - 953	5 Red, 3 Green; 1/4 to 1/2 mile spacing	None		

River Segment	Normal/Mid-Water	Notes:	
UMR 0 - 104	**Set at Cairo 15**	**No Specific High or lower water set, slight adjustments based off river gages for lower water conditions. Cutter does not get underway when Cairo gage above 40 . Buoys spaced as needed.**	
00 - 05	Green: 8 Red: 8	3-4 buoys set on bend dikes during higher water	Ensure 1 Red at ft, possible add range lights lined up off Cairo highway bridge
05 - 10	Green: 3 Red: 4	Add 2-3 Red at MM8.7 at lower water,	
10 - 15	Green: 11 Red: 6	Use chain and double sinker at 16.2, Add 3-4 Green at MM 15-16	Possibly remove daybeacon at Grand Lake lower Light, shift Green at 17.8 down 2 dikes
15 - 25	Green: 6 Red: 8	Add 5 Red near MM 23-24 at lower water,	
25 - 32	Green: 5 Red: 4	Add 1 Red and 1 Green at lower water belower Commerical Point	
32 - 37	Green: 5 Red: 4	Add 4 Green at goose island at lower water	
37 - Thebes	Green: 5 Red: 7	Add 2 additional Red near Thebes Bridge	Stretch below Thebes is critical and needs to be well maintaned
Grays Pt	Green: 4 Red: 4	None	Shoals below fleeting area near MM 46, Add 2 Red at lower water at MM47
44 - Cape G Bridge	Green: 3 Red: 11	Add buoys as needed at lower water near dikes on bend.	Critical stretch for high and lower water, add buoy at slack water harbor with double sinker and chain, Add Green at rock pile, Add USACE symbol to chart
Cape G Bridge - 58	Green: 8 Red: 5	Add 1 Red above bend at Cape Rock near daybeacon	Ensure furthest extending dike near MM 58
58 - 63	Green: 3 Red: 1	Add Green as needed at MM61 at lower water	
63 - 68	Green: 4 Red: 4	Add 1-2 Green at lower water above Shepherd Point near MM65, add 1 Red near Moccasion Spring	

CGC CHIPPEWA (Assessment Completed 28 Jul 16)

River Segment	Normal/Mid-Water	Notes:	
68 - 73	Green: 2 Red: 6	Add 1 Green near MM70 at lower water	
73 - 82	Green: 8 Red: 9	Critical Stretch at high and lower water	Mark rock shelf belower boatramp near pipeline
82 - 88	Green: 8 Red: 1	Minor adjustments at lower water, number remain same	
88 - 95	Green: 2 Red: 8	Add 1-2 Red at bend belower MM 95 at lower water	
95 - 99	Green: 7 Red: 1	Add 2 Green at lower water	
99 - 104	Green: 7 Red: 4	Add 2-3 Red if shoaling between 100 - 102, add 2 Green near Mansker	
104 - Chester	Green: 7 Red: 4	Add 2-3 Green if necessary near Ford transfer dock at 105, minor adjustments	Add a Red straight out from elevator near MM 108

River Segment	Normal/Mid-Water	Notes:	
UMR 110 - 200	**Pooled water. No specific High and Low water sets. Set at 5 on St. Louis Gage**	**No specific High or Low water set. Buoys spaced as needed.**	
110 - 115	Green: 7 Red: 3	Add 2 Reds from 114 - 115.5 at lower water	Add 2-3 Green above Chester Bridge all the time,
115 - 121	Green: 6 Red: 4		Critical area near 119
121 - 126	Green: 2 Red: 0		
126 - 132	Green: 6 Red: 2		
132 - 137	Green: Red: 5	Add Green below rock dock at lower water in the vicinity of 135.	
137 - 144	Green: 4 Red: 4		
144 - 150	Green: 0 Red: 0	Add 3 Reds and 2 Green at lower water	
150 - 154.5	Green: 1 Red: 0	Add 3-4 Reds at lower water	
154.5 - 159	Green: 1 Red: 3	Add 1 Red and 1 Green at MM 159 at lower water	
159 - 164	Green: 3 Red: 8	Add 1 Green and 1 Red at lower water	
164 - 171	Green: 0 Red: 6	Add 2-3 at lower water	
171 - 175	Green: 0 Red: 0	Add 2-3 Reds and 2-3 Green a low water	172-173 critical area to be marked.
175 - 180	Green: 0 Red: 0	Add 1 Red and 2 Green at lower water	
180 - 185	Green: 2 Red:	Add 1 Red at lower water 183.7	Add Virtual/synthetic aid near 182 near Chevron dike, Add Red buoy on dike on IL side near 182.5
185 - 194	Green: 0 Red: 0	Canal No CG Buoys	
194 - 200	Green: 7 Red:	Add 1 Green at lower water	Critical area at high and low water

River Segment	Normal/Mid-Water	Additions for Low or High Water	Notes:
UMR 200 - 295	**Pooled water. No specific High and Low water sets. Set 9' at flat pool for entire AOR**		
200.8-205	Green: 5 Red: 3	No specific High or Low water set	Buoy spacing approximately 1/4 mile apart. Mel Price, during max drawdown, there is a problem at mile 203 with buoy position
205-210	Green: 6 Red: 5	No specific High or Low water set	Green buoy end of dike (MM 209) - Critical
210-215	Green: 5 Red: 6	No specific High or Low water set	
215-220	Green: 11 Red: 9	No specific High or Low water set	Green buoy on dike (MM 218) - Critical (2 sinkers needed) Add Red buoy at MM 219. Numerous buoys needed in this section. Buoys set approx 1/2 - 3/4 mi apart
220-225	Green: 10 Red: 10	No specific High or Low water set	Remove Red buoy at Royal Landing (MM 223) Squaw Light downgrade to dayboard (MM 224)
225-230	Green: 9 Red: 8	No specific High or Low water set	1/4 mi buoy spacing on Red buoys - Shallow Mackers Landing - move Red buoy off dike and out towards channel. Re-evaluate Red buoy at end of Two Branch Isl and remove, if possible
230-235	Green: 6 Red: 11	No specific High or Low water set	1/4 mi or less buoy spacing
235-240	Green: 6 Red: 6	No specific High or Low water set	Remove Hastings Red buoy (MM 238-239)
240-245	Green: 7 Red: 9	No specific High or Low water set	
245-250	Green: 11 Red: 6	No specific High or Low water set	1/4 mi buoy spacing on average
250-255	Green: 5 Red: 10	No specific High or Low water set	Check for hump at MM 252.6 and Remove Red buoy if not necessary
255-260	Green: 10 Red: 7	No specific High or Low water set	Check Green buoy at Westport Isl Light (MM 256) and remove if not necessary. Add Green buoy on dike at MM 258
260-265	Green: 9 Red: 9	No specific High or Low water set	
265-270	Green: 7 Red: 12	No specific High or Low water set	
270-275	Green: 4 Red: 7	No specific High or Low water set	Remove Green buoy at MM 272 Confirm 2 Green buoys at MM 275
275-280	Green: 1 Red: 8	No specific High or Low water set	Remove Red buoy at Crider Bend (MM 279)

River Segment	Normal/Mid-Water	Additions for Low or High Water	Notes:
280-285	Green: 2 Red: 5	No specific High or Low water set	
285-290	Green: 9 Red: 5	No specific High or Low water set	
290-295	Green: 5 Red: 9	No specific High or Low water set	
295-300	Green: 8 Red: 5	No specific High or Low water set	Green buoy is set at MM 299.5 due to rocks which are exposed at low water
300-305	Green: 6 Red: 6	No specific High or Low water set	Cave Hollow is constantly moving, buoys must adjust with river.
305-310	Green: 4 Red: 5	No specific High or Low water set	
310-315	Green: 8 Red: 10	No specific High or Low water set	2017 Navigation season - change Green buoys from 4th to 6th class in this area. Red buoy at MM 314 - Critical (esp at higher water)
315-320	Green: 6 Red: 7	No specific High or Low water set	
320-325	Green: 2 Red: 9	No specific High or Low water set	
325-330	Green: 5 Red: 2	No specific High or Low water set	
330-335	Green: 6 Red: 11	No specific High or Low water set	Hogback (Critical area) - constantly changing - need to maintain this section straight.
335-340	Green: 9 Red: 14	No specific High or Low water set	
340-345	Green: 8 Red: 6	No specific High or Low water set	Remove Green buoy at Smoot Chute (MM 341) Remove Green buoy at MM 342 Add Green buoy just above L&D 20
345-350	Green: 8 Red: 12	No specific High or Low water set	
350-355	Green: 4 Red: 10	No specific High or Low water set	Hinge Point at Gregory critical.
355-360	Green: 7 Red: 9	No specific High or Low water set	
360-365	Green: 10 Red: 13	No specific High or Low water set	Remove Green buoy above mouth of DeMoines River (MM 361.5) Put buoys on double sinkers in the area around DeMoines River.
365-370	Green: 0 Red: 5	No specific High or Low water set	Buoys set 1 mi apart - one lighted
370-375	Green: 1 Red: 6	No specific High or Low water set	Buoys set 1 mi apart
375-380	Green: 8 Red: 8	No specific High or Low water set	1 Red lighted buoy
380-385	Green: 5 Red: 9	No specific High or Low water set	1 Green lighted buoy
385-390	Green: 8 Red: 7	No specific High or Low water set	Pontoosack Light downgrade to dayboard (MM 388)

River Segment	Normal/Mid-Water	Additions for Low or High Water	Notes:
390-395	Green: 9 Red: 13	No specific High or Low water set	1 Green lighted buoy - change to can (MM 394.3) Remove Red buoy at MM 393.5
395-400	Green: 10 Red: 11	No specific High or Low water set	Burlington Island - Critical area Add a day beacon to the Island
400-405	Green: 4 Red: 6	No specific High or Low water set	
405-410	Green: 5 Red: 7	No specific High or Low water set	
410-415	Green: 14 Red: 11	No specific High or Low water set	Green buoys from MM 413-415 - Critical
415-420	Green: 8 Red: 10	No specific High or Low water set	Check Red buoy at Benton (mm 419.7) - if good water, remove buoy
420-425	Green: 11 Red: 6	No specific High or Low water set	Remove Red buoy at MM 423 (waiting spot)
425-430	Green: 10 Red: 7	No specific High or Low water set	Critical buoys from MM 425-427 . Remove rock pile RDB at MM 425 - old Huron Island Light stand
430-435	Green: 11 Red: 10	No specific High or Low water set	Critical buoys at MM 431 (rock)
435-440	Green: 3 Red: 4	No specific High or Low water set	
440-445	Green: 8 Red: 6	No specific High or Low water set	
445-450	Green: 8 Red: 11	No specific High or Low water set	
450-455	Green: 0 Red: 9	No specific High or Low water set	
455-460	Green: 5 Red: 10	No specific High or Low water set	
460-465	Green: 11 Red: 9	No specific High or Low water set	IL City Landing Light - downgrade to day beacon
465-470	Green: 11 Red: 11	No specific High or Low water set	
470-475	Green: 10 Red: 9	No specific High or Low water set	
475-480	Green: 10 Red: 16	No specific High or Low water set	Rock behind Red buoys MM 476-477 Check Green side at MM 477 for shallow water and for possible need for buoy(s)
480-485	Green: 6 Red: 4	No specific High or Low water set	Remove Credit Isl Light (MM 484.6)
485-490	Green: 11 Red: 13	No specific High or Low water set	Critical area (rock) Remove a buoy off Dynamite Island
490-495	Green: 16 Red: 12	No specific High or Low water set	2017 Navigation season - possible location to test 6th class buoys
495-500	Green: 4 Red: 6	No specific High or Low water set	
500-505	Green: 8 Red: 11	No specific High or Low water set	
505-510	Green: 6 Red: 6	No specific High or Low water set	
510-515	Green: 6 Red: 5	No specific High or Low water set	
515-522.5	Green: 13 Red: 12	No specific High or Low water set	

River Segment	Normal/Mid-Water	Additions for Low or High Water	Notes:
UMR 522 - 858	**Pooled water. No specific High and Low water sets. Set 9' at flat pool entire AOR**	No specific High or Low water set	Buoys set 1/4 mi apart on average
522.5-525	Green: 5 Red: 4	No specific High or Low water set	
525-530	Green: 14 Red: 14	No specific High or Low water set	Widen buoys between Pomme De Terre and Elk River (MM 526)
530-535	Green: 7 Red: 14	No specific High or Low water set	Red buoy (MM 530) - Critical
535-540	Green: 7 Red: 7	No specific High or Low water set	
540-545	Green: 8 Red: 10	No specific High or Low water set	
545-550	Green: 9 Red: 11	No specific High or Low water set	Green buoy (MM 549) - Critical
550-555	Green: 14 Red: 12	No specific High or Low water set	
555-560	Green: 10 Red: 10	No specific High or Low water set	Remove Red buoy below MM 558.5
560-565	Green: 13 Red: 8	No specific High or Low water set	Green buoys (MM 560-562) - Critical
565-570	Green: 7 Red: 7	No specific High or Low water set	
570-575	Green: 11 Red: 6	No specific High or Low water set	
575-580	Green: 2 Red: 9	No specific High or Low water set	Buoys (MM 172-173) - Critical Red buoy below bridge - move out of the river (towards dike) to open channel width
580-585	Green: 7 Red: 8	No specific High or Low water set	
585-590	Green: 17 Red: 15	No specific High or Low water set	Downgrade Maquoketa Light to day beacon
590-595	Green: 10 Red: 10	No specific High or Low water set	Green buoy on dike (MM 595) constantly getting hit - Critical turn (*contact USACE to discuss)
595-600	Green: 10 Red: 15	No specific High or Low water set	
600-605	Green: 10 Red: 5	No specific High or Low water set	Check Red buoy at Jack Oak (MM 602) for hump - Widen if possible
605-610	Green: 9 Red: 12	No specific High or Low water set	
610-615	Green: 14 Red: 11	No specific High or Low water set	Remove Red buoy at St Louis Wood Yard (MM 611.5) Check Red buoy above MM 614 and remove if deep enough
615-620	Green: 12 Red: 8	No specific High or Low water set	Entire 5 mile span - Critical area
620-625	Green: 7 Red: 7	No specific High or Low water set	
625-630	Green: 11 Red: 10	No specific High or Low water set	
630-635	Green: 6 Red: 7	No specific High or Low water set	

River Segment	Normal/Mid-Water	Additions for Low or High Water	Notes:
635-640	Green: 7 Red: 7	No specific High or Low water set	
640-645	Green: 11 Red: 9	No specific High or Low water set	
645-650	Green: 6 Red: 10	No specific High or Low water set	Remove Green buoy just below the lock (MM 647) - if possible
650-655	Green: 8 Red: 5	No specific High or Low water set	
655-660	Green: 5 Red: 9	No specific High or Low water set	
660-665	Green: 10 Red: 11	No specific High or Low water set	Remove Green buoy at MM 662
665-670	Green: 11 Red: 6	No specific High or Low water set	Entire 5 mile span - Shallow Add Red buoy above Indian Camp Light (MM 665.5)
670-675	Green: 5 Red: 6	No specific High or Low water set	
675-680	Green: 2 Red: 7	No specific High or Low water set	
680-685	Green: 12 Red: 10	No specific High or Low water set	
685-690	Green: 16 Red: 14	No specific High or Low water set	Remove rock pile at Benover Slough (MM 686.7) Disestablish Raft Channel Head Light (MM 688) (*already in process)
690-695	Green: 14 Red: 9	No specific High or Low water set	All buoys between MM 693-695 - Critical
695-700	Green: 10 Red: 9	No specific High or Low water set	
700-705	Green: 8 Red: 10	No specific High or Low water set	Remove Green buoy at MM 700 Check Red buoy just below MM 701 - if good water, remove it (wait spot) Shallow above lock wall at L&D 7
705-710	Green: 17 Red: 11	No specific High or Low water set	Check water below Green buoy (MM 706) - boats get stuck (wait spot)
710-715	Green: 10 Red: 9	No specific High or Low water set	
715-720	Green: 13 Red: 13	No specific High or Low water set	
720-725	Green: 6 Red: 12	No specific High or Low water set	
725-730	Green: 9 Red: 11	No specific High or Low water set	Betsy Slough - critical (MM 730-732)
730-735	Green: 15 Red: 13	No specific High or Low water set	Betsy Slough - critical (MM 730-732)
735-740	Green: 9 Red: 7	No specific High or Low water set	Re-evaluate Red buoys at dikes MM 736-737 (wait spot along Bass Island)
740-745	Green: 14 Red: 16	No specific High or Low water set	All buoys between MM 740-743 - Critical
745-750	Green: 15 Red: 12	No specific High or Low water set	Shallow and narrow - Critical span
750-755	Green: 8 Red: 10	No specific High or Low water set	Beef Slough (MM 754) - Critical
755-760	Green: 14 Red: 14	No specific High or Low water set	Shallow - Critical
760-765	Green: 8 Red: 12	No specific High or Low water set	

River Segment	Normal/Mid-Water	Additions for Low or High Water	Notes:
765-775	Green: 2 Red: 3	No specific High or Low water set	Lake Pepin - Check buoys and remove if not needed
775-780	Green: 5 Red: 0	No specific High or Low water set	Point No Point lighted buoy (MM 780) - Reduce to non-lit Reduce number of Green buoys
780-785	Green: 8 Red: 9	No specific High or Low water set	Shallow - Critical
785-790	Green: 10 Red: 4	No specific High or Low water set	
790-795	Green: 9 Red: 10	No specific High or Low water set	
795-800	Green: 7 Red: 5	No specific High or Low water set	
800-805	Green: 12 Red: 10	No specific High or Low water set	Shallow and Narrow (MM 800-803) - Critical
805-810	Green: 14 Red: 14	No specific High or Low water set	2017 navigation season - Change 4th to 6th class buoys on dikes at Prescott for evaluation
810-815	Green: 3 Red: 11	No specific High or Low water set	
815-820	Green: 15 Red: 18	No specific High or Low water set	Green buoy just above lock (MM 816) - Critical Nininger Lake to Boulanger Bend (MM 818-821) - Critical
820 - 825	Green: 13 Red: 16	No specific High or Low water set	Nininger Lake to Boulanger Bend (MM 818-821) - Critical 2017 Navigation Season - Test 6th class buoys at Pine Bend (MM 822.5-823.5) Turn at Pine Bend (MM 824) - Critical
825 - 830	Green: 7 Red: 12	No specific High or Low water set	Remove Green buoy above MM 826 if present (wait spot)
830 - 835	Green: 13 Red: 8	No specific High or Low water set	
835 - 840	Green: 7 Red: 3	No specific High or Low water set	
840- 845	Green: 0 Red: 0	No specific High or Low water set	
845 - 850	Green: 0 Red: 0	No specific High or Low water set	
850 - 857.5	Green: 0 Red: 0	No specific High or Low water set	

River Segment	Nomal/Mid-Water	Additions for Low or High Water	Recommended Adjustments
ILR	**Set at 9' for entire AOR**	**No specific High or Low water set**	
00 - 05	Green: 6 Red: 3	None	Buoys set 1000' apart
05 - 10	Green: 1 Red: 8	None	
10 - 15	Green: 5 Red: 5	None	
15 - 20	Green: 0 Red: 2	None	
20-25	Green: 0 Red: 4	None	Remove Red buoy at MM 22
25-30	Green: 5 Red: 12	None	
30-35	Green: 6 Red: 5	None	
35-40	Green: 9 Red: 9	None	Discontinue Twin Isl Light (MM 37.8)
40-45	Green: 9 Red: 8	None	
45-50	Green: 11 Red: 7	None	
50-55	Green: 7 Red: 8	None	Discontinue Little Blue Light (MM 54) Check creeks for fluff bars (MM 52-53)
55-60	Green: 5 Red: 13	None	Florance Light buoys (3 greens above bridge) - Critical Move Red buoy above Bevington Light (lay up spot/fleet on opposite bank)
60-65	Green: 7 Red: 8	None	Remove green buoy just below MM 64
65-70	Green: 6 Red: 7	None	Green buoys above MM 66 - Critical
70-75	Green: 5 Red: 9	None	All Green buoys - Critical
75-80	Green: 14 Red: 15	None	Remove Green buoy below Morris Isl Light
80-85	Green: 1 Red: 5	None	Briggs Landing Light (MM 84) - Critical Need additional Red (lead in) buoy above Briggs
85-90	Green: 8 Red: 5	None	Green buoys below Beardstown Bridge - Critical
90-95	Green: 8 Red: 9	None	Red buoys at Frederick Light (MM 91) - Critical
95-100	Green: 5 Red: 1	None	Green buoys at Sangamon Chute Light (MM 98.2) - Critical
100-105	Green: 4 Red: 4	None	
105-110	Green: 13 Red: 6	None	Red buoys at Anderson Lake Light (MM 109.4) - Critical
110 - 115	Green: 16 Red: 15	None	
115 - 120	Green: 3 Red: 6	None	

CGC SAGAMON (Assessment completed 11 JAN 17)

River Segment	Nomal/Mid-Water	Additions for Low or High Water	Recommended Adjustments
120 - 125	Green: 8 Red: 5	None	Buoys at Siebs Lake Light (MM 121) - Critical Add Green buoy above Havana Landing (MM 120) Add Red buoy (MM 122)
125 - 130	Green: 7 Red: 4	None	Green buoys at Liverpool Light (MM 129) - Critical
130 - 135	Green: 8 Red: 7	None	
135 - 140	Green: 10 Red: 11	None	Green buoys below (MM 137) - Critical
140-145	Green: 7 Red: 7	None	
145 - 150	Green: 7 Red: 20	None	Mackinaw River Light buoys - Critical Entire wiggles buoys (MM 149-151) - Critical
150 - 155	Green: 6 Red: 6	None	Entire wiggles buoys (MM 149-151) - Critical
155-163	Green: 7 Red: 6	None	Buoys below Peoria Lock - Critical (shallow) Buoys along Kickapoo Bend (MM 159-160) - Critical
163-167	Green: 8 Red: 9	None	Peoria Lake: narrows - Critical
167-173	Green: 16 Red: 18	None	Peoria Lake: All buoys - Critical
173 - 180	Green: 16 Red: 15	None	Peoria Lake: All buoys - Critical
180 - 185	Green: 8 Red: 9	None	Buoys at MM 180-182.5 - Critical *note: check clearance Atchison/Topeka/Santa Fe railroad bridge (D8 bridges) - 10' discrepancy
185 - 190	Green: 9 Red: 9	None	
190-195	Green: 1 Red: 10	None	
195 - 200	Green: 9 Red: 13	None	Red buoy above bridge (MM 196) - Critical
200-205	Green: 7 Red: 10	None	Green buoys in bend at (MM 200) - Critical
205-210	Green: 8 Red: 4	None	Green buoys above Hennipen Bridge - Critical
210-213	Green: 4 Red: 8	None	All buoys between MM 210-213 - Critical
213-218	Green: 11 Red: 13	None	All buoys at MM 214-217.5 - Critical
218-225	Green: 10 Red: 6	None	Remove Red buoy at MM 225
225-230	Green: 12 Red: 9	None	Need Red buoy marking the bar above the IL Central RR bridge (MM 225)
230-235	Green: 12 Red: 16	None	All buoys at MM 230-231 - Critical Buoys across lake (MM 231-237) - Critical

CGC SAGAMON (Assessment completed 11 JAN 17)

River Segment	Nomal/Mid-Water	Additions for Low or High Water	Recommended Adjustments
235-240	Green: 4 Red: 8	None	Buoys across lake (MM 231-237) - Critical
240-245	Green: 18 Red: 10	None	Buoys at Bulls Isl (MM 240-241.5) - Critical
245-250	Green: 9 Red: 17	None	All buoys (MM 245-247 & MM 248-250) - Critical
250-255	Green: 9 Red: 3	None	
255-260	Green: 12 Red: 10	None	All buoys (MM 258-259.5) - Critical
260-265	Green: 6 Red: 3	None	
265-270	Green: 11 Red: 11	None	
270-275	Green: 8 Red: 10	None	Bonel Light (MM 274) - Critical
275-280	Green: 15 Red: 7	None	All buoys (MM 276-278) - Critical Treets Isl cut (MM 279) - Critical
280-285	Green: 10 Red: 18	None	Red buoys (MM 281-283) - Critical
285-291.1	Green: 4 Red: 1	None	Green buoys above Ruby St (MM 289-290) - Critical

River Segment	Normal/Mid-Water	Notes:	
OHR	Pooled water. No specific High and Low water sets. Uses 10 ft at Normal Pool		
00 - 06	Green: 1 Red: 2	Marking rocks/wrecks	
06 - 13	Green: 7 Red: 4	Shallows/shoals/channel	
13 - 20	Green: 4 Red: 1	Marking shoal, set up for bridges	
20 - 23	Green: 2 Red: 2	Marking channel/shoal	
22 - 27	Green: 5 Red: 3	Marking channel/shoal, bridge approch and exit to Beaver River	Possibly add matching red to greens by bridge piers
27 - 31	Green: 3 Red: 2	Marking channel/bridge approach	
31 - 37	Green: Red: 3	Marking shoal at Phillis Island and 1 bridge approach	
37 - 41	Green: 4 Red:	Marking turn/channel	Georgetown Island Light is considered critical to industry, marks island that is barely visible, also fleeting, poor RADAR picture, prevents industry from confusing lights due to passing cars
42 - 47	Green: 4 Red: 3	Marking Babbs Island, bridge approaches	Babbs Island is 4th class due to legacy navigation safety issues/concerns
47 - 50	Green: 2 Red: 1	Marking Bakers Island	
50 - 54	Green: 0 Red: 1	Marks shoal/island, island at MM 52	
55 - 59	Green: 3 Red: 1	Marking shoals/channel	MM 59 Look for shoaling near Foxton Bar
60 - 63	Green: 5 Red: 1	Marking channel/bridge approach	
63 - 68	Green: 8 Red: 3	Marking channel/bridge approach,	Cables Eddy Light considered critcal, used as range, bridge markers important as bridge casts shadows
69 - 72	Green: 2 Red: 2	Marking shoals/bridge approach	
73 - 84	Green: 0 Red: 0	No Buoys	
84 - 87	Green: 10 Red: 5	Marking channel/shoals; important stretch no changes recommended	Departing Pike Island lock gives operators a range, Lower Sisters Light
88 - 91	Green: 6 Red: 1	Marks channel/shoals, bridge approach at 91.5	Add 2 Red at municipal wharf
91 - 94	Green: 2 Red: 2	Marking channel/shoals, bridge approach	Wheeling Island Light at 91.1
94 - 99	Green: 2 2 Lights	Marking channel/shoals, bridge approach	

River Segment	Normal/Mid-Water	Notes:	
99 - 105	Green: 2 1 Light	Marking channel/shoals, bridge approach	Light and Dayboard Critical, helps steer bend due to background lighting, lots of traffic
105 - 108	Green: 2 2 Lights	Campatina Light, marking shoals/channel	
108 - 116	Green: 0 Red: 4	Marking shoals/channel	
116 - 121	Green: 1 Red: 2	2 Lights, top and bottom of bend	
121 - 129	Green: 0 Red: 0	none	
129 - 132	Green: 2 Red: 1	Marking channel/shoals, lock approach, greens marking old lock walls	
132 - 136	Green: 1 2 Red	Marking channel/shoals, dike at head and foot of island	
136 - 142	Green: 0 0 Red	None	
143 - 145	Red: 2	Marking Island	
145 - 150	Green: 2 Red: 1	Marking Old lock	
150 - 154	Green: 1 Red: 2	Marking channel, grape island	
154 - 158	Green: 0 Red: 2	Marking bridge approach, 3 lights	
158 - 161.1	Green: 1 2 Red	Marking channel, approach to Willow Island Lock	
161.1 - 166	Green: 1 1 Red	Marking channel, shoals, Bull Creek Light	
166 - 170.5	Red: 4	Marking channel, shoals	
170.5 - 174	Red: 1	Marking Marietta Island, and Muskingum River	
174 - 178	Green: Red: 2	Marking Muskingum Island DIke	
178 - 182	Green: 2 Red: 0	Marking Old Lock	
182 - 186	Green: 2 4 Red	Marking shoals/channel	Traps Run Light Critical, used to judge making Parkersburg Bridges
186 - 190	Green: 0 2 Red	Head and Foot of Blennerhassett Island	
190 - 194	2 Green Lights	Marking shoals/channel	
194 - 199	Green: 0 5 Red	Marking shoals/channel; red aids critical at newbary island	
199 - 205.5	1 Light Red: 2	Marking shoals/channel	
205.5 - 210	Green: 1 Red: 4	Marking shoals/channel, 3 Red at longbottom critical	

CGC OSAGE (Assessment Completed 1 Jul 17)

River Segment	Normal/Mid-Water	Notes:	
210 - 216	Green: 2 1 Red	Marking shoals/channel	
216 - 222	Green: 2 Red: 1	Marking shoals/channel, Red marking old structure, critical at 221.5	
222 - 235	Red: 1	Leetard Island Light, Red buoy at 235 considered critical	
235 - 244	Green: 2 Red: 0	Marking old lock wall	
244 - 248	Green: 2 1 Light	Sliding HIll Bend light considered critical for approaching vsls, buoys at 245/47 is rocks	
248 - 252	Green: 2 2 Red	Marking bridge approach, Green at 251.5 is ice breaker/structure	
252 - 261	Green: 0 Red: 1	Red marks 8 mile island	
261 - 266	Green: 1 2 Red	Marking Bridge buoys at 265, mouth of Kanawha	
266 - 279	Green: 0 0 Red	None	
279 - 284	Green: 0 Red: 0	None	
284 - 288	Green: 2 6 Red	Marking bar/channel	
288 - 293	Green: 1 2 Red	Marking shoals/channel	
293 - 298	1 Green	Light discontinued at 298, Can buoy on RDB	
298 -304	2 Green 2 Red	Marking shoals/channel, Greens mark old lock 27	
304 - 309	4 Green, 3 Red	Marking bridge approaches	Add Red nuns to compliment greens at 309
309 - 313	4 Greens	Marking shoals/channel	Add downbound Red at 311
313 - 322	None	None	
322 - 326	2 Greens	Marking bridge approach	
326 - 330	2 Red	Marking bridge approach, Ironton Bridge Light out being rebuilt	
330 - 342	None	None	
342 - 344	5 Red	Marking shoal/bar along LDB	

River Segment	Normal/Mid-Water	Notes:	
OHR	Pooled water. No specific High and Low water sets. 19-22 feet at Pool		
344 -347	Red: 2	Marking chanel	
347 - 351	Green: 3 Red: 8	Marking shoal/channel/bridge approach	
351 - 356	Green: 4 Red: 4	Marking shoal/channel/ Greens Marking bridge approach	
356 - 361	Green: 3 Red: 4	Marking shoal/channel/bridge approach	
361 - 366	Green: 2 Red: 4	Marking shoal	
366 - 369	Green: 0 Red: 3	Marking shoal	
369 - 376	Green: 4 Red: 0	Marking shoal	
376 - 383	Green: 1 Red: 2	Marking old lock (Reds), can see top at low water	
383 - 388	Green: 0 Red: 0	None	
388 - 391	Green: 0 Red: 2	Marking isolated shoal	
391 - 396	Green: 4 Red: 3	Marking Manchester Island	
396 - 408	Green: 0 Red: 0	None	
408 - 410	Green: 2 Red: 2	Marking shoals	
410 - 437	Green: 0 Red: 0	Wide open bank to bank	
437 - 441	Green: 9 Red: 0	Marking shoal water along RDB	
441 - 445	Green: 2	Marking shoal water along RDB	
445 - 448	Green: 2 Red: 4	Marking shoals/channel, isolated shoal at 448	
448 - 453	Green: 3 Red: 3	Marking shoal	
453 - 456	Green: 3 Red: 9	Marking shoal along LDB, Greens mark isolated shoals	
456 - 459	Green: 2 Red: 2	Marking shoal along LDB, Greens mark isolated shoals	
459 - 464	Green: 2 Red: 1	Marking bridge approach, gravel bar	
464 - 469	Green: 0 Red: 2	Marking shoal; look at additional Reds near Dayton Bar (3 missing Reds)	
469 - 471	Green: 2 Red: 3	Marking channel/bridges through Cincinnati	

River Segment	Normal/Mid-Water	Notes:	
471 - 478	Green: 0 Red: 1	Marking isolated shoal	
478 - 483	Green: 2 Red: 1	Marking isolated shoals, ice piers	
483 - 492	Green: 2 Red: 2	Marking Lawrenceburg Bridge	
492 - 499	Green: 0 Red: 1	Marking isolated shoal	
499 - 520	Green: 0 Red: 0	None	Possibly add Reds at MM 520/Patriot Bend
520 - 532	Green: 0 Red: 0	None	Possibly add Greens at Sugar Creek Bend MM 522.5
532 - 536	Green: 4 Red: 5	Marking shoals/channel, approach to Markland, Greens mark towhead; legacy spacing	
536 - 541	Green: 4 Red: 7	Marking shoals/channel	
541 - 544	Green: 5 Red: 1	Critical Craigs Bar area, sharp shoals, possibly not sand bottom	Craigs Bar Lower Light is critical if/when the buoys are missing or off station
544 - 548	Green: 2 Red: 2	Marking shoal	
549 - 553	Green: 2 Red: 2	Marking isolated shoals	
553 - 560	Green: 2 Red: 2	Marking bridge span	
560 - 564	Green: 1 Red: 4	Green Marking isolated shoal: Red bend Marking shoal	
564 - 565	Green: 0 Red: 2	Finishing out the Red bend	
565 - 571	Green: 1 Red: 0	Isolated shoal	
571 - 576	Green: 0 Red: 1	Isolated shoal	
576 - 581	Green: 0 Red: 3	Marking a shoal on a bend	
581 - 603	Green: 0 Red: 0	None	
603 - 605	Green: 6 Red: 2	Marking bridges in Louisville and lining approach to L&D; Reds critical	Add in the L&I Green
605 - 611	Green: 1 Red: 13	Marking sand bar and shoal on the Red side; Green Marking a rock (critical buoy	Thin out the Red line below Sherman Mitton Bridge (McAlpine Red line) currently 13 buoys
611 - 615	Green: 2 Red: 0	Marking isolated shoal	
615 - 627.5	Green: 1 Red: 0	Isolated shoal	Consider adding Red at MM 625.5
628 - 631	Green: 3 Red: 0	Marking a sand bar	
631 - 641	Green: 0 Red: 0	None	
641 - 648	Green: 2 Red: 0	Marking the bridge	
648 - 660	Green: 0 Red: 0	None	
660 - 663	Green: 3 Red: 2	Greens Marking upper Blue Riverlisland; Reds Marking Lower Blue River Island	
663 - 715	Green:0 Red: 0	None	

River Segment	Normal/Mid-Water	Notes:	
715 - 724	Green: 3 Red: 3	Greens Marking a legit sand bar; RedsMarking the bridge	
724 - 727	Green: 0 Red: 4	Marking Fulton Bar	
727 - 730	Green: 6 Red: 0	Marking sand bar at Mussle shoal bar	
730 - 733	Green: 2 Red: 5	Marking bend and bar	2 or 3 Reds could be removed; MM 731.5
733 - 737	Green: 2 Red: 7	Marking Anderson Bar on the Red side, and channel	MM735.3 - 737, Anderson Bar; Reds could be thinned out.
737 - 741	Green: 7 Red: 0	Marking shoal and slow turn near Corn Island	7 buoys is minimal amout needed to accurately mark the bend
741 - 748	Green: 2 Red: 6	2 Red Marking the bridge, 4 below ; Greens marking the shoal	could remove some of the Reds leading to the bridge
748 - 751	Green: 2 Red:0	Greens marking shoal;	
751 - 753	Green: 0 Red: 3	Marking a shoal	
753 - 759	Green: 5 Red: 0	Marking bridge and shoal on a bend	
759 - 766	Green: 2 Red: 0	Marking Ellis Island	
766 - 774	Green: 0 Red: 3	Marking a shoal near Scuffelton Island	
774 - 779	Green: 0 Red: 5	Lead in for the L&D	
779 - 787	Green: 3 Red: 8	Marking shoals and channel	
787 - 791	Green:11 Red:2	Marking shoals and channel, buoys are in good place, using buoys to see shape of river	MM785 LDB potential buoy, Green River approach (ACOE). Also likely candidate for E-ATON
791 - 796	Green: 3 Red: 12	Evansville Bend, buoys marking shoals/bend, 2nd most critical part of OBION AOR	Industry likes to cut the point and take out the buoy line, no room to stop, very unforgiving
796 - 802	Green: 3 Red: 5	Marking shoals/channel near Dutch Island	
802 - 806	Green: 6 Red: 1	Marking shoals/channel; CSX Railroad Bridge arpproach and Henderson Island	Occasionally hit upper Green near Henderson Island due to fluid dynamics
806 - 810	Green: 9 Red: 2	Marking shoals/channel, Reds mark sharp shoal	
810 - 817	Green: 2 Red: 7	Marking shoals/channel; Cypress Bend	Important to empties, especially in high winds
817 - 822	Green: 8 Red: 2	Marking Diamond Island	
822 -827	Green: 4 Red: 3	Marking shoals/channel	

CGC OBION (Assessment Completed 1 Jul 17)

River Segment	Normal/Mid-Water	Notes:	
827 - 830	Green: 1 Red: 4	Marking shoals/bend at Mt. Vernon	
830 - 836	Green: Red: 8	Marking shoals/channel	Industry/CG use opposite slough from the marked channel; possibly adjust sailing line at Slim Island Slough
836 - 845	Green: 2 Red:	Marking former hazard	Possibly remove, not marking anything as per recent survey
845 - 850	Green: 4 Red: 8	Critical Area; mouth of Wabash	Changes often after high water
850 - 856.5	Green: 13 Red: 7	Bend/Raleigh Bar Area, Greens critical	
856.5 - 859	Green: 1 Red: 2	Marking bridge approach	
859 - 862	Green: 1 Red: 6	Marking Cincinnati Island	
862 - 868	Green: 4 Red: 8	Marking shoals/channel	
868 - 878	Green: 16 Red: 6	Marking channel/shoals near Dekoven, critical location	
878 - 893	Green: Red: 1	Marking Dike at 862.8	
893 - 896	Green: 4 Red:	Greens mark good shoal at Irish Jimmy's Bar	
896 - 903	Green: Red:	None	
903 - 908	Green: 2 Red: 2	Greens mark old lock at 903.5; marking isolated shoals with Red	
908 - 918	Green: 2 Red: 0	Greens mark Stewartd Island	

River Segment	Normal/Mid-Water	Notes:	
Cumberland River	**Pooled water. No specific High and Low Water sets.**		
373 - 242	Few ATON	Run by CIMMARON once per year, not used by any known industry	No Changes
239 - 242	Green: 8 Red: 9	Marking turn, buoys in good place	No Changes
239 - 232	Green: 16 Red: 15	Buoys marking channel, give good RADAR picture	No Changes
232 - 227	Green: 6 Red: 10	Marking channel/shoals on narrow bend	No Changes
227 - 216.2	Green: 19 Red: 14	Old Hickory and approaches; marking channel and bend	No Changes
216.2 - 200	Green: 35 Red: 27	Lock tailwaters; buoys marking shoals and absolutely necessary, very shallow	No Changes
200 - 181	No Buoys	Good water, no buoys	No Changes
181 - 170	Green: 1 Red: 7	Cockrill Bend Lower daybeacon needed for turn, leave in place	No Changes
170 - 155	No Buoys	Good water, no buoys, discussed shore aids	No Changes
155 - 148	Green: 5 Red: 5	Cheatam Lock and approaches, Reds marking Harpeth Island	No Changes
148 - 140	Green: 5 Red: 5	Cheatam Tailwaters; controlled depth but buoys critical at low water	No Changes
140 - 104	Green: 1 Red: 2	Good water, not many buoys, buoys marking obstructions	Discussed removing shore aids, few needed, can pull Cummings and Smith Branch Daybeacons, same with Hematite and Johnson daybeacons
104 - 94.5	Green: 9 Red: 7	Cross Creek mouth critical; otherwise bank to bank good water	Checkered House daybeacon, Not used by industry can be removed
94.5 - 89	Green: 2 Red: 10	Marking slight turn near Cross Creek light, giving good RADAR picture	No Changes
89 - 86.2	Green: 1 Red: 1	Marking specific shoals/obstructions otherwise good water	No Changes
86.2 - 82	Green: 7 Red: 6	Marking channel/shoals	No Changes
82 - 78.1	Green: 6 Red: 3	Marking channel/shoals	No Changes
78.1 - 74.7	Green: 11 Red: 11	Narrow "S" turns, very difficult to navigate	Widen out turns if possible
74.7 - 69	Green: 14 Red: 14	Very narrow channel, high currents/debris take out Greens	Add Red at MM 70

CGC CIMMARON CBR (Assessment Completed 1 Jul 17)

River Segment	Normal/Mid-Water	Notes:	
69 - 62.6	Green: 20 Red: 20	Marking very narrow channel, Absolutely no water (4ft) outside reds	Very narrow, Request USACE dredge
62.6 - 57	Green: 14 Red: 14	Barkley Lake, very shallow, many gated pairs. Tough turn at MM 60	Buoys at MM 60 commonly hit/destroyed. No Changes recommended however.
57 - 53	Green: 11 Red: 11	Narrow, shallow straightaway, many gated pairs	No Changes
53 - 49	Green: 13 Red: 13	Narrow, shallow straightaway, many gated pairs	No Changes
49 - 45	Green: 10 Red: 11	Barkley Lake and Ingram Shoals, very shallow, many gated pairs	No Changes
45 - 39	Green: 34 Red: 23	Barkley Lake, very shallow, many gated pairs	No Changes
30 - 39	Green: 25 Red: 25	Approach to Barkley; Barkley Lake, winding curves, many gated pairs	No Changes
30 - 00	Green: 20 Red: 14	Barkley Lock tail water, good water but hard rock bottom outside channel; no changes. Bad shoaling near Luka, buoys critical, request USACE Dredge	Industry not using Taylor's Farm daybeacon can remove, same with Vicksburg Daybeacon

River Segment	Normal/Mid-Water	Notes:	
TNR	Pool is 11 ft at 355 elevation		
206.7 - 200	Green: 16 Red: 6	Marking shoals and channel and approach to lock; Red side is rock	Add 1 Green
200 - 190	Green: 9 Red: 7	Marking Wolf Island and Diamond Island; no changes recommended	Industry does use Diamond Light to line up, leave in place
190 - 180	Green: 3 Red: 2	Savannah TN to Orras Point; Red marking bad rocks at Coffee Landing	No changes
180 - 170	Green: 3 Red: 5	Marking channel/shoals; good feedback from industry on turn	Satillo Daybeacon at 173.3 not used, could remove
170 - 160	Green: 7 Red: 0	Swallow Bluff Island, leave buoys and daybeacons in place all are used	Right below Swallow Bluff on right descending bank, hunting club has intense lighting which can be dangerous to navigation.
160 - 150	Green: 7 Red: 2	Approach to Clifton Bridge and Beach Creek; no changes	Beach Creek daybeacon, occasioinally used for parking and meeting but otherwise not important
150 - 140	Green: 7 Red: 3	Double Islands and turns; Greens not very important could possibly be removed	Housing development gives operators geographic reference that eliminates need for buoys
140 - 130	Green: 2 Red: 2	Approach to Perrysville Bridge; no changes recommended	Lick Creek Daybeacon possibly damaged/destroyed industry needs repaired
130 - 120	Green: Red: 1	No changes	
120 - 110	Green: 4 Red: 2	Good water, marking approach to I-40 Bridge and near Duck River	
110 - 100	Green: 18 Red: 7	Mouth of Duck River, backside of Greens gets shallow quickly, 2 Greens marking wreck	No changes; Green sign for Birdsong Marina can be confused with dayboard, lots of drunk rec boaters
100 - 90	Green: 16 Red: 15	Approach to New Johnsonville RR bridge, lots of shoaling, marked well, no changes	Recent grounding, industry stated master was out of channel
90 - 80	Green: 15 Red: 15	Getting into KY Lake, marking channel, lots of gated pairs, good feedback regarding current buoy placement.	
80 - 70	Green: 15 Red: 15	KY Lake gated pairs; many gated pairs marking channel	Big Sandy Light/Buoy important

River Segment	Normal/Mid-Water	Notes:	
70 - 60	Green: 15 Red: 15	KY Lake gated pairs; many gated pairs marking channel	No Changes
60 - 50	Green: 15 Red: 15	KY Lake gated pairs; many gated pairs marking channel; good water	3 Greens near Pine Bluff Light not used, can remove; Pine Bluff Light dangerous for CG to maintain, industry says its useful and good aid
50 - 40	Green: 15 Red: 15	KY Lake gated pairs; many gated pairs marking channel and approach to Eggners	Buoys near Highland junction light are critical; sailing line near Eggner's Ferry Bridge does not match new bridge
40 - 30	Green: 6 Red: 2	KY Lake, good water, not many buoys	No changes
30 - 22	Green: 8 Red: 1	KY Lake, good water, no changes recommended	
22 - 00	Green: 16 Red: 9	KY Lock tailwaters; marking shoals and channel and bridge in Paducah	No changes

River Segment	Normal/Mid-Water	Notes:	
TNR			
654 - 472	400 ATON	Marking Shoals, bridges, no comments	
472 - 467	Green: 9 Red: 10	No recommended changes	
424 - 467	Green: Red:	Marking rocks and critical navigation igation hazards, do not change	
426 - 423	Green: 10 Red: 9	Marking rocks and critical navigation hazards; maybe more reds	
420 - 423	Green: 8 Red: 9	Marking channel and bridge approach; no changes	
412 - 420	Green: 8 Red: 2	Marking narrow channel; no changes	
412 - 392	No ATON	No changes	
392 - 390	Green: 2 Red: 0	ATON not critical, industry comfortable with straight, remove ATON	
390 - 386	Green: 3 Red:	Marking bridge approach, channel, industry lines up on it; no changes	BB Comer Bridge lights very hard to see at MM 386
386 - 382	Green: 8 Red: 6	Marking channel and bridge approach; industry uses Green buoyss, recreational vessels use Red buoys	
382 - 379	Green: 6 Red: 4	No changes	
379 - 375	Green: 5 Red: 6	Gated pairs marking channel; no changes, industry likes the gated pairs	Dangerous area during fog
375 - 372	Green: 7 Red: 6	Gated pairs marking channel; no changes, industry likes the gated pairs	Safety harbors marked on charts that are not safe for tows
372 - 363	Green: 50 Red: 50	Gated pairs marking channel; no changes, industry likes the gated pairs	Backside of Bridgeport Island,TVA

River Segment	Normal/Mid-Water	Notes:	
363 - 353	Green: 8 Red: 6	Marking channel and bridge approach, no changes recommended	
349 - 345	Green: 4 Red: 10	Reds marking channel; no changes recommended	
345 - 338	Green: 8 Red: 8	Marking Flint River mouth and Greenbriad light; industry occasionally runs backside of the island.	
338 - 335	Green: 3 Red: 2	Marking mouth of river above Hobbs Island; rock hazards at mouth; no change	
335 - 333	Green: 5 Red: 5	Gated pairs marking channel and bridge approach near Redstone Arsenal	Industry states some of the ATON is unnecessary; could mark turning point with one Red and a bridge buoy and remove all others
333 - 331	Green: 5 Red: 3	Marking channel and shoals; good set near bridge, no changes	
331 - 303	Green: 0 Red: 2	Reds marking chanel near Meow Mix facility; no changes	
303 - 298	Green: 20 Red: 20	Marking two channels; lots of fleet tows in area, need the ATON for red flags	No changes recommended; heavy shoaling in areas outside channel
298 - 288	Green: 20 Red: 20	Gated pairs marking channel; no changes, industry likes the gated pairs	Shoal at 293 on Red side that absolutely needs to be marked, add 1 red buoy to shoal
288 - 284	No ATON	No changes	
284	Green: 3 Red: 4	Mouth of Elk River; industry does not use; could possibly privatize ATON on Elk River	
284 - 274	No ATON	Industy does not use lights; potentially remove fixed ATON in this area	MM 278.2 Wheeler, MM 286.2 Light remove, Some Masters do utilize Second Creek Light leave in place
274 - 272	Green: 3 Red: 4	Marking shoal, channel, and approach to lock; no changes recommended	

River Segment	Normal/Mid-Water	Notes:	
272 - 269	Green: 1	Marking steering point and TVA water testing equipment; no changes	
269 - 265	Wilson Pool Light	2 lights in this area, industry only uses downstream light; remove upper	
265 - 256	Green: 1 Red: 0	Marking set/exit to marina; dangerous area due to recreational traffic	
256 - 252	Green: 5 Red: 9	Marking shoals and channel; could remove lower Reds	
252 - 248	Green: 7 Reds: 1	Marking shoals and channel; no changes	
248 - 244	Green: 4 Red: 1	Marking shoals and channel; try to straighten out	
244 - 240	Red: 6 Green: 6	Marking shoals and channel; try to straighten out	
240 - 236	Red: 7 Green : 9	Marking shoals and channel; no changes	
236 - 226	Green: 20 Red: 20	Gated pairs marking channel; no changes, industry likes the gated pairs	
226 - 209	No ATON	No changes	
209 - 206.7	Green: 3 Red: 3	Marking channel and approach to lock; no changes	

River Segment	Normal/Mid-Water	Notes:	
AR River including Verdigas and San Bois	**Pooled water. No specific High and Low water set. Spacing: ½ Mile in straight aways and ¼ Mile in bends**		
AR			
75-80	Green: 1 Red: 4	No Concerns.	
80-85	Green: 8 Red: 4	No Concerns.	
85-90	Green: 3 Red: 2	Shoaling exists coming out of the lock.	
90-95	Green: 4 Red: 8	No Concerns.	
95-100	Green: 6 Red: 6	No Concerns.	A buoy could be placed at the end of the dike at MM 99.
100-105	Green: 5 Red:9	No Concerns.	
105-110	Green: 2 Red: 1	No Concerns.	
110-115	Green: 3 Red: 3	Possibly add a Greenbuoy at the pile of rock even though it is mostly clear.	Used to be a pile of rocks at MM 112 with a Greenbuoy near it. Most of the pile has been down to enable barges to safely cross over.
115-120	Green: 6 Red: 1	No concerns.	
120-125	Green: 3 Red: 4	No concerns.	
125-130	Green: 10 / 11 Red	Greenbuoy above 126.9 seems too far into the channel might need to move it out.	
130-135	Green: 6 Red: 10	No concerns.	Finger dike buoys have been adjusted some.
135-140	Green: 10 Red: 8	No concerns.	No issues.
140-145	Green: 10 Red: 6	No concerns.	Shoaling at 142-143 near Greenbuoy line.
145-150	Green: 1 Red: 11	No concerns.	
150-155	Green: 7 Red: 3	No concerns.	
155-160	Green: 8 Red: 3	No concerns.	
160-165	Green: 2 Red: 6	No concerns.	
165-170	Green: 4 Red: 7	No concerns.	
170-175	Green: 9 Red: 2	No concerns.	
175-180	Green: 7 Red: 10	179 - 180 is beginning to shoal.	
180-185	Green: 11 Red: 4	No concerns.	
185-190	Green: 7 Red: 6	185.7 Check for Red buoy. Add if missing.	
190-195	Green: 5 Red: 5	No concerns.	
195-200	Green: 4 Red: 8	No concerns.	

River Segment	Normal/Mid-Water	Notes:	
200-205	Green: 5 Red: 3	No concerns.	Downstream of lock 10 powerhouse side, shoaling is getting larger.
205-210	Green: 4 Red: 5	Buoy should be placed at 209.7 when day-beacon falls in.	
210-215	Green: 9 Red: 13	No concerns.	
215-220	Green: 2 Red: 4	No concerns.	
220-225	Green: 11 Red: 12	No concerns.	Shallow along the Red buoy line. Staying center channel is best.
225-230	Green: 12 Red: 10	No concerns.	
230-235	Green: 7 Red: 7	No concerns.	
235-240	Green: 3 Red: 10	No concerns.	
240-245	Green: 7 Red: 7	No concerns.	
245-250	Green: 5 Red: 8	No concerns.	
250-255	Green: 3 Red: 7	No concerns.	
255-260	Green: 3 Red: 3	No concerns.	
260-265	Green: 1 Red: 0	No concerns.	
265-270	Green: 0 Red: 3	No concerns.	
270-275	Green: 2 Red: 7	Add a Green to 272.	Shallows quickly outside of the channel.
275-280	Green: 15 Red: 4	No concerns.	
280-285	Green: 5 Red: 11	No concerns.	
285-290	Green: 7 Red: 7	No concerns.	
290-295	Green: 3 Red: 7	No concerns.	Red buoy at 292.3 likes to dive.
295-300	Green: 6 Red: 5	No concerns.	
300-305	Green: 8 Red: 2	No concerns.	
305-310	Green: 2 Red: 8	No concerns.	308.9 Red buoy gets lost frequently.
310-315	Green: 8 Red: 4	No concerns.	
315-320	Green: 0 Red: 12	No concerns.	Swift waters after lock.
320-325	Green: 4 Red: 1	No concerns.	
325-330	Green: 2 Red: 6	No concerns.	
330-335	Green: 5 Red: 4	No concerns.	
335-340	Green: 10 Red: 5	No concerns.	Robert S. Kerr Lake entrance.
340-345	Green: 17 Red: 21	No concerns.	Home Port for MUSKINGUM.
345-350	Green: 12 Red: 11	At 346.1 check buoy depths for shallow water.	
350-355	Green: 8 Red: 6	No concerns.	
355-360	Green: 6 Red: 9	No concerns.	
360-365	Green: 5 Red: 4	No concerns.	
365-370	Green: 3 Red: 1	No concerns.	
370-375	Green: 8 Red: 11	No concerns.	
375-380	Green: 3 Red: 4	No concerns.	

CGC MUSKINGUM (Assesment Completed 1 Nov 17)

River Segment	Normal/Mid-Water	Notes:	
380-385	Green: 3 Red: 3	An additional buoy may be needed needed near the shoaling.	Center channel shoaling around 381-382
385-390	Green: 2 Red: 4	No concerns.	
390-395	Green: 8 Red: 4	No concerns.	Very important buoy at 395
Verdigris			
395-400 Verdigris	Green: 5 Red: 1	No concerns.	
400-405 Verdigris	Green: 2 Red: 0	No concerns.	
405-410 Verdigris	Green: 1 Red: 0	No concerns.	
410-415 Verdigris	N/A	No concerns.	No Buoys.
415-420 Verdigris	N/A	No concerns.	No Buoys.
420-425 Verdigris	Green: 3 Red: 1	No concerns.	Shoaling on Red side of channel at 421.
425-430 Verdigris	Green: 1 Red: 0	No concerns.	
430-435 Verdigris	N/A	No concerns.	No Buoys.
435-440 Verdigris	Green: 2 Red: 0	No concerns.	
440-445 Verdigris	Green: 0 Red: 2	No concerns.	Entrance to Port of Catoosa is very shallow.
San Bois			
0-5 Sans Bois	Green: 10 Red: 11	No concerns.	
5-10 Sans Bois	Green: 10 Red: 9	No concerns.	Cutter's small boat operates here with small buoys and doormoors to mark channel leading to animal feed facility.

River Segment	Normal/Mid-Water	Notes:	
AR and White Rivers	**Pooled water. No specific High and Low water sets. Spacing: ½ mile in straights and ¼ mile in turns**	**White River: Downsizing to 6th class buoys wouldn't present any issues.**	
0-5 WHT	Green: 6 Red: 11	Nice to know where tip of the dike is at MM 2.5. If USACE can set the I-beam back at the dike end it would be helpful.	
5-10 WHT	Green: 9 Red: 4	Dredging at MM 6.2 turn from the USACE would be helpful.	Turn at MM 6 is the highest reported grounding area. Buoys are in at least 12ft of water in the turn. Shoal is building on the inside at MM 8.6 but still ok for now.
10-15 AR	Green: 0 Red: 0	N/A	No Buoys present.
15-20 AR	Green: 3 Red: 2	1 Red and 1 Green buoy at 17.8 are not necessary. Good water exists throughout area.	Buoys located at 17.8 not needed.
20-25 AR	Green: 4 Red: 9	Remove 2 of the buoys between 20-22 and space out a bit. Keep the buoys on each side of the bridge at 22.6.	Would like to open up Red buoy spacing at miles 20-22.
25-30 AR	Green: 6 Red: 10	At MM 27.8 Check depths center channel, shoaling has occurred.	No issues.
30-35 AR	Green: 7 Red: 6	No concerns.	H beam at 31.8 is laying at a 45° angle. We'll put buoys to cover these if they go down.
35-40 AR	Green: 11 Red: 7	2 Red buoys would be beneficial around 39.5 – 38.5 along the dikes as close as possible for temporary relief until I beams are replaced.	H beams are located at various locations along dikes. Would like to place a Green buoy at 40.3 at the dike tip.
40-45 AR	Green: 6 Red: 10	No concerns.	Shoal at LDB on MM 42 is building out slighly.
45-50 AR	Green: 7 Red: 6	On the lower approach there are dikes washed out with water topping over. No floating aid concerns.	Coming out of Lock 3 a Green has been added to mark the shoal.
50-55 AR	Green: 5 Red: 0	No concerns.	No issues.
55-60 AR	Green : 10 Red: 7	No concerns.	No Issues.

River Segment	Normal/Mid-Water	Notes:	
60-65 AR	Green: 4 Red: 8	No concerns.	Some buoys were moved in the last year around MM 64 to account for shoaling but it hasn't changed in the past year.
65-70 AR	Green: 5 Red: 2	No concerns.	No issues.
70-75 AR	Green: 3 Red: 4	No concerns.	Middle Green buoy at 70.5 disappears sometimes.

River Segment	Pooled Water 9 ft	Notes:	
Tenn-Tom			
217-220	No buoys	No Changes	
220-225	0 Green : 2 Red; mark hazards	No Changes	
225-230	2 Green : 0 Red; mark hazards	No Changes	
230-235	No buoys	No Changes	
235-240	1 Green : 0 Red; mark hazard	No Changes	
240-245	1 red: 3 green mark hazard	No Changes	
245-250	1Green : 2 Red; mark hazard	No Changes	
250-255	2 Green: 0 Red; mark hazards	No Changes	
255-260	8 Green : 3 Red; mark turns at 1000 ft spacing	No Changes	
260-265	3 Green : 2 Red; mark hazards	No Changes	MM266 green above lock critical for safe navigation when lock is being drained
265-270	2 Green : 4 Red; mark hazards	No Changes	
270-275	2 Green : 3 Red; mark hazards	No Changes	MM271 investigate placement of red buoy, suspect stump field
275-280	1 Green : 0 Red; mark hazard	No Changes	
280-285	1 Green : 1 Red mark hazard	No Changes	MM288 1 red and 1 green critical mark bars
285-290	7 Green : 7 Red; mark turns 1000 ft spacing	No Changes	MM290 all greens in turn are needed for safe navigation
290-295	2 Green : 8 Red; mark turns 1000 ft spacing	No Changes	Research reason for second red at 294
295-300	6 Green : 9 Red; 1000 feet spacing in turns	MM 296 Add 1 red to mark rock shelf, MM297 add red to mark rock point	
300-305	2 Green : 8 Red; mark turns 1000 ft spacing	No Changes	
305-310	5 Green : 6 Red; mark turns 1000 ft spacing	No Changes	MM307 Red buoy critical marks dike
310-315	1 Green : 2 Red; mark hazard	MM310 Investigate placement of 1 red buoy	
315-320	10 Green : 8 Red; mark turns 1000 ft spacing	No Changes	MM311-312 gated pairs critical mark stumps on both sides
320-325	3 Green : 3 Red; mark hazards	No Changes	

River Segment	Pooled Water 9 ft	Notes:	
325-330	3 Green : 8 Red; mark turns 1000 ft spacing	No Changes	
330-335	3 Green : 8 Red; mark turns 1000 ft spacing	MM 331 Add red to mark shallow water where old river meets Tenn-Tom	
335-340	1 Green : 4 Red; mark hazard	No Changes	
340-345	3 Green : 1 Red; mark hazards	No Changes	
345-350	0 Green : 4 Red; mark hazards	No Changes	
350-355	3 Green : 4 Red; mark sand bar	No Changes	
355-360	13 Green : 13 Red; Gated pairs	No Changes	
360-365	11 red: 12 green gated pair	No Changes	MM358-361 many gated pairs mark channel as there many stumps outside of channel
365-370	6Green : 0 Red; mark hazards	No Changes	
370-375	3 Green : 4 Red; Gated pair	No Changes	
375-380	13 Green : 14 Red; Gated pair	No Changes	MM377-MM391 many gated pairs mark channel, outside channel is shallow water
380-385	16 Green : 15 Red; Gated pair	No Changes	
385-390	2 Green : 5 Red mark Turn	No Changes	
390-395	8 Green : 7 Red; Gated pairs	No Changes	
395-400	9 Green : 10 Red; Gated pair	No Changes	
400-406	12 Green : 11 Red; Gated pairs	No Changes	
Comments:	**Buoys marking the topside of ALL bends are the most critical when navigating all of the river**		

River Segment	Pooled Water 9 Ft	Notes:	
BWTA			
217-220	No Buoys	No Changes	
220-225	1 Green : 0 Red; mark hazard	No Changes	
225-230	No Buoys	No Changes	
230-235	0 Green : 1 Red; mark hazard	No Changes	
235-240	1 Green : 0 Red; mark hazard	No Changes	
240-245	0 Green : 2 Red; mark hazard	No Changes	
245-250	0 Green : 1 Red; mark hazard	No Changes	
250-255	3 Green : 1 Red; mark Hazard	MM253.5, Add 1 green to mark rock wall that sticks out	MM252.5 1 Red (critical rock wall)
255-260	0 Green : 1 Red; mark hazard	No Changes	
260-265	2 Green : 1 Red; mark hazards	No Changes	264.5 1 red (critical marks stump field)
265-270	No Buoys	No Changes	
270-275	0 Green : 5 Red; mark turn 1000 feet spacing	No Changes	
275-280	4 Green : 2 Red; mark turn 1/4 mile spacing	No Changes	
280-285	4 Green : 5 Red; mark turn 1000 ft spacing	No Changes	
285-290	9 Green : 6 Red; mark turns 1000 ft spacing	No Changes	
290-295	6 Green : 5 Red; mark turns 1000 ft spacing	No Changes	
295-300	17 Green : 12 Red; Gated Pairs	No Changes	MM300.5 (critical gated pairs for safe navigation)
300-305	3 Green : 8 Red; Gated Pairs	No Changes	MM300.5 (critical gated pairs for safe navigation)
305-310	9 Green : 14 Red; mark turns 1000 ft spacing and hazard	MM308: Add 2 greens 500 feet on top/bottom of current green aid (critical to mark rocks)	MM308 1 Green (critical marks rocks, see note),
310-315	9 Green : 12 Red; mark turns	No Changes	
315-320	13 Green : 8 Red; mark turns 1000 ft spacing	No Changes	
320-325	10 Green : 10 Red; Gated Pairs	No Changes	
325-330	7 Green : 7 Red; Gated Pairs	No Changes	

River Segment	Pooled Water 9 Ft	Notes:	
330-335	7 Green : 4 Red; mark turns and Hazards	MM332 Evaluate necessity of green buoy	MM332 Evaluate necessity of green buoy. Not sure if its necessary
335-340	No Buoys	No Changes	
340-345	0 Green : 1 Red; mark hazard	No Changes	
345-350	0 Green : 1 Red; mark hazard	No Changes	
350-355	No Buoys	No Changes	
355-360	2 Green : 3Red; mark hazards	No Changes	
360-365	1 Green : 1 Red; mark hazard	No Changes	
365-370	No Buoys	No Changes	
370-375	No Buoys	No Changes	
375-380	4 Green : 5 Red; mark turn 1000 ft spacing	No Changes	Mulberry/locust fork, Many buoys closely spaced to mark stump fields from MM385-end of AOR
380-385	8 Green : 4 Red; mark turns	No Changes	Mulberry/locust fork, Many buoys closely spaced to mark stump fields from MM385-end of AOR
Comments:	**Buoys marking the topside of ALL bends are the most critical when navigating all of the river**		

River Segment	Pooled Water 9 Ft	Notes:	
Tombigbee			
010-015	No Buoys		
015-020	3 Green : 0 Red; Mark Hazards		
020-025	1 Green : 0 Red; Mark Hazards	No Changes	
025-030	0 Green: 1 Red; Mark Hazards	No Changes	MM27 1 red turn buoy (critical for making turn marks point)
030-035	No Buoys	No Changes	
035-040	4 Green : 2 Red; Mark Turn 1/4 mile spacing	No Changes	MM37/38 2 red turn buoy (critical for making turn)
040-045	7 Green : 3 Red; Mark Turn 1000 ft spacing	No Changes	
045-050	4 Green : 6 Red; Mark Turns 1000 ft spacing	No Changes	
050-055	3 Green : 8 Red; Mark Hazards & Turns	No Changes	
055-060	10 Green : 6 Red; Mark Turns 1000	No Changes	MM55.5 Green (very Critical, If not there then not able to navigate safely
060-065	12 Green : 10 Red; Mark Turns	No Changes	
065-070	9 Green : 9 Red; Mark Turns	No Changes	
070-075	9 Green : 10 Red; Mark Turns 1000 ft spacing	No Changes	
075-080	6 Green : 5 Red; Mark Turns 1/4 mile spacing	No Changes	
085-090	7 Green : 9 Red; Mark Turn 1000 ft spacing	No Changes	MM89 2 greens (vital to line up bridge passage)
090-095	4 Green : 3 Red; Mark hazards	Each of the four New ACOE Dikes need to be marked with green buoy, 45ft Wire rope 1k sinker	MM91 (Jackson Bar)
095-100	5 Green : 4 Red; Mark turns 1000 ft spacing	No Changes	
100-105	6 Green : 6 Red; Mark turns 1000 ft spacing	No Changes	
105-110	8 Green : 6 Red; Mark turns 10000 ft spacing	No Changes	MM108-109 3 red, 5 green (critical to make safe turn bar sticks out)
110-115	4 Green : 6 Red; Mark Turns 1000 ft spacing	No Changes	
115-120	3 Green : 1 Red; Mark hazards	No Changes	MM116 (Critical for Lock passage)
120-125	No Buoys	No Changes	

CGC WEDGE (Assessment Completed 30 Nov 17)

River Segment	Pooled Water 9 Ft	Notes:	
125-130	1 Green : 0 Red; Mark hazards	No Changes	
130-135	No Buoys	No Changes	
135-140	No Buoys	No Changes	
140-145	2 Green : 0 Red; Mark hazards	No Changes	
145-150	2 Green : 1 Red; Mark hazards	MM149.5 Add green at the top of the point to aid in safely navigating the turn	MM149.5 1 green (critical to make turn)
150-155	0 Green : 2 Red; Mark hazards	No Changes	
155-160	0 Green : 2 Red; Mark hazards	No Changes	
160-165	0 Green : 5 Red; Mark hazards	No Changes	MM161 3 reds 1000ft spacing (critical to navigate a rock shelf)
165-170	0 Green : 1 Red; Mark hazards	No Changes	MM166 1 red (critical marks a rock)
170-175	1 Green : 2 Red; Mark hazards	No Changes	MM173 1 Green (critical marks effluent discharge pipe)
175-180	9 Green : 4 Red; Mark Turns 1000 ft spacing	No Changes	MM177 3 Greens (critical marks rock shelf)
180-185	5 Green : 13 Red; Mark turns 1000 ft spacing & hazards	MM181.5 Add green to mark rock shelf	MM189 1 Red (critical marks a land obstruction)
185-190	11 Green : 11 Red; Mark turns 1000 ft spacing & hazards	MM186.5 Add red to end of the rock shelf	MM186 1 red (critical marks a bar), MM188 (Critical marks a sand bar)
190-195	7 Green : 7 Red; Mark turns 1000 ft spacing & hazards	MM191 Add Green to mark top end of rock wall, MM 192 install 2 reds to mark rock shelf	MM191 2 red/2green (critical mark rock wall)
195-200	3 Green : 5 Red; Mark hazards	No Changes	
200-205	1 Green : 8 Red; Mark turns 1000 ft spacing & hazards	No Changes	
205-210	3 Green : 0 Red; Mark hazards	No Changes	
210-217	1 Green : 1 Red; Mark hazards	No Changes	MM211 1 red (critical marks rocks)
Comments:	**Buoys marking the topside of ALL bends are the most critical when navigating all of the river**		