

Supplement: Ranges of Length at Date for Central Valley Chinook Salmon Juveniles

Supplementary Table S.1. Sample date and corresponding assumed FL ranges (L = lower value; U = upper value) of length-at-date size criteria (Delta model) for assigning race to juvenile Chinook Salmon sampled at the pump intakes of state and federal water projects located in the Sacramento–San Joaquin Delta.

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
1-Jan	0	< 41	41	< 58	58	< 156	156	< 202	202	< 270				
2-Jan	0	< 41	41	< 59	59	< 157	157	< 203	203	< 270				
3-Jan	0	< 41	41	< 59	59	< 158	158	< 205	205	< 270				
4-Jan	0	< 41	41	< 60	60	< 159	159	< 206	206	< 270				
5-Jan	0	< 42	42	< 60	60	< 161	161	< 207	207	< 270				
6-Jan	0	< 42	42	< 61	61	< 162	162	< 209	209	< 270				
7-Jan	0	< 42	42	< 61	61	< 163	163	< 210	210	< 270				
8-Jan	0	< 43	43	< 62	62	< 165	165	< 211	211	< 270				
9-Jan	0	< 43	43	< 62	62	< 166	166	< 213	213	< 270				
10-Jan	0	< 43	43	< 63	63	< 167	167	< 214	214	< 270				
11-Jan	0	< 43	43	< 63	63	< 169	169	< 216	216	< 270				
12-Jan	0	< 44	44	< 64	64	< 170	170	< 217	217	< 270				
13-Jan	0	< 44	44	< 64	64	< 172	172	< 218	218	< 270				
14-Jan	0	< 44	44	< 65	65	< 173	173	< 220	220	< 270				
15-Jan	0	< 45	45	< 65	65	< 174	174	< 221	221	< 270				
16-Jan	0	< 45	45	< 66	66	< 176	176	< 223	223	< 270				
17-Jan	0	< 45	45	< 66	66	< 177	177	< 224	224	< 270				
18-Jan	0	< 45	45	< 67	67	< 179	179	< 226	226	< 270				

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
19-Jan	0	< 46	46	< 68	68	< 180	180	< 227	227	< 270				
20-Jan	0	< 46	46	< 68	68	< 182	182	< 229	229	< 270				
21-Jan	0	< 46	46	< 69	69	< 183	183	< 230	230	< 270				
22-Jan	0	< 47	47	< 69	69	< 185	185	< 232	232	< 270				
23-Jan	0	< 47	47	< 70	70	< 186	186	< 233	233	< 270				
24-Jan	0	< 47	47	< 70	70	< 188	188	< 235	235	< 270				
25-Jan	0	< 48	48	< 71	71	< 189	189	< 236	236	< 270				
26-Jan	0	< 48	48	< 71	71	< 191	191	< 238	238	< 270				
27-Jan	0	< 48	48	< 72	72	< 192	192	< 239	239	< 270				
28-Jan	0	< 49	49	< 73	73	< 194	194	< 241	241	< 270				
29-Jan	0	< 49	49	< 73	73	< 195	195	< 243	243	< 270				
30-Jan	0	< 49	49	< 74	74	< 197	197	< 244	244	< 270				
31-Jan	0	< 50	50	< 74	74	< 199	199	< 246	246	< 270				
1-Feb	0	< 50	50	< 75	75	< 200	200	< 247	247	< 270				
2-Feb	0	< 50	50	< 76	76	< 202	202	< 249	249	< 270				
3-Feb	0	< 50	50	< 76	76	< 203	203	< 251	251	< 270				
4-Feb	0	< 51	51	< 77	77	< 205	205	< 252	252	< 270				
5-Feb	0	< 51	51	< 78	78	< 207	207	< 254	254	< 270				
6-Feb	0	< 51	51	< 78	78	< 208	208	< 256	256	< 270				
7-Feb	0	< 52	52	< 79	79	< 210	210	< 257	257	< 270				
8-Feb	0	< 52	52	< 79	79	< 212	212	< 259	259	< 270				
9-Feb	0	< 53	53	< 80	80	< 214	214	< 261	261	< 270				
10-Feb	0	< 53	53	< 81	81	< 215	215	< 262	262	< 270				
11-Feb	0	< 53	53	< 81	81	< 217	217	< 264	264	< 270				
12-Feb	0	< 54	54	< 82	82	< 219	219	< 266	266	< 270				
13-Feb	0	< 54	54	< 83	83	< 221	221	< 268	268	< 270				
14-Feb	0	< 54	54	< 83	83	< 222	222	< 269	269	< 270				

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
15-Feb	0	< 55	55	< 84	84	< 224	224	< 270	270					
16-Feb	0	< 55	55	< 85	85	< 226	226	< 270						
17-Feb	0	< 55	55	< 86	86	< 228	228	< 270						
18-Feb	0	< 56	56	< 86	86	< 230	230	< 270						
19-Feb	0	< 56	56	< 87	87	< 232	232	< 270						
20-Feb	0	< 56	56	< 88	88	< 234	234	< 270						
21-Feb	0	< 57	57	< 88	88	< 235	235	< 270						
22-Feb	0	< 57	57	< 89	89	< 237	237	< 270						
23-Feb	0	< 58	58	< 90	90	< 239	239	< 270						
24-Feb	0	< 58	58	< 91	91	< 241	241	< 270						
25-Feb	0	< 58	58	< 91	91	< 243	243	< 270						
26-Feb	0	< 59	59	< 92	92	< 245	245	< 270						
27-Feb	0	< 59	59	< 93	93	< 247	247	< 270						
28-Feb	0	< 59	59	< 94	94	< 249	249	< 270						
29-Feb	0	< 60	60	< 94	94	< 250	250	< 270						
1-Mar	0	< 60	60	< 94	94	< 251	251	< 270						
2-Mar	0	< 60	60	< 95	95	< 253	253	< 270						
3-Mar	0	< 61	61	< 96	96	< 255	255	< 270						
4-Mar	0	< 61	61	< 97	97	< 257	257	< 270						
5-Mar	0	< 61	61	< 97	97	< 260	260	< 270						
6-Mar	0	< 62	62	< 98	98	< 262	262	< 270						
7-Mar	0	< 62	62	< 99	99	< 264	264	< 270						
8-Mar	0	< 63	63	< 100	100	< 266	266	< 270						
9-Mar	0	< 63	63	< 101	101	< 268	268	< 270						
10-Mar	0	< 64	64	< 101	101	< 270	270							
11-Mar	0	< 64	64	< 102	102	< 270								
12-Mar	0	< 64	64	< 103	103	< 270								

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
13-Mar	0	< 65	65	< 104	104	< 270								
14-Mar	0	< 65	65	< 105	105	< 270								
15-Mar	0	< 66	66	< 106	106	< 270								
16-Mar	0	< 66	66	< 107	107	< 270								
17-Mar	0	< 67	67	< 107	107	< 270								
18-Mar	0	< 67	67	< 108	108	< 270								
19-Mar	0	< 67	67	< 109	109	< 270								
20-Mar	0	< 68	68	< 110	110	< 270								
21-Mar	0	< 68	68	< 111	111	< 270								
22-Mar	0	< 69	69	< 112	112	< 270								
23-Mar	0	< 69	69	< 113	113	< 270								
24-Mar	0	< 70	70	< 114	114	< 270								
25-Mar	0	< 70	70	< 115	115	< 270								
26-Mar	0	< 71	71	< 116	116	< 270								
27-Mar	0	< 71	71	< 117	117	< 270								
28-Mar	0	< 72	72	< 118	118	< 270								
29-Mar	0	< 72	72	< 118	118	< 270								
30-Mar	0	< 72	72	< 119	119	< 270								
31-Mar	0	< 73	73	< 120	120	< 270								
1-Apr							0	< 33	33	< 73	73	< 121	121	< 270
2-Apr							0	< 33	33	< 74	74	< 122	122	< 270
3-Apr							0	< 34	34	< 74	74	< 123	123	< 270
4-Apr							0	< 34	34	< 75	75	< 124	124	< 270
5-Apr							0	< 34	34	< 75	75	< 125	125	< 270
6-Apr							0	< 34	34	< 76	76	< 126	126	< 270
7-Apr							0	< 34	34	< 76	76	< 128	128	< 270
8-Apr							0	< 35	35	< 77	77	< 129	129	< 270

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
9-Apr							0	< 35	35	< 77	77	< 130	130	< 270
10-Apr							0	< 35	35	< 78	78	< 131	131	< 270
11-Apr							0	< 35	35	< 78	78	< 132	132	< 270
12-Apr							0	< 36	36	< 79	79	< 133	133	< 270
13-Apr							0	< 36	36	< 79	79	< 134	134	< 270
14-Apr							0	< 36	36	< 80	80	< 135	135	< 270
15-Apr							0	< 36	36	< 80	80	< 136	136	< 270
16-Apr							0	< 37	37	< 81	81	< 137	137	< 270
17-Apr							0	< 37	37	< 82	82	< 138	138	< 270
18-Apr							0	< 37	37	< 82	82	< 139	139	< 270
19-Apr							0	< 37	37	< 83	83	< 141	141	< 270
20-Apr							0	< 38	38	< 83	83	< 142	142	< 270
21-Apr							0	< 38	38	< 84	84	< 143	143	< 270
22-Apr							0	< 38	38	< 84	84	< 144	144	< 270
23-Apr							0	< 38	38	< 85	85	< 145	145	< 270
24-Apr							0	< 39	39	< 85	85	< 146	146	< 270
25-Apr							0	< 39	39	< 86	86	< 148	148	< 270
26-Apr							0	< 39	39	< 87	87	< 149	149	< 270
27-Apr							0	< 39	39	< 87	87	< 150	150	< 270
28-Apr							0	< 40	40	< 88	88	< 151	151	< 270
29-Apr							0	< 40	40	< 88	88	< 153	153	< 270
30-Apr							0	< 40	40	< 89	89	< 154	154	< 270
1-May							0	< 40	40	< 89	89	< 155	155	< 270
2-May							0	< 41	41	< 90	90	< 156	156	< 270
3-May							0	< 41	41	< 91	91	< 158	158	< 270
4-May							0	< 41	41	< 91	91	< 159	159	< 270
5-May							0	< 41	41	< 92	92	< 160	160	< 270

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
6-May							0	< 42	42	< 92	92	< 162	162	< 270
7-May							0	< 42	42	< 93	93	< 163	163	< 270
8-May							0	< 42	42	< 94	94	< 164	164	< 270
9-May							0	< 43	43	< 94	94	< 166	166	< 270
10-May							0	< 43	43	< 95	95	< 167	167	< 270
11-May							0	< 43	43	< 95	95	< 168	168	< 270
12-May							0	< 43	43	< 96	96	< 170	170	< 270
13-May							0	< 44	44	< 97	97	< 171	171	< 270
14-May							0	< 44	44	< 97	97	< 172	172	< 270
15-May							0	< 44	44	< 98	98	< 174	174	< 270
16-May							0	< 45	45	< 99	99	< 175	175	< 270
17-May							0	< 45	45	< 99	99	< 177	177	< 270
18-May							0	< 45	45	< 100	100	< 178	178	< 270
19-May							0	< 45	45	< 101	101	< 180	180	< 270
20-May							0	< 46	46	< 101	101	< 181	181	< 270
21-May							0	< 46	46	< 102	102	< 183	183	< 270
22-May							0	< 46	46	< 103	103	< 184	184	< 270
23-May							0	< 47	47	< 103	103	< 186	186	< 270
24-May							0	< 47	47	< 104	104	< 187	187	< 270
25-May							0	< 47	47	< 105	105	< 189	189	< 270
26-May							0	< 48	48	< 105	105	< 190	190	< 270
27-May							0	< 48	48	< 106	106	< 192	192	< 270
28-May							0	< 48	48	< 107	107	< 193	193	< 270
29-May							0	< 49	49	< 107	107	< 195	195	< 270
30-May							0	< 49	49	< 108	108	< 196	196	< 270
31-May							0	< 49	49	< 109	109	< 198	198	< 270
1-Jun							0	< 50	50	< 110	110	< 200	200	< 270

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
2-Jun							0	< 50	50	< 110	110	< 201	201	< 270
3-Jun							0	< 50	50	< 111	111	< 203	203	< 270
4-Jun							0	< 50	50	< 112	112	< 205	205	< 270
5-Jun							0	< 51	51	< 112	112	< 206	206	< 270
6-Jun							0	< 51	51	< 113	113	< 208	208	< 270
7-Jun							0	< 51	51	< 114	114	< 210	210	< 270
8-Jun							0	< 52	52	< 115	115	< 211	211	< 270
9-Jun							0	< 52	52	< 115	115	< 213	213	< 270
10-Jun							0	< 53	53	< 116	116	< 215	215	< 270
11-Jun							0	< 53	53	< 117	117	< 217	217	< 270
12-Jun							0	< 53	53	< 118	118	< 218	218	< 270
13-Jun							0	< 54	54	< 119	119	< 220	220	< 270
14-Jun							0	< 54	54	< 119	119	< 222	222	< 270
15-Jun							0	< 54	54	< 120	120	< 224	224	< 270
16-Jun							0	< 55	55	< 121	121	< 226	226	< 270
17-Jun							0	< 55	55	< 122	122	< 228	228	< 270
18-Jun							0	< 55	55	< 123	123	< 229	229	< 270
19-Jun							0	< 56	56	< 123	123	< 231	231	< 270
20-Jun							0	< 56	56	< 124	124	< 233	233	< 270
21-Jun							0	< 56	56	< 125	125	< 235	235	< 270
22-Jun							0	< 57	57	< 126	126	< 237	237	< 270
23-Jun							0	< 57	57	< 127	127	< 239	239	< 270
24-Jun							0	< 58	58	< 127	127	< 241	241	< 270
25-Jun							0	< 58	58	< 128	128	< 243	243	< 270
26-Jun							0	< 58	58	< 129	129	< 245	245	< 270
27-Jun							0	< 59	59	< 130	130	< 247	247	< 270
28-Jun							0	< 59	59	< 131	131	< 249	249	< 270

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
29-Jun							0	< 59	59	< 132	132	< 251	251	< 270
30-Jun							0	< 60	60	< 133	133	< 253	253	< 270
1-Jul					0	< 36	36	< 60	60	< 133	133	< 255	255	< 270
2-Jul					0	< 36	36	< 61	61	< 134	134	< 257	257	< 270
3-Jul					0	< 36	36	< 61	61	< 135	135	< 259	259	< 270
4-Jul					0	< 36	36	< 61	61	< 136	136	< 261	261	< 270
5-Jul					0	< 37	37	< 62	62	< 137	137	< 263	263	< 270
6-Jul					0	< 37	37	< 62	62	< 138	138	< 266	266	< 270
7-Jul					0	< 37	37	< 63	63	< 139	139	< 268	268	< 270
8-Jul					0	< 38	38	< 63	63	< 140	140	< 270	270	
9-Jul					0	< 38	38	< 64	64	< 141	141	< 270		
10-Jul					0	< 38	38	< 64	64	< 142	142	< 270		
11-Jul					0	< 38	38	< 64	64	< 143	143	< 270		
12-Jul					0	< 39	39	< 65	65	< 143	143	< 270		
13-Jul					0	< 39	39	< 65	65	< 144	144	< 270		
14-Jul					0	< 39	39	< 66	66	< 145	145	< 270		
15-Jul					0	< 40	40	< 66	66	< 146	146	< 270		
16-Jul					0	< 40	40	< 67	67	< 147	147	< 270		
17-Jul					0	< 40	40	< 67	67	< 148	148	< 270		
18-Jul					0	< 41	41	< 67	67	< 149	149	< 270		
19-Jul					0	< 41	41	< 68	68	< 150	150	< 270		
20-Jul					0	< 41	41	< 68	68	< 151	151	< 270		
21-Jul					0	< 42	42	< 69	69	< 152	152	< 270		
22-Jul					0	< 42	42	< 69	69	< 153	153	< 270		
23-Jul					0	< 42	42	< 70	70	< 154	154	< 270		
24-Jul					0	< 43	43	< 70	70	< 155	155	< 270		
25-Jul					0	< 43	43	< 71	71	< 156	156	< 270		

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
26-Jul					0	< 43	43	< 71	71	< 157	157	< 270		
27-Jul					0	< 44	44	< 72	72	< 158	158	< 270		
28-Jul					0	< 44	44	< 72	72	< 159	159	< 270		
29-Jul					0	< 44	44	< 72	72	< 160	160	< 270		
30-Jul					0	< 45	45	< 73	73	< 161	161	< 270		
31-Jul					0	< 45	45	< 73	73	< 163	163	< 270		
1-Aug					0	< 45	45	< 74	74	< 164	164	< 270		
2-Aug					0	< 46	46	< 74	74	< 165	165	< 270		
3-Aug					0	< 46	46	< 75	75	< 166	166	< 270		
4-Aug					0	< 47	47	< 75	75	< 167	167	< 270		
5-Aug					0	< 47	47	< 76	76	< 168	168	< 270		
6-Aug					0	< 47	47	< 76	76	< 169	169	< 270		
7-Aug					0	< 48	48	< 77	77	< 170	170	< 270		
8-Aug					0	< 48	48	< 77	77	< 171	171	< 270		
9-Aug					0	< 48	48	< 78	78	< 172	172	< 270		
10-Aug					0	< 49	49	< 78	78	< 174	174	< 270		
11-Aug					0	< 49	49	< 79	79	< 175	175	< 270		
12-Aug					0	< 50	50	< 79	79	< 176	176	< 270		
13-Aug					0	< 50	50	< 80	80	< 177	177	< 270		
14-Aug					0	< 50	50	< 80	80	< 178	178	< 270		
15-Aug					0	< 51	51	< 81	81	< 179	179	< 270		
16-Aug					0	< 51	51	< 82	82	< 181	181	< 270		
17-Aug					0	< 52	52	< 82	82	< 182	182	< 270		
18-Aug					0	< 52	52	< 83	83	< 183	183	< 270		
19-Aug					0	< 52	52	< 83	83	< 184	184	< 270		
20-Aug					0	< 53	53	< 84	84	< 185	185	< 270		
21-Aug					0	< 53	53	< 84	84	< 187	187	< 270		

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
22-Aug					0	< 54	54	< 85	85	< 188	188	< 270		
23-Aug					0	< 54	54	< 85	85	< 189	189	< 270		
24-Aug					0	< 55	55	< 86	86	< 190	190	< 270		
25-Aug					0	< 55	55	< 87	87	< 192	192	< 270		
26-Aug					0	< 55	55	< 87	87	< 193	193	< 270		
27-Aug					0	< 56	56	< 88	88	< 194	194	< 270		
28-Aug					0	< 56	56	< 88	88	< 195	195	< 270		
29-Aug					0	< 57	57	< 89	89	< 197	197	< 270		
30-Aug					0	< 57	57	< 89	89	< 198	198	< 270		
31-Aug					0	< 58	58	< 90	90	< 199	199	< 270		
1-Sep					0	< 58	58	< 91	91	< 201	201	< 270		
2-Sep					0	< 59	59	< 91	91	< 202	202	< 270		
3-Sep					0	< 59	59	< 92	92	< 203	203	< 270		
4-Sep					0	< 60	60	< 92	92	< 205	205	< 270		
5-Sep					0	< 60	60	< 93	93	< 206	206	< 270		
6-Sep					0	< 61	61	< 94	94	< 207	207	< 270		
7-Sep					0	< 61	61	< 94	94	< 209	209	< 270		
8-Sep					0	< 62	62	< 95	95	< 210	210	< 270		
9-Sep					0	< 62	62	< 95	95	< 211	211	< 270		
10-Sep					0	< 63	63	< 96	96	< 213	213	< 270		
11-Sep					0	< 63	63	< 97	97	< 214	214	< 270		
12-Sep					0	< 64	64	< 97	97	< 216	216	< 270		
13-Sep					0	< 64	64	< 98	98	< 217	217	< 270		
14-Sep					0	< 65	65	< 99	99	< 218	218	< 270		
15-Sep					0	< 65	65	< 99	99	< 220	220	< 270		
16-Sep					0	< 66	66	< 100	100	< 221	221	< 270		
17-Sep					0	< 66	66	< 101	101	< 223	223	< 270		

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
18-Sep					0	< 67	67	< 101	101	< 224	224	< 270		
19-Sep					0	< 67	67	< 102	102	< 226	226	< 270		
20-Sep					0	< 68	68	< 103	103	< 227	227	< 270		
21-Sep					0	< 68	68	< 103	103	< 229	229	< 270		
22-Sep					0	< 69	69	< 104	104	< 230	230	< 270		
23-Sep					0	< 69	69	< 105	105	< 232	232	< 270		
24-Sep					0	< 70	70	< 105	105	< 233	233	< 270		
25-Sep					0	< 71	71	< 106	106	< 235	235	< 270		
26-Sep					0	< 71	71	< 107	107	< 236	236	< 270		
27-Sep					0	< 72	72	< 107	107	< 238	238	< 270		
28-Sep					0	< 72	72	< 108	108	< 239	239	< 270		
29-Sep					0	< 73	73	< 109	109	< 241	241	< 270		
30-Sep					0	< 73	73	< 110	110	< 243	243	< 270		
1-Oct					0	< 74	74	< 110	110	< 244	244	< 270		
2-Oct					0	< 75	75	< 111	111	< 246	246	< 270		
3-Oct					0	< 75	75	< 112	112	< 247	247	< 270		
4-Oct					0	< 76	76	< 112	112	< 249	249	< 270		
5-Oct					0	< 76	76	< 113	113	< 251	251	< 270		
6-Oct					0	< 77	77	< 114	114	< 252	252	< 270		
7-Oct					0	< 78	78	< 115	115	< 254	254	< 270		
8-Oct					0	< 78	78	< 115	115	< 256	256	< 270		
9-Oct					0	< 79	79	< 116	116	< 257	257	< 270		
10-Oct					0	< 80	80	< 117	117	< 259	259	< 270		
11-Oct					0	< 80	80	< 118	118	< 261	261	< 270		
12-Oct			0	< 30	30	< 81	81	< 119	119	< 262	262	< 270		
13-Oct			0	< 30	30	< 82	82	< 119	119	< 264	264	< 270		
14-Oct			0	< 31	31	< 82	82	< 120	120	< 266	266	< 270		

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
15-Oct			0	< 31	31	< 83	83	< 121	121	< 268	268	< 270		
16-Oct			0	< 31	31	< 84	84	< 122	122	< 269	269	< 270		
17-Oct			0	< 31	31	< 84	84	< 123	123	< 270	270			
18-Oct			0	< 32	32	< 85	85	< 123	123	< 270				
19-Oct			0	< 32	32	< 86	86	< 124	124	< 270				
20-Oct			0	< 32	32	< 86	86	< 125	125	< 270				
21-Oct			0	< 32	32	< 87	87	< 126	126	< 270				
22-Oct			0	< 33	33	< 88	88	< 127	127	< 270				
23-Oct			0	< 33	33	< 88	88	< 127	127	< 270				
24-Oct			0	< 33	33	< 89	89	< 128	128	< 270				
25-Oct			0	< 33	33	< 90	90	< 129	129	< 270				
26-Oct			0	< 34	34	< 91	91	< 130	130	< 270				
27-Oct			0	< 34	34	< 91	91	< 131	131	< 270				
28-Oct			0	< 34	34	< 92	92	< 132	132	< 270				
29-Oct			0	< 35	35	< 93	93	< 133	133	< 270				
30-Oct			0	< 35	35	< 94	94	< 133	133	< 270				
31-Oct			0	< 35	35	< 94	94	< 134	134	< 270				
1-Nov			0	< 35	35	< 95	95	< 135	135	< 270				
2-Nov			0	< 36	36	< 96	96	< 136	136	< 270				
3-Nov			0	< 36	36	< 97	97	< 137	137	< 270				
4-Nov			0	< 36	36	< 97	97	< 138	138	< 270				
5-Nov			0	< 37	37	< 98	98	< 139	139	< 270				
6-Nov			0	< 37	37	< 99	99	< 140	140	< 270				
7-Nov			0	< 37	37	< 100	100	< 141	141	< 270				
8-Nov			0	< 38	38	< 101	101	< 142	142	< 270				
9-Nov			0	< 38	38	< 101	101	< 143	143	< 270				
10-Nov			0	< 38	38	< 102	102	< 143	143	< 270				

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
11-Nov			0	< 38	38	< 103	103	< 144	144	< 270				
12-Nov			0	< 39	39	< 104	104	< 145	145	< 270				
13-Nov			0	< 39	39	< 105	105	< 146	146	< 270				
14-Nov			0	< 39	39	< 106	106	< 147	147	< 270				
15-Nov			0	< 40	40	< 106	106	< 148	148	< 270				
16-Nov			0	< 40	40	< 107	107	< 149	149	< 270				
17-Nov			0	< 40	40	< 108	108	< 150	150	< 270				
18-Nov			0	< 41	41	< 109	109	< 151	151	< 270				
19-Nov			0	< 41	41	< 110	110	< 152	152	< 270				
20-Nov			0	< 41	41	< 111	111	< 153	153	< 270				
21-Nov			0	< 42	42	< 112	112	< 154	154	< 270				
22-Nov			0	< 42	42	< 113	113	< 155	155	< 270				
23-Nov			0	< 42	42	< 114	114	< 156	156	< 270				
24-Nov			0	< 43	43	< 114	114	< 157	157	< 270				
25-Nov			0	< 43	43	< 115	115	< 158	158	< 270				
26-Nov			0	< 43	43	< 116	116	< 159	159	< 270				
27-Nov			0	< 44	44	< 117	117	< 160	160	< 270				
28-Nov			0	< 44	44	< 118	118	< 161	161	< 270				
29-Nov			0	< 45	45	< 119	119	< 163	163	< 270				
30-Nov			0	< 45	45	< 120	120	< 164	164	< 270				
1-Dec	0	< 33	33	< 45	45	< 121	121	< 165	165	< 270				
2-Dec	0	< 33	33	< 46	46	< 122	122	< 166	166	< 270				
3-Dec	0	< 34	34	< 46	46	< 123	123	< 167	167	< 270				
4-Dec	0	< 34	34	< 46	46	< 124	124	< 168	168	< 270				
5-Dec	0	< 34	34	< 47	47	< 125	125	< 169	169	< 270				
6-Dec	0	< 34	34	< 47	47	< 126	126	< 170	170	< 270				
7-Dec	0	< 34	34	< 48	48	< 127	127	< 171	171	< 270				

Sample date	Fall run		Spring run		Winter run		Late-fall run		Fall run		Spring run		Winter run	
	L	U	L	U	L	U	L	U	L	U	L	U	L	U
8-Dec	0	< 35	35	< 48	48	< 128	128	< 172	172	< 270				
9-Dec	0	< 35	35	< 48	48	< 129	129	< 174	174	< 270				
10-Dec	0	< 35	35	< 49	49	< 130	130	< 175	175	< 270				
11-Dec	0	< 35	35	< 49	49	< 131	131	< 176	176	< 270				
12-Dec	0	< 36	36	< 50	50	< 132	132	< 177	177	< 270				
13-Dec	0	< 36	36	< 50	50	< 133	133	< 178	178	< 270				
14-Dec	0	< 36	36	< 50	50	< 135	135	< 179	179	< 270				
15-Dec	0	< 36	36	< 51	51	< 136	136	< 181	181	< 270				
16-Dec	0	< 37	37	< 51	51	< 137	137	< 182	182	< 270				
17-Dec	0	< 37	37	< 52	52	< 138	138	< 183	183	< 270				
18-Dec	0	< 37	37	< 52	52	< 139	139	< 184	184	< 270				
19-Dec	0	< 37	37	< 52	52	< 140	140	< 185	185	< 270				
20-Dec	0	< 38	38	< 53	53	< 141	141	< 187	187	< 270				
21-Dec	0	< 38	38	< 53	53	< 142	142	< 188	188	< 270				
22-Dec	0	< 38	38	< 54	54	< 144	144	< 189	189	< 270				
23-Dec	0	< 38	38	< 54	54	< 145	145	< 190	190	< 270				
24-Dec	0	< 39	39	< 55	55	< 146	146	< 192	192	< 270				
25-Dec	0	< 39	39	< 55	55	< 147	147	< 193	193	< 270				
26-Dec	0	< 39	39	< 56	56	< 148	148	< 194	194	< 270				
27-Dec	0	< 39	39	< 56	56	< 149	149	< 195	195	< 270				
28-Dec	0	< 40	40	< 56	56	< 151	151	< 197	197	< 270				
29-Dec	0	< 40	40	< 57	57	< 152	152	< 198	198	< 270				
30-Dec	0	< 40	40	< 57	57	< 153	153	< 199	199	< 270				
31-Dec	0	< 40	40	< 58	58	< 154	154	< 201	201	< 270				