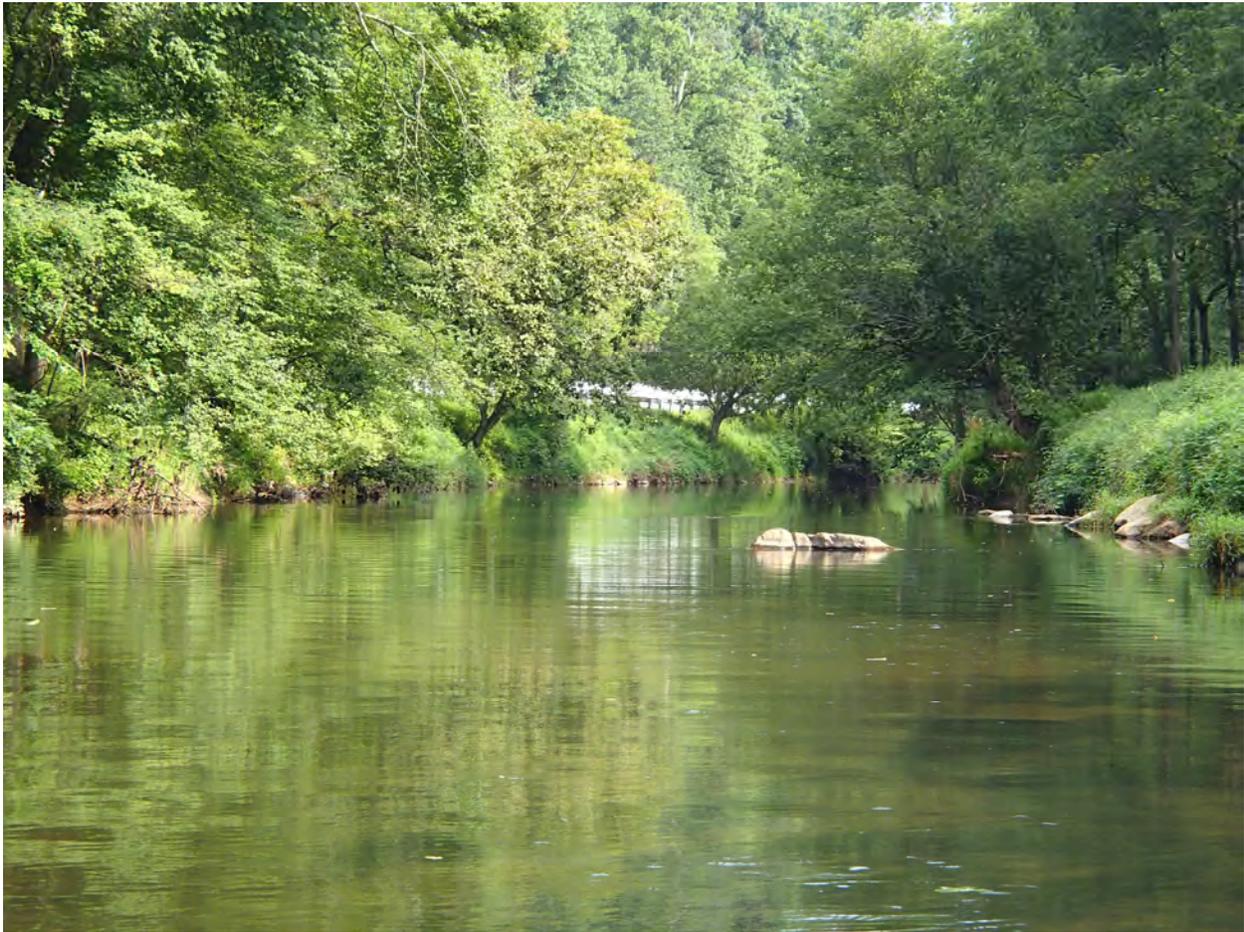


**Relocation of freshwater mussels in Deer Creek, Rocks State Park, Maryland:
Year 1 results.**



**Maryland Department of Natural Resources
Resource Assessment Service
Monitoring and Non-Tidal Assessment Division
RAS-MANTA-AIM-17-01**





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Relocation of freshwater mussels in Deer Creek, Rocks State Park, Maryland: Year 1 results.

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June 2015

Executive summary

In accordance with permit conditions of the Maryland Department of the Environment and contract conditions of the Maryland State Highway Administration, the Maryland Department of Natural Resources conducted a relocation of freshwater mussels in 2014. The effort removed mussels from within the direct impact and surrounding buffer areas associated with the instream construction activities required to stabilize MD Route 24 in Deer Creek, Rocks State Park, Maryland. Mussels were relocated further upstream into areas of suitable habitat. The mussel relocation entailed development of a rigorous monitoring component to evaluate its efficacy as a conservation strategy to avoid harm to freshwater mussels because this represents the first such effort of size and scope within Maryland. Initiating the monitoring plan required that 1) sites stocked with mussels (relocation) and sites stocked with no mussels (control) be surveyed before receiving mussels with the same methods used in the removal area and 2) individual mussels were marked with uniquely numbered tags to track their condition over time.

From June 28-30 and July 8-9, DNR surveyed five relocation sites located upstream of the removal area to establish baseline population estimates, collect demographic data, and tag mussels. A total of 209 Eastern elliptio were collected and tagged. We affixed external PIT tags to 40 (19%) of these mussels. After calculating population estimates, we determined an appropriate number of mussels that could be stocked at each site.

Over 10 days from July 10-August 6, DNR staff relocated 2,349 mussels, representing two species. Four *Strophitus undulatus* (Creepers – In Need of Conservation MD) were found in the direct impact area. A total of 1,249 Eastern elliptio were marked with shellfish tags and 297 (23%) with PIT tags. We did not tag all Eastern elliptio due to the unexpectedly high number, which consumed considerable time and supplies. However, more than a sufficient number were tagged for monitoring before the process ceased.

From August 25-27, DNR conducted surveys at four control sites to establish baseline population estimates, collect demographic data, and tag mussels. A total of 332 Eastern elliptio and two Creepers were found. We marked 316 Eastern elliptio with shellfish tags and PIT tagged 90 (27%). The 16 mussels that were not marked with shellfish tags were among some of the 90 PIT tagged.

The relocation surveys met the main objective of removing a majority (> 80%) of the estimated mussel population at the substrates surface within the direct and indirect impact area. However, because the population found exceeded preliminary estimates and flows were unseasonably high throughout the survey period, the amount of effort needed to reach survey completion was greater than expected, even after refining methods to increase survey efficiency. Estimating population size in highly clustered animals, like mussels, can be difficult and strongly influenced by sampling design. Minor refinement of the methods used in future removal surveys could help State Highway Administration address this uncertainty and ensure effort is focused to the areas of highest mussel concentration and greatest impact.

Introduction

Freshwater mussels are the most imperiled faunal group in North America. Nearly two-thirds of the continent's approximately 300 species are extinct, endangered, or declining (Williams et al. 1993). In Maryland, 14 of the state's 16 mussel species are listed as rare, threatened or endangered (Maryland Department of Natural Resources 2010). *Elliptio complanata* (Eastern elliptio) is the most common mussel species in Maryland (Bogan and Proch 1997). It is considered relatively secure in the state (Maryland Department of Natural Resources 2010) and throughout most of its global range (NatureServe 2014). Still, its distribution and abundance has declined in various parts of the Mid-Atlantic (Strayer and Fetterman 1994, Clayton et al. 2001). Streams that support it in high abundance like Deer Creek are uncommon in Maryland and indicative of high quality conditions (MBSS 2014). *Strophitus undulatus* (Creeper) is widely distributed, yet uncommon species in Maryland (Bogan and Proch 1997). Although it is globally secure (Nature Serve 2014), it is typically found in low abundance in Maryland and is thus considered in need of conservation (Maryland Department of Natural Resources 2010).

Mussel relocation has been used as a conservation strategy for decades. For years, their efficacy was largely unknown because the ecology of most species was poorly understood. In a review of 33 relocations, Cope and Waller (1995) found on average half of mussels died following relocation. Further, only a few relocations were monitored and recapture rate of mussels was low. Subsequent studies found survival could be improved by decreasing handling and exposure times (Waller et al. 1995), relocating into suitable habitat (Hamilton et al. 1997), and stocking at appropriate density (Bolden and Brown 2002). By implementing these best practices (e.g., Luzier and Miller 2009), survival of mussels following relocation has seemingly improved (Fernandez 2013).

Mussels can be particularly difficult to detect with high probability because they often exist at very low densities, buried beneath the substrates surface, or in habitats difficult to survey (Strayer and Smith 2003). The probability of capture in mussel surveys can be improved with the use of quantitative sampling designs (Strayer and Smith 2003). Sediment excavation is typically needed to account for low capture probabilities and imperfect detection because a portion of the population is below the substrate and may be missed by qualitative, visual searches (Amyot and Downing 1997, Watters et al. 2001). However, visual searches are more cost-effective and suggested over quantitative sampling when the objective is to find rare species (Strayer 1997, Metcalfe-Smith et al. 2000). Recapture rates can be further improved using PIT tag technology (Kurth et al. 2007). Increasing the quantity and quality of data should provide more accurate estimates of mussel survival, thus making the method ideal for monitoring relocated mussels (Young and Isley 2008).

Deer Creek is a 4th order tributary of the lower Susquehanna River in Harford County, Maryland. It is designated as a Scenic River, which requires the state protect and enhance the qualities of the river (Maryland Natural Resources Article, 8-402). Land use in the watershed is primarily agricultural (54%), with lesser amounts of forested (30%) and urban areas (15%) (Homer et al. 2001). The reach of stream is afforded further protection under the Maryland Clean Water Act because it supports healthy biological communities and its designated use (COMAR 26.08.02.04). Maryland Route 24 runs parallel to Deer Creek and the bedrock valley wall within Rocks State Park (Figure 1). Stream bank sloughing created concern that the road could fail without bank armoring, which required impacts to Deer Creek including temporary fill, excavation, and dewatering. Prior surveys in this reach of stream indicated patches of habitat supported mussels in high relative abundance (U.S. Fish and Wildlife Service, unpublished data, Maryland Natural Heritage Program unpublished data). The potential take of a state listed mussel and alteration to its habitat necessitated the removal of mussels from the area of impact. Our objectives

were to 1) remove as many mussels as feasible from the direct and indirect impact areas, 2) minimize risk of relocation failure by stocking mussels in appropriate habitat and abundance, and 3) rigorously evaluate the action by monitoring the condition and fate of mussels over time.

Methods

Study site

The removal site was approximately 380-m-long, beginning approximately 30 m downstream of the direct impact area and ending 10 m upstream of the direct impact (Figure 2). Due to the lateral buffering of the direct impact area the survey included the entire width of the stream. Five, 40-m-long relocation sites were located upstream of the removal site (Figure 2). Four, 40-m-long control sites were located upstream of the relocation sites (Figure 3). The upper and lower extent of sites were marked with surveyors flagging and recorded with a hand held GPS unit (Garmin Vista H). Each site was divided into 10-m-long sections that were approximately half the stream width to manage survey logistics and guide stocking of mussels at relocation sites.

Survey methods

From June-August 2014, we conducted timed, visual searches in Deer Creek during periods of low flow and water visibility ≥ 2 m. Freshwater mussels at the substrates surface were collected using a combination of visual surveying techniques, including snorkeling, glass-bottom view buckets, and SCUBA. Typically, a section was searched by four-six observers who were aligned perpendicularly with the stream bank and sampled in an upstream direction to cover the entire area (Figure 4). We attempted to equalize sampling effort within and among sections by limiting effort to 0.5-1 person-hour. The total number of mussels collected by species and time spent searching within a section was recorded upon its completion.

We used a multiple-pass sampling design to quantify mussel abundance. Two passes were made at a site to collect mussels, estimate their population size, and capture probability (Serber and LeCren 1967). During baseline surveys at relocation and control sites, we noted the location where we found mussels with flagged weights. This allowed us to return mussels to the precise areas they were collected and reduce the potential effects of handling or unsuitable habitat on survival. At the removal site, we conducted a third pass within individual sections if we had not already removed 80% of the total catch or a Creeper was found. Population estimates were not adjusted for capture probability.

Relocation and monitoring

Mussels were processed at centralized stations following procedures to minimize handling and exposure by holding them in flow through live wells or aerated coolers with routine changes of stream water (Luzier and Miller 2009). We identified mussels using taxonomic standards (Bogan and Proch 1997, Turgeon et al. 1998). To track rates of growth and survival, mussels were individually measured with dial calipers and marked with a uniquely numbered vinyl (Hallprint) shellfish tag affixed to each valve with cyanoacrylate adhesive. We recorded shell length (mm), tag numbers, and the section in which mussels were collected. We also adhered externally a PIT tag to each Creeper to increase the probability of recapture in future monitoring. An accelerant (Turbo Set I, Palm Labs Adhesives) was used to reduce the additional time necessary for the adhesive to cure the tag to shell. A subset ($> 20\%$) of Eastern elliptio marked with shellfish tags were also marked with PIT tags, including all individuals < 50 mm in shell

length. This cohort should exhibit greater absolute growth over time as opposed to larger mussels (Anthony et al. 2001). Prior to being returned to the stream, PIT tagged mussels were logged into portable readers (Biomark HPR+) to assure tags functioned properly. A mark-recapture technique will be used in future survey efforts to facilitate estimation of mussel population demographics, like survival and recruitment (e.g., Vilella et al. 2004).

We stocked mussels from the removal site into relocation sites in batches based on the spatial distributions observed in baseline surveys to reduce potential effects of mussels being placed into unsuitable habitat. We limited the number of mussels each site could receive to approximately three times its population estimate to diminish the potential that these new densities might exceed resource availability (Cope et al. 2003). Mussels were partially placed into substrate anterior end down to mimic their natural orientation. We recorded the section within relocation sites where we placed mussels along with their tag numbers. PIT tagged mussels were logged with a portable reader after bedding them into the substrate at the point of their relocation.

Results

Baseline survey

We spent 28.33 person-hours surveying for mussels at four control sites. Average total survey effort per section was 1.20 person-hours. A total of 332 Eastern elliptio and two Creeper were collected. We PIT tagged 90 (27%) Eastern elliptio. Population estimates, detection probabilities, and CPUE of mussels were variable among control sites (Table 1). Creeper was detected in sections that received 0.80 and 2.35 person-hours of total effort. Shell lengths of Eastern elliptio collected at control sites ranged from 19.3 to 96.9 mm (Figure 5). The two Creeper were 33.4 and 56.8 mm long.

We spent 47.27 person-hours surveying for mussels at five relocation sites. Average total survey effort per section was 1.41 person-hours. A total of 209 Eastern elliptio were collected and tagged. We affixed external PIT tags to 40 (19%) of these mussels. Population estimates, detection probabilities, and CPUE were variable among sites (Table 1). Shell lengths of Eastern elliptio collected at relocation sites ranged from 31.8 to 96.2 mm (Figure 5). We estimated the five relocation sites could receive approximately 870 mussels based on tripling their population estimates (Table 2).

Mussel relocation

We spent 109.92 person-hours surveying the removal site and collected 2,349 mussels. Four Creeper were found in the direct impact area. We spent on average 0.76-person hours surveying within an individual section during the first pass. For the river left sections of the removal site, we spent on average a total of 2.00 and 2.58 total person-hours in the second and third passes, respectively. A total of 1,249 Eastern elliptio were marked with shellfish tags and 297 (24%) with PIT tags. Tagging of Eastern elliptio ceased after completion of the first pass because we had more than a sufficient number of mussels to monitor. Mussel abundance and CPUE was highly variable among sections in the removal site. Mussel CPUE was also variable among 10-m-long sections. Eastern elliptio collected at the removal site ranged in size from 23.8 to 99.0 mm and exhibited similar size-structure to control and relocation sites (Figure 5). Average length of Eastern elliptio collected in the relocation site was similar to the average length at control and relocation sites (Figure 6). Creepers were 33.4, 34.6, 56.2, and 56.8 mm in length, suggesting two distinct age-classes in their population.

Probability of detection for two-pass surveys was slightly higher (0.50) than for three-pass surveys (0.43). We detected Creeper in as little as 0.93 person-hours of effort. Based on the two-pass population estimate from the left side of the removal site, we estimated a total of $2,444 \pm 169$ mussels were within the direct impact area (Table 1). We removed 70-81% of the estimated population by conducting a two-pass survey. Based on a three-pass survey population estimate (Carle and Strub 1978) of $2,744 \pm 111$ mussels within the direct impact area, we removed 79-86% of the population.

We stocked 875 mussels from the removal site to each relocation site in quantities relative to their estimated population size (Table 2). We placed 1,396 mussels into habitat between relocation sites because the total number collected from the removal site exceeded the number we determined could be stocked (Table 2). Without an understanding on mussel abundance and distribution in these areas, we conservatively assumed this habitat could support a slightly lower stocking rate. We determined the total number of mussels that could be stocked into the habitat between relocation sites, by 1) calculating the mean of relocation site population estimates, 2) standardizing it to the available habitat (linear meters) in each area, and 3) multiplying the resulting number by two. The remaining 74 mussels were stocked upstream of the upper most relocation site in habitat where we observed mussels bedded in the substrate and actively filtering.

Discussion

We accomplished our primary goals of 1) relocating a majority of the observed freshwater mussel population from the direct and indirect impact areas and 2) conducting the relocation in a manner to reduce the risk of mortality often associated with the practice. We also accomplished the initial steps of our secondary goal to evaluate the success of the relocation by designing and conducting the survey in a way that can be rigorously monitored. The success of past freshwater mussel relocations has been generally hampered by a lack of monitoring and poor recapture rates (Cope and Waller 1995). By conducting baseline surveys within our relocation sites, we also quantified basic mussel-habitat relationships to use as a guide for stocking of mussels, which may affect their survival (Hamilton et al. 1997, Bolden and Brown 2002). We also followed empirical guidelines and best practices for handling, transporting, and marking mussels (e.g., Waller et al. 1995, Waller et al. 1999, Lemarie, et al. 2000, Young and Isley 2008, Luzier and Miller 2009). Incorporating new monitoring technologies like PIT tagging should greatly improve our recapture rate and the precision of survival and growth estimates by including mussels that may be buried in the substrate (Kurth et al. 2007).

The community present within Deer Creek was almost entirely composed of Eastern elliptio. Creeper, while present in the removal area, was uncommon. Community composition, CPUE, and size-structure of the population sampled in 2014 were comparable to data collected in 2008 (U.S. Fish and Wildlife Service, unpublished data). We observed evidence of recent (e.g., smaller mussels) and regular recruitment (e.g., normally distributed length-frequency curve). Provided stable substrate and flows still exist in the removal area following stream bank stabilization, recolonization into the area seems likely in the presence of ample fish-hosts. The regional importance for conserving this mussel population was confirmed by catch-rates that were similar to other large populations in Maryland (MDNR, unpublished data) and the Mid-Atlantic (Strayer et al. 1997, Vilella and Smith 2005). Based on an extrapolation of simple ecosystem function estimates (U.S. Geological Survey, unpublished data) and the number of Eastern elliptio we observed in the study area, the population has the capacity to filter approximately 50,000 gallons-day and 2 lbs of suspended solids-day highlighting their ecological importance.

Detecting rare species often requires considerable effort or complex sampling designs. The ecology of mussels can make them particularly difficult to detect (Strayer and Smith 2003). In species rich streams, 2.5-4 person-hours were necessary to detect all species present at a site (Metcalf-Smith et al. 2000, Tiemann et al. 2009). However, it is unclear if these relationships are transferable to Mid-Atlantic streams that have comparably species poor faunas. At very low densities (< 0.001 mussels/m²) just 1 person-hour was necessary to detect Eastern Elliptio in Mid-Atlantic streams with high probability (Strayer et al. 1997). How this relationship applies to the small scale that we sub-sampled at our sites is also unknown. Most sections on average received > 1 person-hour of total effort, yet mussel detection probabilities were highly variable among sites. We detected Creeper within a 10 x 10 m section using as little as 0.80 person-hours of effort, but up to 3.84 person-hours of total effort. Given these findings, total effort > 1 person-hour may be needed to detect Creeper with high probability since half of them were found on the second or third-passes. We have no data suggesting a large portion of the Creeper population might be buried and undetectable by our methods, although prior surveys in Deer Creek found approximately 25% of Eastern elliptio were below the substrates surface during the summer (U.S. Fish and Wildlife Service, unpublished data). Detection can vary by species, habitat, and season and affects the strength of population demographic estimates (Meador et al. 2011). The causes of variability in our study merit further investigation.

The time required to complete the relocation was in large part due to the unexpectedly high number of mussels encountered. Freshwater mussels exhibit patchy distributions within streams, which makes estimating their population size difficult (Downing and Downing 1992). Various sampling designs have been compared for their accuracy at predicting population size and the logistical complexity that implementing requires versus its precision (e.g., cost-benefit). Prior data in the study area (U.S. Fish and Wildlife Service, unpublished data) was based on a systematic design (Smith et al. 2001). When populations are highly clustered, adaptive sampling designs may collect more individuals and encounter uncommon species more regularly than systematic designs (Smith et al. 2003). There are few known instances where one method is more appropriate than another. Using a complete coverage survey, we observed approximately 95% of the population at the removal site to be clustered along the left side of the stream. Further, 19% of all mussels were found within a single 10-m-long section and 44% within a 90-m-long area that encompassed 13% of the removal site. As a result, we did not conduct a second pass in the right side of the river because the time necessary to complete the pass would have resulted in very few mussels being salvaged and these sections were within the indirect impact area. This emphasizes how the logistics of complete coverage sampling designs that are often used in mussel removals can be affected by the type and quality of prior data and the need to incorporate some level of flexibility into survey methods to assure that conservation objectives are met in a timely manor.

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Table 1. Population size and demographics from freshwater mussel surveys in Deer Creek. Abundance estimates (\pm 95% confidence intervals) are calculated from two-pass surveys at survey sites and are not adjusted for capture probability.

	Site		
	Removal	Relocation	Control
Estimated abundance	2,444 \pm 169	38 \pm 7 - 83 \pm 14	0 - 275 \pm 43
Capture probability	0.50	0.30 - 0.70	0 - 0.82
Mean (\pm SD) shell length	66.79 \pm 9.51 mm	64.62 \pm 9.10 mm	66.27 \pm 11.51 mm

Table 2. Summary of freshwater mussel relocation effort by survey site. Number of mussels relocation sites could approximately receive was based on two-pass population estimates (N_{pop}) and stocking rate ($X = 3$) from recommendations of Cope et al. (2003).

Relocation site	$N_{pop} * X$	Total mussels		
		relocated	PIT tagged mussels	No shellfish tag
T1	249	248	53	0
T1 – T2	409	485	63	377
T2	114	125	28	0
T2 – T3	87	87	17	0
T3	135	133	21	0
T3 – T4	215	222	3	43
T4	225	224	55	0
T4 – T5	545	602	0	602
T5	147	145	60	0
Upstream T5	N/A	74	0	74

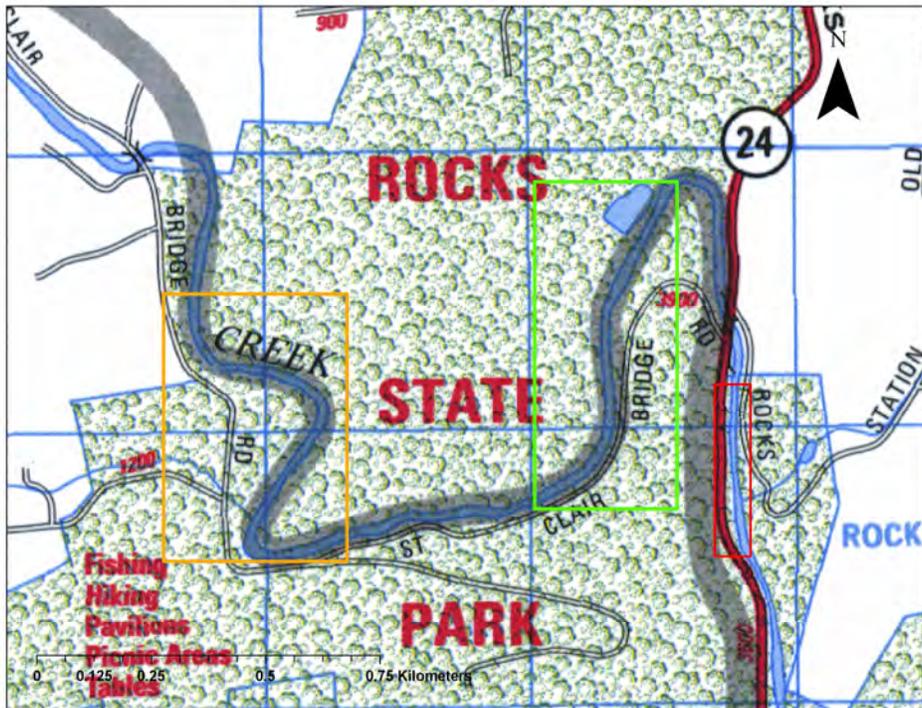
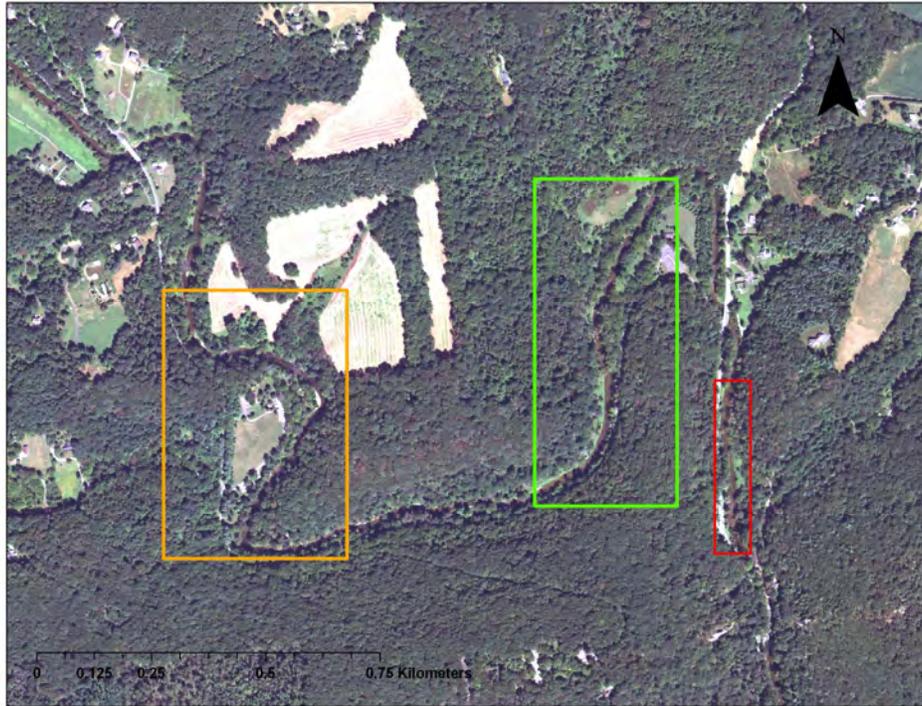


Figure 1. Freshwater mussel relocation study area, Harford County, Maryland. Approximate location of survey and monitoring areas are denoted in orange (control), green (relocation), and red (removal).



Figure 2. Locations of freshwater mussel relocation (green) and removal (red) sites in Deer Creek, Harford County, Maryland.



Figure 3. Locations of freshwater mussel control monitoring sites (orange), Deer Creek, Harford County, Maryland.

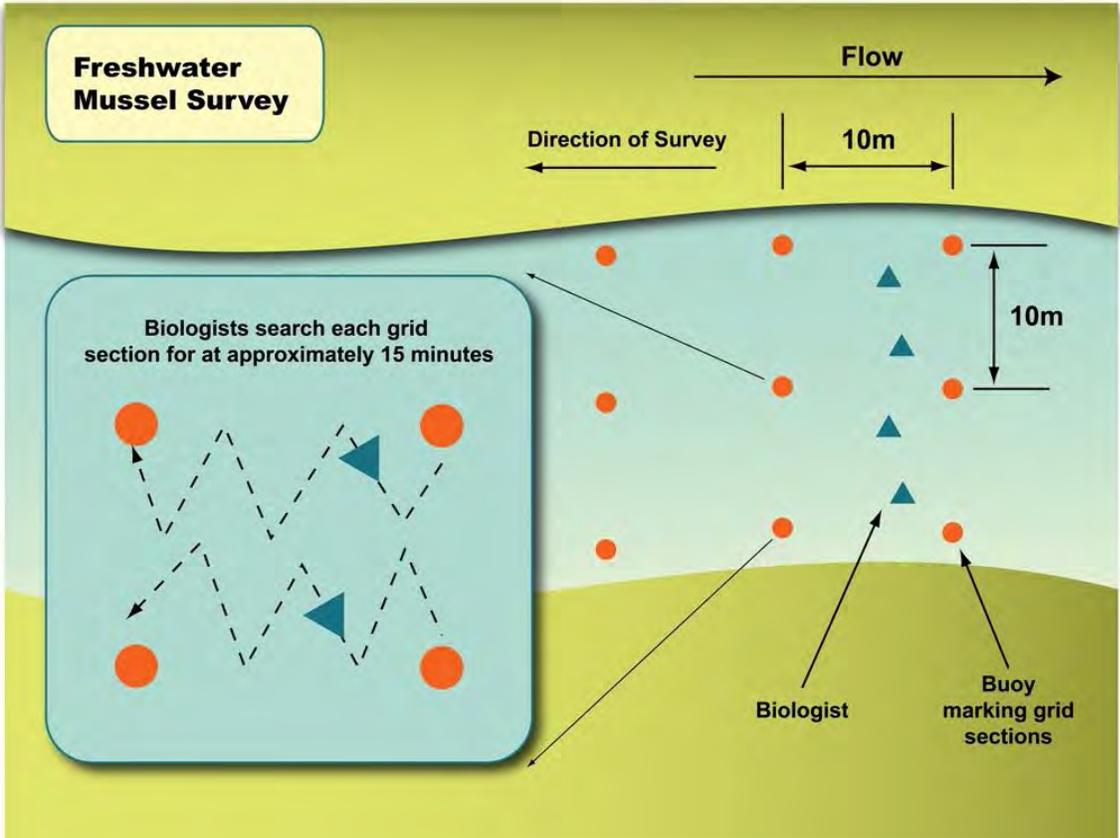


Figure 4. Schematic of a mussel survey pass within a section.

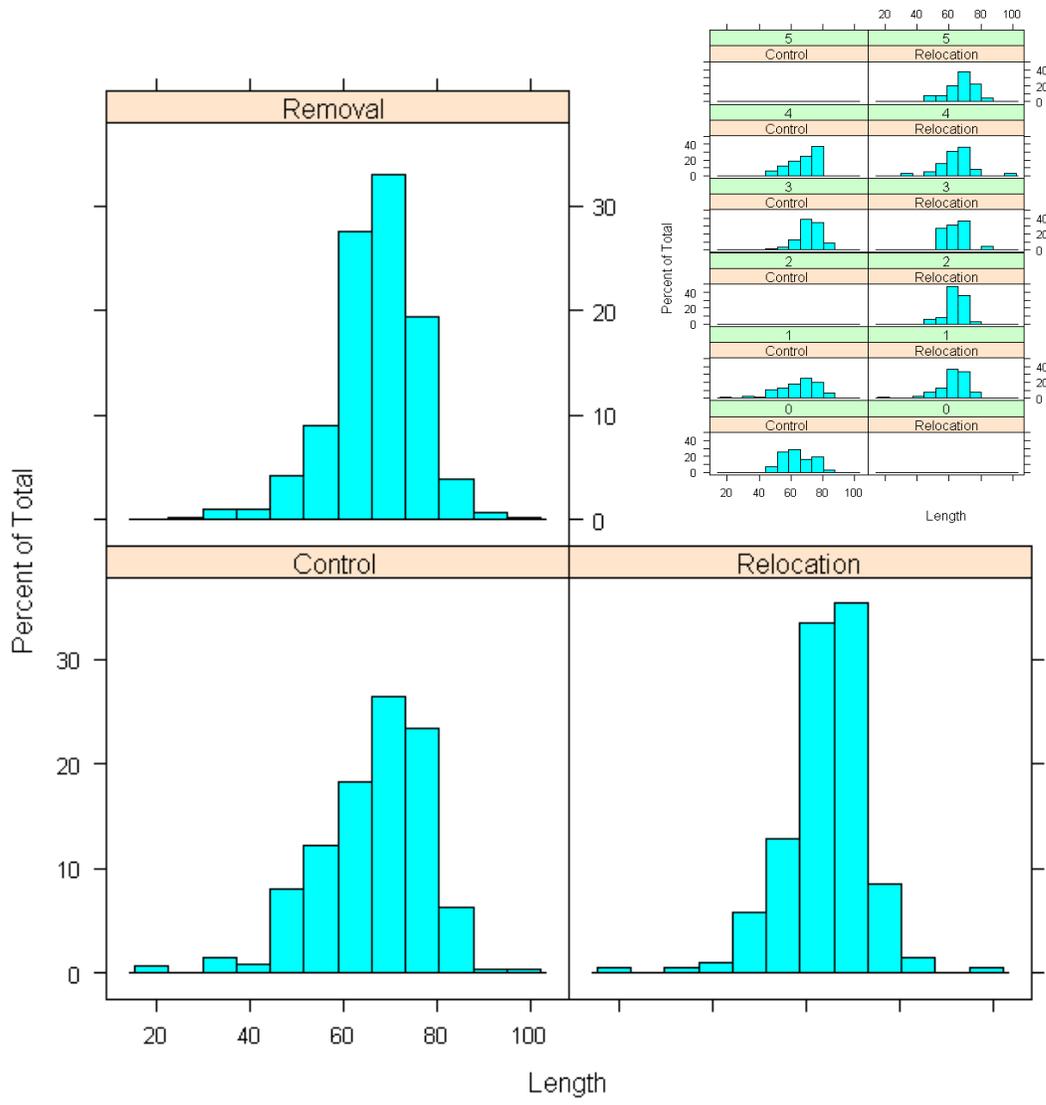


Figure 5. Length-frequency distribution of Eastern elliptio by survey and sites.

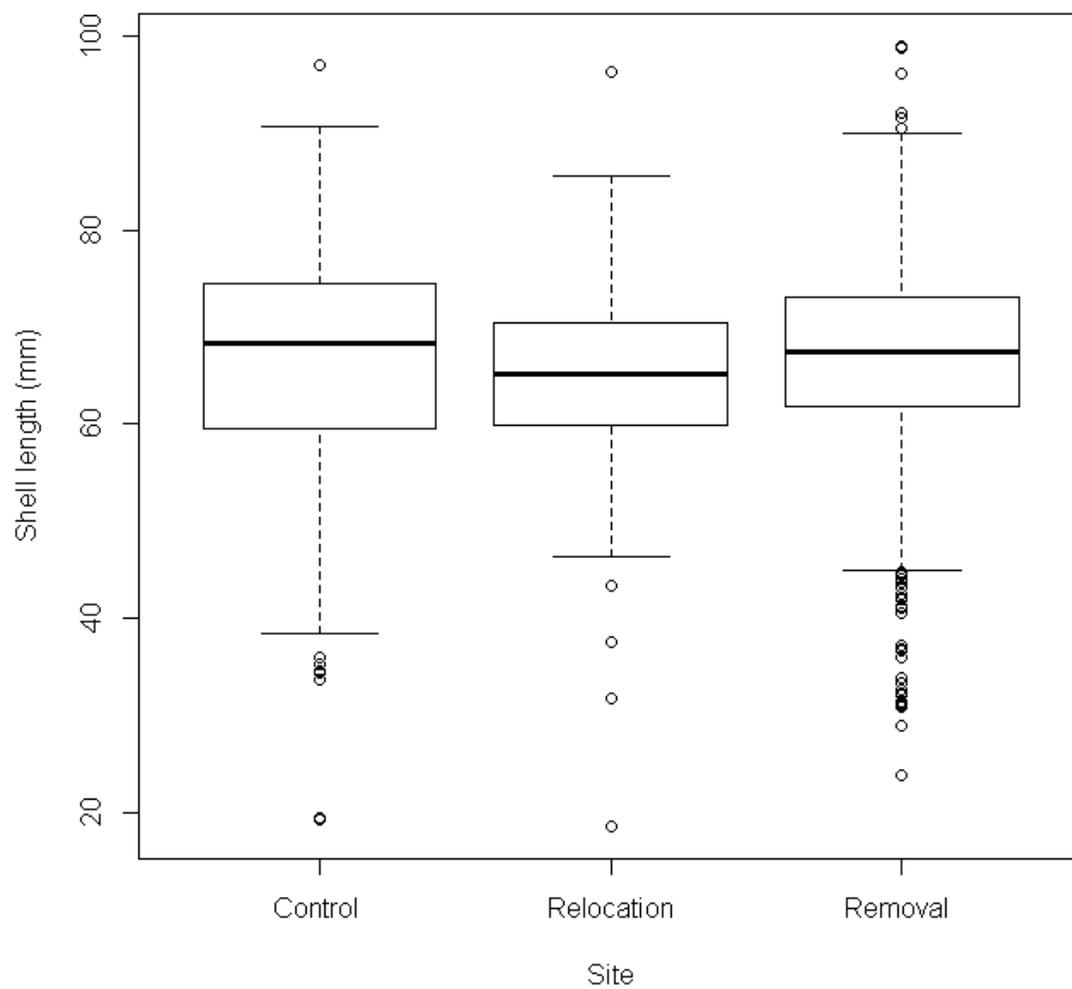
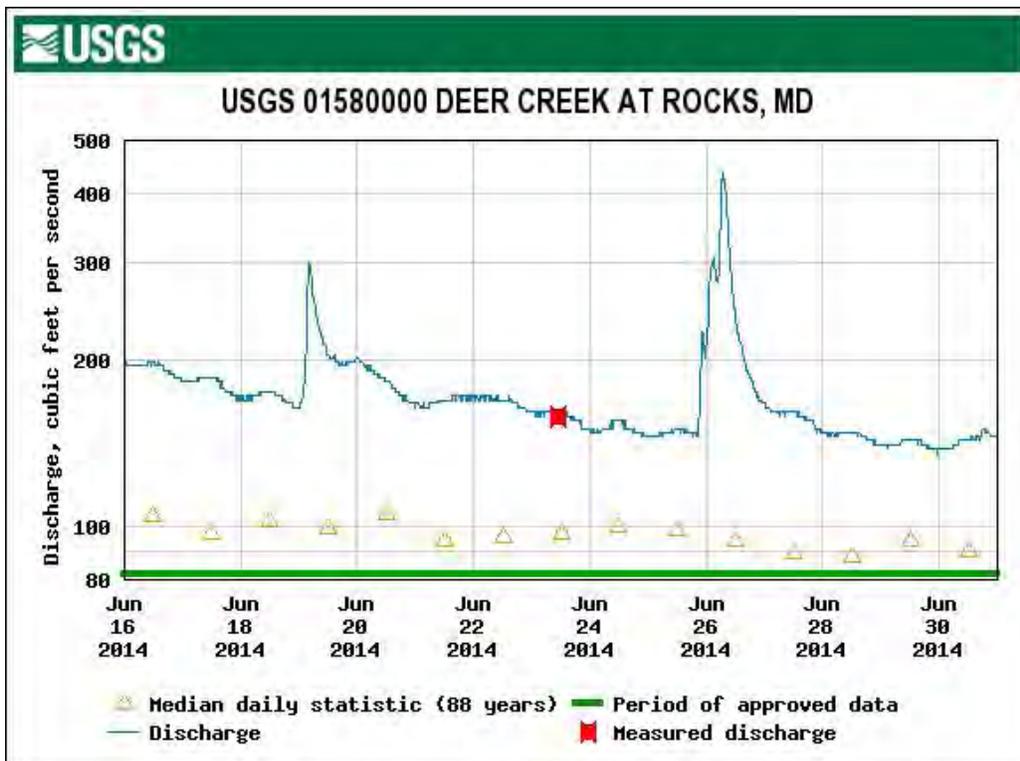
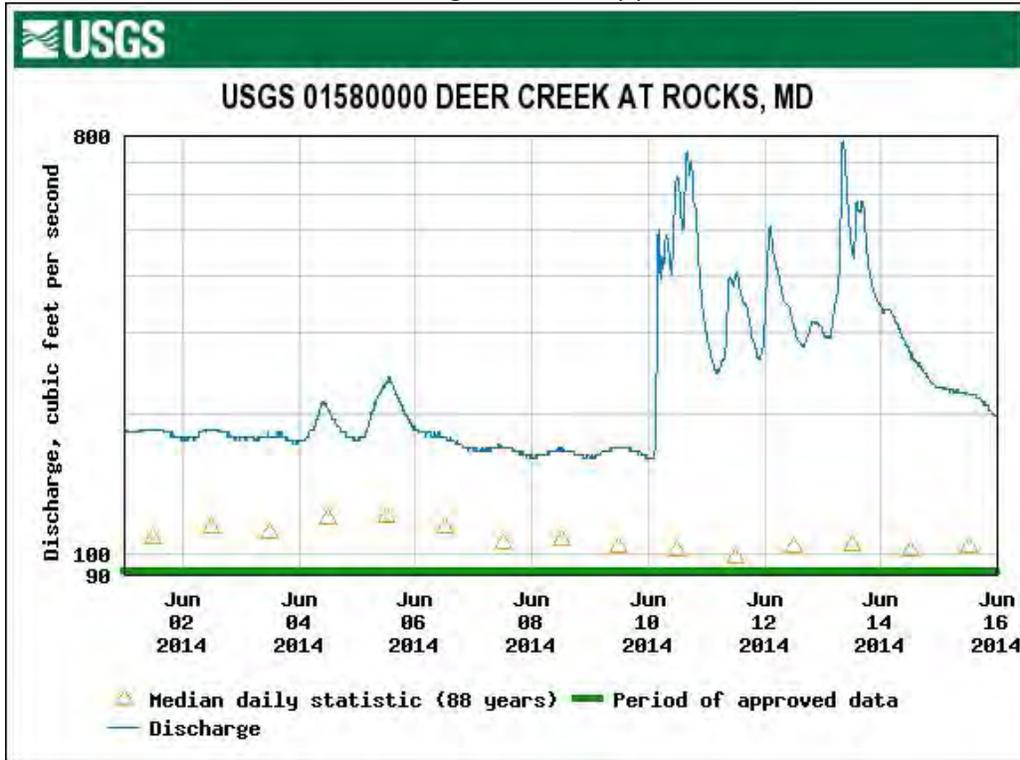


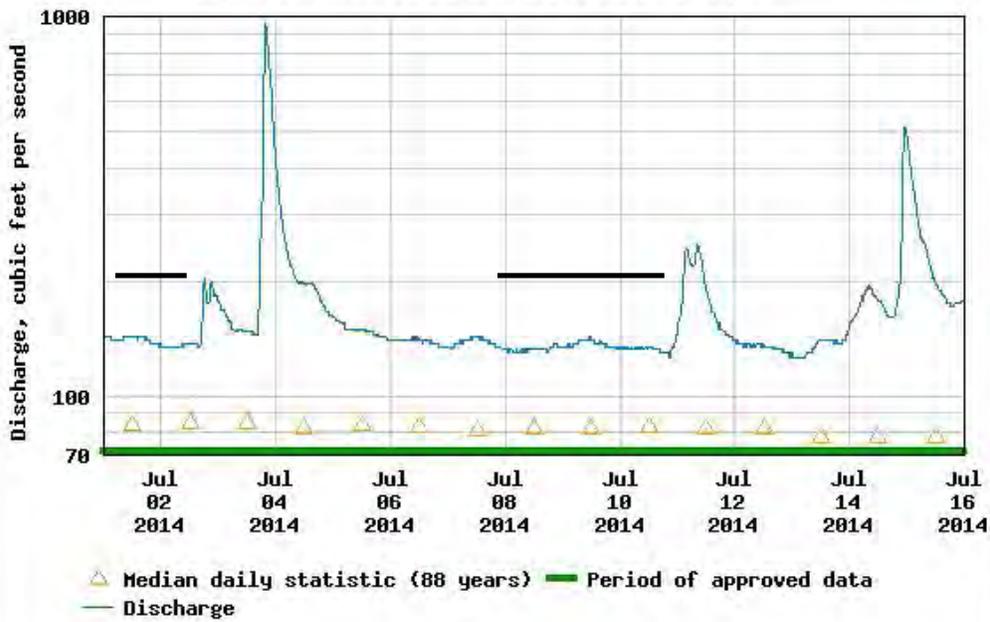
Figure 6. Box-and-whisker plot of Eastern elliptio shell lengths by sites.

Appendix I. Stream discharge in Deer Creek at Rocks, Maryland. Gauging station (01580000) is located approximately 1.5 stream kilometers downstream of mussel removal site. Hydrographs are broken into two-week intervals from June 1 to August 30. Survey periods are denoted with black horizontal lines.

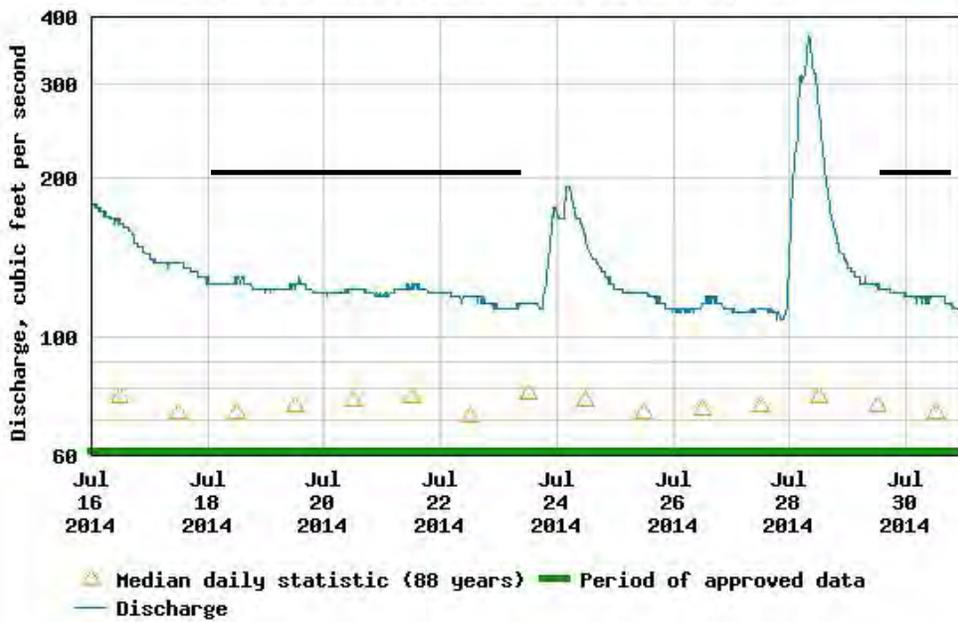




USGS 01580000 DEER CREEK AT ROCKS, MD



USGS 01580000 DEER CREEK AT ROCKS, MD

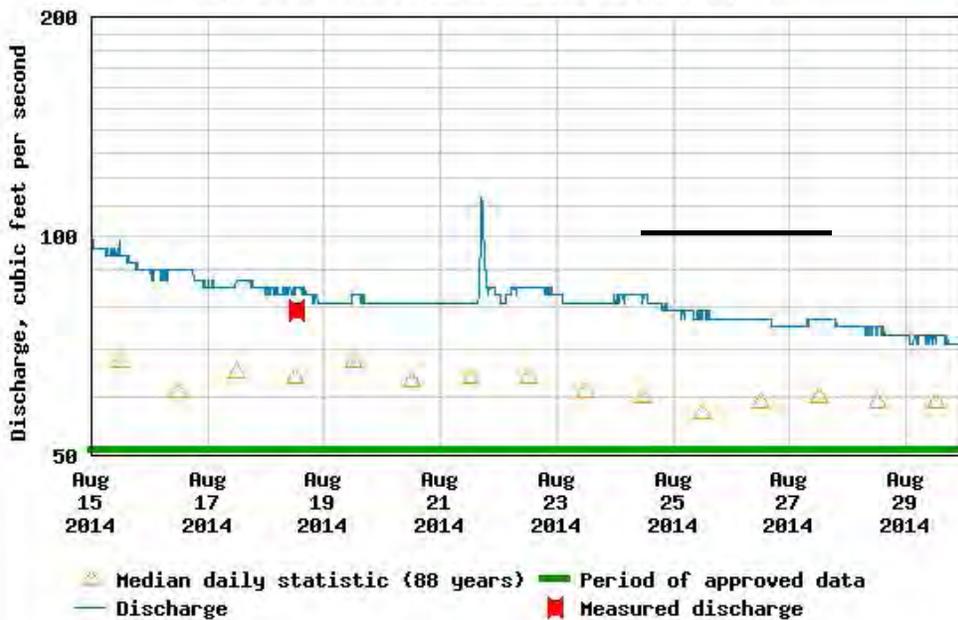




USGS 01580000 DEER CREEK AT ROCKS, MD



USGS 01580000 DEER CREEK AT ROCKS, MD



Appendix II. Baseline mussel survey results for control and relocation sites by section.

	Control site 0			
	Pass 1		Pass 2	
	0 L	0 R	0 L	0 R
Section	0 L	0 R	0 L	0 R
Time	7	7	4	4
No. observers	6	7	6	7
No. ELCO	3	7	1	1
CPUE	4.29	8.571	2.50	2.14
Section	10 L	10 R	10 L	10 R
Time	4	8	4	6
No. observers	6	7	6	7
No. ELCO	0	4	2	2
CPUE	0.00	4.29	5.00	2.86
Section	20 L	20 R	20 L	20 R
Time	6	7	4	4
No. observers	6	7	6	7
No. ELCO	2	2	0	1
CPUE	3.33	2.45	0.00	2.14
Section	30 L	30 R	30 L	30 R
Time	5	6	5	4
No. observers	6	7	6	7
No. ELCO	2	1	0	2
CPUE	4.00	1.43	0.00	4.29

	Control site 1			
	Pass 1		Pass 2	
	0 L	0 R	0 L	0 R
Section	0 L	0 R	0 L	0 R
Time	8	10	7	7
No. observers	6	6	6	6
No. ELCO	4	6	1	1
CPUE	5.00	6.00	1.43	1.43
Section	10 L	10 R	10 L	10 R
Time	7	22	8	12
No. observers	6	6	6	6
No. ELCO	4	72	1	22
CPUE	5.71	32.73	1.25	18.33
No. STUN	0	0	0	1
CPUE	0.00	0.00	0.00	0.83
Section	20 L	20 R	20 L	20 R
Time	8	15	6	11
No. observers	6	5	6	6
No. ELCO	1	28	0	24
CPUE	1.25	22.40	0.00	21.82
Section	30 L	30 R	30 L	30 R
Time	9	10	5	8
No. observers	6	6	6	6
No. ELCO	6	31	0	18
CPUE	6.67	31.00	0.00	22.50

Control site 3				
	Pass 1		Pass 2	
Section	0 L	0 R	0 L	0 R
Time	5	14	4	10
No. observers	5	6	4	5
No. ELCO	1	39	0	4
CPUE	2.40	27.86	0.00	4.80
Section	10 L	10 R	10 L	10 R
Time	6	11	4	7
No. observers	5	6	4	5
No. ELCO	0	13	0	2
CPUE	0.00	11.82	0.00	3.43
Section	20 L	20 R	20 L	2 R
Time	4	8	4	5
No. observers	5	6	4	5
No. ELCO	0	1	0	0
CPUE	0.00	1.25	0.00	0.00
Section	30 L	30 R	30 L	30 R
Time	4	7	5	4
No. observers	5	6	4	5
No. ELCO	0	2	0	4
CPUE	0.00	2.86	0.00	12.00

Control site 4				
	Pass 1		Pass 2	
Section	0 L	0 R	0 L	0 R
Time	7	9	5	10
No. observers	2	3	2	3
No. ELCO	0	2	0	3
CPUE	0.00	4.44	0.00	6.00
Section	10 L	10 R	10 L	10 R
Time	5	8	5	9
No. observers	2	3	2	3
No. ELCO	0	4	0	2
CPUE	0.00	10.00	0.00	4.44
Section	20 L	20 R	20 L	20 L
Time	5	8	5	8
No. observers	2	3	2	3
No. ELCO	0	1	0	2
CPUE	0.00	2.50	0.00	5.00
STUN	0	0	0	1
CPUE	0.00	0.00	0.00	2.50
Section	30 L	30 R	30 L	30 R
Time	5	11	5	7
No. observers	2	3	2	3
No. ELCO	0	1	0	1
CPUE	0.00	1.82	0.00	2.86

Relocation site 1				
	Pass 1		Pass 2	
Section	0 L	0 R	0 L	0 R
Time			4	5
No. observers			7	7
No. ELCO			8	0
CPUE			17.14	0.00
Section	10 L	10 R	10 L	10 R
Time	18	18	5	5
No. observers	7	7	7	7
No. ELCO	42	0	11	0
CPUE	20.00	0	18.86	0.00
Section	20 L	20 R	20 L	20 R
Time	14	12	7	4
No. observers	7	7	7	7
No. ELCO	6	0	0	0
CPUE	3.67	0	0.00	0.00
Section	30 L	30 R	30 L	30 R
Time	14	12	6	5
No. observers	7	7	7	7
No. ELCO	5	0	0	0
CPUE	3.06	0	0.00	0.00

Relocation site 2				
	Pass 1		Pass 2	
Section	0 L	0 R	0 L	0 R
Time	8	4	6	4
No. observers	7	7	8	8
No. ELCO	16	0	5	0
CPUE	17.14	0	6.25	0.00
Section	10 L	10 R	10 L	10 R
Time	9	6	6	5
No. observers	7	7	8	8
No. ELCO	7	1	2	0
CPUE	6.67	1.43	2.50	0.00
Section	20 L	20 R	20 L	20 R
Time	9	5	8	4
No. observers	7	7	8	8
No. ELCO	2	0	1	0
CPUE	1.90	0.00	0.94	0.00
Section	30 L	30 R	30 L	30 R
Time	7	5	8	4
No. observers	7	7	8	8
No. ELCO	2	0	1	0
CPUE	2.45	0.00	0.94	0.00

Relocation site 3				
	Pass 1		Pass 2	
Section	0 L	0 R	0 L	0 R
Time	21	5	6	4
No. observers	7	7	7	7
No. ELCO	0	3	1	3
CPUE	0.00	5.142857143	1.43	6.43
Section	10 L	10 R	10 L	10 R
Time	8	6	5	5
No. observers	7	7	7	6
No. ELCO	2	3	2	1
CPUE	2.14	4.29	3.43	2.00
Section	20 L	20 R	20 L	20 L
Time	8	7	7	4
No. observers	7	7	7	6
No. ELCO	1	4	1	0
CPUE	1.07	4.90	1.22	0.00
Section	30 L	30 R	30 L	30 R
Time	6	6	3	3
No. observers	7	7	7	7
No. ELCO	0	0	1	0
CPUE	0.00	0.00	2.86	0.00

Relocation site 4				
	Pass 1		Pass 2	
Section	0 L	0 R	0 L	0 R
Time	6	4	3	4
No. observers	7	7	7	7
No. ELCO	1	3	7	1
CPUE	1.43	6.43	20.00	2.14
Section	10 L	10 R	10 L	10 R
Time	5	5	5	3
No. observers	7	6	7	7
No. ELCO	2	1	2	0
CPUE	3.43	2.00	3.43	0.00
Section	20 L	20 R	20 L	2 R
Time	7	4	7	3
No. observers	7	6	7	7
No. ELCO	1	0	1	2
CPUE	1.22	0.00	1.22	5.71
Section	30 L	30 R	30 L	30 R
Time	3	3	3	3
No. observers	7	7	7	7
No. ELCO	1	0	2	0
CPUE	2.86	0.00	5.71	0.00

Relocation site 5				
	Pass 1		Pass 2	
Section	0 L	0 R	0 L	0 R
Time	4	12	4	7
No. observers	6	2	6	2
No. ELCO	2	4	2	1
CPUE	5.00	10.00	5.00	4.29
Section	10 L	10 R	10 L	10 R
Time	4	5	5	4
No. observers	6	6	6	6
No. ELCO	6	0	3	2
CPUE	15.00	0.00	6.00	5.00
Section	20 L	20 R	20 L	20 L
Time	5	6	4	4
No. observers	6	6	6	6
No. ELCO	2	3	1	0
CPUE	4.00	5.00	2.50	0.00
Section	30 L	30 R	30 L	30 R
Time	5	7	3	4
No. observers	6	6	6	6
No. ELCO	4	7	1	2
CPUE	8.00	10.00	3.33	5.00

Appendix III. Mussel removal survey results by section.

	Pass 1		Pass 2		Pass 3	
Section	0 L	0 R	0 L	0 R	0 L	0 R
Time	5	7	7	---	7	---
No. observers	8	8	5	---	8	---
No. ELCO	7	0	10	---	6	---
CPUE	10.50	0	17.14	---	6.43	---
Section	10 L	10 R	10 L	10 R	10 L	10 R
Time	7	4	5	---	7	---
No. observers	8	8	5	---	8	---
No. ELCO	12	1	8	---	15	---
CPUE	12.86	1.875	19.20	---	16.07	---
Section	20 L	20 R	20 L	20 R	20 L	20 R
Time	6	6	6	---	6	---
No. observers	8	8	5	---	8	---
No. ELCO	24	2	15	---	13	---
CPUE	30.00	2.5	30.00	---	16.25	---
Section	30 L	30 R	30 L	30 R	30 L	30 R
Time	7	5	15	---	4	---
No. observers	8	8	5	---	7	---
No. ELCO	9	1	6	---	5	---
CPUE	9.64	1.5	4.80	---	10.71	---
No. STUN	1	0	0	---	0	---
CPUE	1.07	0.00	0.00	---	0.00	---
Section	40 L	40 R	40 L	40 L	40 L	40 L
Time	7	5	5	---	4	---
No. observers	8	8	7	---	7	---
No. ELCO	1	1	4	---	2	---
CPUE	1.07	1.5	6.86	---	4.29	---
Section	50 L	50 R	50 L	50 R	50 L	50 R
Time	8	8	7	---	4	---
No. observers	7	7	7	---	7	---
No. ELCO	18	2	12	---	7	---
CPUE	19.29	2.14	14.69	---	15.00	---
Section	60 L	60 R	60 L	60 R	60 L	60 R
Time	12	6	9	---	---	---
No. observers	7	7	5	---	---	---
No. ELCO	48	0	6	---	---	---
CPUE	34.29	0.00	8.00	---	---	---
Section	70 L	70 R	70 L	70 R	70 L	70 R
Time	17	5	8	---	---	---
No. observers	7	7	5	---	---	---
No. ELCO	78	1	14	---	---	---
CPUE	39.33	1.71	21.00	---	---	---
Section	80 L	80 R	80 L	80 R	80 L	80 R
Time	9	11	10	---	---	---
No. observers	4	5	6	---	---	---
No. ELCO	40	8	12	---	---	---
CPUE	66.67	8.73	12.00	---	---	---
Section	90 L	90 R	90 L	90 R	90 L	90 R
Time	31	12	9	---	---	---
No. observers	5	5	7	---	---	---
No. ELCO	58	2	6	---	---	---
CPUE	22.45	2.00	5.71	---	---	---
Section	100 L	100 R	100 L	100 R	100 L	100 R
Time	12	6	10	---	10	---
No. observers	5	5	7	---	5	---
No. ELCO	24	0	25	---	13	---

CPUE	24.00	0.00	21.43	---	15.60	---
	Pass 1		Pass 2		Pass 3	
Section	110 L	110 R	110 L	110 R	110 L	110 R
Time	17	5	21	---	17	---
No. observers	5	5	7	---	5	---
No. ELCO	189	0	116	---	137	---
CPUE	133.41	0.00	47.35	---	96.71	---
No. STUN	1	0	0	---	0	---
CPUE	0.71	0.00	0.00	---	0.00	---
Section	120 L	120 R	120 L	120 R	120 L	120 R
Time	17	10	13	---	8	---
No. observers	4	3	7	---	6	---
No. ELCO	71	1	32	---	8	---
CPUE	62.65	2.00	21.10	---	10.00	---
Section	130 L	130 R	130 L	130 R	130 L	130 R
Time	25	3	8	---	6	---
No. observers	4	4	7	---	6	---
No. ELCO	29	2	8	---	2	---
CPUE	17.40	10.00	8.57	---	3.33	---
Section	140 L	140 R	140 L	140 R	140 L	140 R
Time	12	4	11	---	4	---
No. observers	7	5	7	---	6	---
No. ELCO	58	1	45	---	10	---
CPUE	41.43	3.00	35.06	---	25.00	---
Section	150 L	150 R	150 L	150 R	150 L	150 R
Time	9	5	8	---	5	---
No. observers	8	5	7	---	6	---
No. ELCO	6	9	2	---	3	---
CPUE	5.00	21.60	2.14	---	6.00	---
Section	160 L	160 R	160 L	160 R	160 L	160 R
Time	6	5	5	---	4	---
No. observers	8	5	7	---	6	---
No. ELCO	10	10	3	---	0	---
CPUE	12.50	24.00	5.14	---	0.00	---
Section	170 L	170 R	170 L	170 R	170 L	170 R
Time	5	6	6	---	4	---
No. observers	8	5	7	---	6	---
No. ELCO	16	5	14	---	4	---
CPUE	24.00	10.00	20.00	---	10.00	---
Section	180 L	180 R	180 L	180 R	180 L	180 R
Time	8	5	5	---	6	---
No. observers	8	5	7	---	6	---
No. ELCO	36	7	12	---	10	---
CPUE	33.75	16.80	20.57	---	16.67	---
Section	190 L	190 R	190 L	190 R	190 L	190 R
Time	14	4	10	---	8	---
No. observers	8	5	7	---	6	---
No. ELCO	82	6	37	---	23	---
CPUE	43.93	18.00	31.71	---	28.75	---
No. STUN	0	0	0	---	1	---
CPUE	0.00	0.00	0.00	---	1.25	---
Section	200 L	200 R	200 L	200 R	200 L	200 R
Time	9	4	9	---	6	---
No. observers	8	5	7	---	6	---
No. ELCO	63	3	22	---	15	---
CPUE	52.50	9.00	20.95	---	25.00	---
No. STUN	1	0	0	---	0	---
CPUE	0.83	0.00	0.00	---	0.00	---

	Pass 1		Pass 2		Pass 3	
Section	210 L	220 R	210 L	210 R	210 L	210 R
Time	10	4	9	---	5	---
No. observers	7	5	7	---	6	---
No. ELCO	10	4	36	---	16	---
CPUE	8.57	12.00	34.29	---	32.00	---
Section	220 L	220 R	220 L	220 R	220 L	220 R
Time	9	3	5	---	6	---
No. observers	7	5	7	---	6	---
No. ELCO	21	3	10	---	6	---
CPUE	20.00	12.00	17.14	---	10.00	---
Section	230 L	230 R	230 L	230 R	230 L	230 R
Time	8	4	9	---	7	---
No. observers	7	5	8	---	6	---
No. ELCO	0	4	6	---	8	---
CPUE	0.00	12.00	5.00	---	11.43	---
Section	240 L	240 R	240 L	240 R	240 L	240 R
Time	8	3	11	---	5	---
No. observers	7	5	8	---	6	---
No. ELCO	12	0	11	---	8	---
CPUE	12.86	0.00	7.50	---	16.00	---
Section	250 L	250 R	250 L	250 R	250 L	250 R
Time	8	4	11	---	8	---
No. observers	7	5	8	---	6	---
No. ELCO	23	1	9	---	2	---
CPUE	24.64	3.00	6.14	---	2.50	---
Section	260 L	260 R	260 L	260 R	260 L	260 R
Time	27	4	12	---	5	---
No. observers	7	5	8	---	6	---
No. ELCO	78	2	26	---	9	---
CPUE	24.76	6.00	16.25	---	18.00	---
Section	270 L	270 R	270 L	270 R	270 L	270 R
Time	6	4	7	---	8	---
No. observers	7	5	8	---	6	---
No. ELCO	34	0	19	---	18	---
CPUE	48.57	0.00	20.36	---	22.50	---
Section	280 L	280 R	280 L	280 R	280 L	280 R
Time	6	3	6	---	5	---
No. observers	7	5	8	---	6	---
No. ELCO	26	0	22	---	11	---
CPUE	37.14	0.00	27.50	---	22.00	---
Section	290 L	290 R	290 L	290 R	290 L	290 R
Time	10	5	6	---	6	---
No. observers	5	5	8	---	6	---
No. ELCO	30	1	21	---	18	---
CPUE	36.00	2.40	26.25	---	30.00	---
Section	300 L	300 R	300 L	300 R	300 L	300 R
Time	10	3	6	---	6	---
No. observers	5	5	8	---	6	---
No. ELCO	63	2	17	---	29	---
CPUE	75.60	8.00	21.25	---	48.33	---
Section	310 L	310 R	310 L	310 R	310 L	310 R
Time	7	4	5	---	4	---
No. observers	5	5	8	---	6	---
No. ELCO	7	3	2	---	4	---
CPUE	12.00	9.00	3.00	---	10.00	---

	Pass 1		Pass 2		Pass 3	
Section	320 L	320 R	320 L	320 R	320 L	320 R
Time	7	3	6	---	5	---
No. observers	5	5	8	---	5	---
No. ELCO	21	1	10	---	2	---
CPUE	36.00	4.00	12.50	---	4.80	---
Section	330 L	330 R	330 L	330 R	330 L	330 R
Time	6	3	5	---	4	---
No. observers	5	5	8	---	5	---
No. ELCO	3	0	1	---	8	---
CPUE	6.00	0.00	1.50	---	24.00	---
Section	340 L	340 R	340 L	340 R	340 L	340 R
Time	5	3	5	---	3	---
No. observers	4	5	8	---	5	---
No. ELCO	5	0	3	---	2	---
CPUE	15.00	0.00	4.50	---	8.00	---
Section	350 L	350 R	350 L	350 R	350 L	350 R
Time	4	3	4	---	3	---
No. observers	5	5	8	---	5	---
No. ELCO	2	4	4	---	0	---
CPUE	6.00	16.00	7.50	---	0.00	---
Section	360 L	360 R	360 L	360 R	360 L	360 R
Time	6	3	5	---	3	---
No. observers	5	5	8	---	5	---
No. ELCO	14	3	5	---	2	---
CPUE	28.00	12.00	7.50	---	8.00	---

Appendix IV. Mussel relocation monitoring data.

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/10/14	ELCO	65.7	C567	C566	543C	T	1	7/10/14
Removal	1	1	7/10/14	ELCO	70.4	C577	C576	5423	T	1	7/10/14
Removal	1	1	7/10/14	ELCO	71.6	C597	C596	542C	T	1	7/10/14
Removal	1	1	7/10/14	ELCO	82.0	C607	C606	5438	T	1	7/10/14
Removal	1	1	7/10/14	ELCO	63.5	C617	C616	5419	T	1	7/10/14
Removal	1	1	7/10/14	ELCO	73.1	C627	C626	5453	T	1	7/10/14
Removal	1	1	7/10/14	ELCO	66.0	C637	C636	5431	T	1	7/10/14
Removal	1	1	7/10/14	ELCO	68.9	C647	C646	5445	T	1	7/10/14
Removal	1	1	7/10/14	STUN	56.2	C655	C654	545F	T	1	7/10/14
Removal	1	1	7/10/14	ELCO	65.2	C657	C656	5421	T	1	7/10/14
Removal	1	1	7/10/14	ELCO	61.1	C667	C666	541C	T	1	7/10/14
Removal	1	1	7/10/14	ELCO	45.1	C685	C684	541F	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	71.0	C687	C686	5428	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	64.4	C697	C696	5457	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	68.0	C707	C706	543A	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	67.4	C717	C716	544E	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	73.4	C727	C726	5420	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	67.0	C737	C736	540D	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	64.5	C747	C746	546E	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	37.2	C757	C756	546C	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	60.0	C767	C766	5437	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	44.8	C769	C768	5439	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	78.3	C777	C776	5467	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	49.4	C779	C778	5449	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	59.0	C787	C786	542B	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	55.7	C797	C796	5444	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	55.5	C799	C798	546B	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	61.2	C807	C806	5455	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	71.0	C817	C816	541E	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	72.2	C827	C826	5459	T	5	7/10/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/10/14	ELCO	74.9	C837	C836	545D	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	77.6	C847	C846	544D	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	59.9	C857	C856	5447	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	72.9	C867	C866	540E	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	74.8	C877	C876	544A	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	60.5	C887	C886	5466	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	70.4	C897	C896	5425	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	65.0	C903	C902		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	54.6	C905	C904		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	74.9	C907	C906	5406	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	63.3	C909	C908		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	79.6	C911	C910		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	70.5	C913	C912		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	68.6	C915	C914		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	60.7	C917	C916	5465	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	63.7	C919	C918		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	69.3	C921	C920		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	70.7	C923	C922		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	59.0	C925	C924		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	60.1	C927	C926	542F	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	79.4	C929	C928		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	72.7	C931	C930		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	59.8	C933	C932		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	59.1	C935	C934		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	65.4	C937	C936	545B	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	50.5	C939	C938		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	65.6	C941	C940		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	56.9	C943	C942		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	48.3	C945	C944	540F	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	57.5	C947	C946	5410	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	59.9	C949	C948		T	5	7/10/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/10/14	ELCO	45.3	C951	C950	543E	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	44.6	C953	C952	543D	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	63.6	C955	C954		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	75.9	C957	C956	5411	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	60.0	C959	C958		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	61.8	C961	C960		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	52.1	C963	C962		T	5	7/10/14
Removal	1	1	7/10/14	ELCO	31.1	C965	C964	5443	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	29.0	C967	C966	5461	T	5	7/10/14
Removal	1	1	7/10/14	ELCO	31.4	C969	C968	5424	T	5	7/10/14
Removal	1	1	7/18/14	ELCO	69.9	C971	C970		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	69.8	C973	C972		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	73.6	C975	C974		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	78.8	C977	C976		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	61.7	C979	C978	5469	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	66.0	C981	C980		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	67.7	C983	C982		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	70.5	C985	C984		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	59.0	C987	C986		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	65.6	C989	C988	5412	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	70.7	C991	C990		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	74.2	C993	C992		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	70.6	C995	C994		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	69.5	C997	C996		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	67.0	C999	C998	5463	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	56.4	F145	F146		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	61.8	F147	F148		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	65.9	F149	F150		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	65.9	F151	F152		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	49.2	F153	F154	5450	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	66.4	F155	F156		T	4	7/18/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/18/14	ELCO	53.0	F157	F158		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	79.3	F159	F160		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	52.9	F161	F162		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	67.9	F163	F164	546F	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	65.9	F165	F166		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	63.7	F167	F168		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	66.0	F169	F170		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	51.7	F171	F172		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	59.0	F173	F174	5441	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	73.4	F175	F176		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	43.7	F177	F178	5464	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	60.2	F179	F180		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	59.8	F181	F182		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	61.2	F183	F184	542E	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	44.4	F185	F186	5462	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	42.4	F187	F188	541A	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	43.2	F189	F190	5446	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	64.3	F191	F192		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	44.8	F193	F194	5468	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	62.1	F195	F196		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	52.6	F197	F198		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	72.7	F199	F200		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	36.8	F201	F202	5415	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	72.7	F203	F204	546A	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	71.5	F205	F206		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	61.6	F207	F208		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	74.8	F209	F210		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	56.5	F211	F212		T	4	7/18/14
Removal	1	1	7/18/14	ELCO	50.7	F213	F214	544B	T	4	7/18/14
Removal	1	1	7/18/14	ELCO	62.6	F215	F216		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	60.2	F217	F218		T	1	7/18/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/18/14	ELCO	75.1	F219	F220		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	69.5	F221	F222		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	67.3	F223	F224	5454	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	59.8	F225	F226		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	64.2	F227	F228		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	60.4	F229	F230		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	65.0	F231	F232		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	69.2	F233	F234	5430	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	66.6	F235	F236		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	70.7	F237	F238		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	71.4	F239	F240		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	63.9	F241	F242		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	69.6	F243	F244	5435	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	62.5	F245	F246		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	66.0	F247	F248		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	59.1	F249	F250		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	72.3	F251	F252		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	46.3	F253	F254	5589	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	61.0	F255	F256		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	59.4	F257	F258		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	54.7	F259	F260		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	61.0	F261	F262		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	45.2	F263	F264	5460	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	59.5	F265	F266		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	69.8	F267	F268		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	65.1	F269	F270		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	58.0	F271	F272		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	63.5	F273	F274	5433	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	60.8	F275	F276		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	57.5	F277	F278		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	61.1	F279	F280		T	1	7/18/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/18/14	ELCO	63.8	F281	F282		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	46.7	F283	F284	545A	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	70.2	F285	F286		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	23.8	F287	F288	5416	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	68.2	F289	F290		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	48.5	F291	F292	545C	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	52.7	F293	F294	5432	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	46.5	F295	F296	543F	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	46.5	F297	F298	5451	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	62.8	F299	F300		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	40.5	F301	F302	5442	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	55.4	F303	F304	5434	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	33.4	F305	F306	5414	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	70.4	F307	F308		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	32.1	F309	F310	544F	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	63.1	F311	F312		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	60.1	F313	F314	5436	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	31.2	F315	F316	5548	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	68.3	F317	F318		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	63.8	F319	F320		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	61.8	F321	F322		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	63.2	F323	F324	553F	T	1	7/18/14
Removal	1	1	7/18/14	ELCO	66.0	F325	F326		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	57.1	F327	F328		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	54.3	F329	F330		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	65.1	F331	F332		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	64.0	F333	F334	5571	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	54.2	F335	F336		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	64.5	F337	F338		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	68.6	F339	F340		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	62.8	F341	F342		T	1	7/18/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/18/14	ELCO	48.8	F343	F344	5566	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	60.3	F345	F346		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	62.1	F347	F348		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	75.2	F349	F350		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	68.5	F351	F352		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	62.3	F353	F354	556D	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	54.3	F355	F356		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	61.8	F357	F358		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	83.7	F359	F360		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	70.1	F361	F362		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	65.4	F363	F364	554F	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	32.2	F365	F366		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	52.0	F367	F368		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	48.6	F369	F370	5567	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	66.4	F371	F372		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	57.7	F373	F374	5586	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	70.7	F375	F376		T	1	7/18/14
Removal	1	1	7/18/14	ELCO	33.9	F377	F378	5582	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	72.7	F379	F380		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	66.9	F381	F382		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	75.5	F383	F384	555E	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	71.5	F385	F386		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	73.7	F387	F388		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	67.1	F389	F390		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	72.2	F391	F392		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	67.2	F393	F394	5550	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	72.2	F395	F396		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	58.4	F397	F398		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	74.3	F399	F400		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	55.8	F401	F402		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	69.0	F403	F404	5587	T	5	7/18/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/18/14	ELCO	75.0	F405	F406		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	71.7	F407	F408		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	71.5	F409	F410		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	67.2	F411	F412		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	63.0	F413	F414		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	62.9	F415	F416		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	72.5	F417	F418		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	59.5	F419	F420		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	72.5	F421	F422		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	81.6	F423	F424	5596	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	66.3	F425	F426		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	73.8	F427	F428		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	52.0	F429	F430		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	72.7	F431	F432		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	71.5	F433	F434	556C	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	73.9	F435	F436		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	62.4	F437	F438		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	90.0	F439	F440		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	58.7	F441	F442		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	59.3	F443	F444	556E	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	67.5	F445	F446		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	68.1	F447	F448		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	68.0	F449	F450		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	62.7	F451	F452		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	61.5	F453	F454	5599	T	5	7/18/14
Removal	1	1	7/18/14	ELCO	62.9	F455	F456		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	67.0	F457	F458		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	77.3	F459	F460		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	78.7	F461	F462		T	5	7/18/14
Removal	1	1	7/18/14	ELCO	64.1	F463	F464	553A	T	2	7/19/14
Removal	1	1	7/18/14	ELCO	70.9	F465	F466		T	2	7/19/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/18/14	ELCO	77.9	F467	F468		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	66.5	F469	F470		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	68.5	F471	F472		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	84.8	F473	F474	5542	T	2	7/19/14
Removal	1	1	7/18/14	ELCO	68.6	F475	F476		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	68.0	F477	F478		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	68.7	F479	F480		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	68.7	F481	F482		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	63.1	F483	F484	5583	T	2	7/19/14
Removal	1	1	7/18/14	ELCO	73.5	F485	F486		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	60.5	F487	F488		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	65.7	F489	F490		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	72.2	F491	F492		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	68.3	F493	F494	5592	T	2	7/19/14
Removal	1	1	7/18/14	ELCO	62.8	F495	F496		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	64.1	F497	F498		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	77.0	F499	F500		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	61.7	F501	F502		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	61.4	F503	F504	5543	T	2	7/19/14
Removal	1	1	7/18/14	ELCO	69.8	F505	F506		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	65.4	F507	F508		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	67.9	F509	F510		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	61.1	F511	F512		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	65.7	F513	F514	5549	T	2	7/19/14
Removal	1	1	7/18/14	ELCO	70.7	F515	F516		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	61.5	F517	F518		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	71.1	F519	F520		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	50.5	F521	F522		T	1	7/19/14
Removal	1	1	7/18/14	ELCO	63.3	F523	F524	5554	T	2	7/19/14
Removal	1	1	7/18/14	ELCO	72.5	F525	F526		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	73.9	F527	F528		T	2	7/19/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/18/14	ELCO	63.0	F529	F530		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	76.4	F531	F532		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	64.7	F533	F534	5594	T	2	7/19/14
Removal	1	1	7/18/14	ELCO	72.9	F535	F536		T	2	7/19/14
Removal	1	1	7/18/14	ELCO	58.1	F537	F538		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	68.3	F539	F540		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	72.5	F541	F542		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	59.4	F543	F544	556F	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	67.3	F545	F546		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	74.8	F547	F548		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	78.3	F549	F550		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	64.6	F551	F552		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	64.6	F553	F554	5541	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	61.5	F555	F556		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	63.1	F557	F558		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	67.6	F559	F560		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	74.4	F561	F562		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	69.8	F563	F564	5580	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	59.3	F565	F566		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	55.7	F567	F568		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	79.4	F569	F570		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	62.8	F571	F572		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	75.0	F573	F574	5584	T	3	7/19/14
Removal	1	1	7/19/14	ELCO	78.4	F575	F576		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	82.8	F577	F578		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	66.8	F579	F580		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	68.8	F581	F582		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	61.4	F583	F585	5555	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	67.1	F584	F586		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	76.3	F587	F588		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	52.4	F589	F590		T	3	7/19/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/19/14	ELCO	64.3	F591	F592		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	67.4	F593	F594	556B	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	55.3	F595	F596		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	67.3	F597	F598		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	71.3	F599	F600		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	78.2	F601	F602		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	77.3	F603	F604	5572	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	58.5	F605	F606		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	62.4	F607	F608		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	75.3	F609	F610		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	69.2	F611	F612		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	58.4	F613	F614	5563	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	65.2	F615	F616		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	72.6	F617	F618		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	70.3	F619	F620		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	65.7	F621	F622		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	72.3	F623	F624	5560	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	66.3	F625	F626		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	59.6	F627	F628		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	71.6	F629	F630		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	66.3	F631	F632		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	62.8	F633	F634	554E	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	67.0	F635	F636		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	58.6	F637	F638		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	55.6	F639	F640		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	71.9	F641	F642		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	59.6	F643	F644	5553	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	61.8	F645	F646		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	64.8	F647	F648		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	63.6	F649	F650		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	78.8	F651	F652		T	3	7/19/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/19/14	ELCO	64.9	F653	F654	5575	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	76.2	F655	F656		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	75.8	F657	F658		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	60.5	F659	F660		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	64.4	F661	F662		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	58.4	F663	F664	555C	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	64.0	F665	F666		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	66.2	F667	F668		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	54.2	F669	F670		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	73.1	F671	F672		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	71.5	F673	F674	5577	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	46.0	F675	F676	5561	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	64.5	F677	F678		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	66.3	F679	F680		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	69.3	F681	F682		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	68.7	F683	F684	555A	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	69.8	F685	F686		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	68.9	F687	F688		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	67.5	F689	F690		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	57.1	F691	F692		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	63.8	F693	F694	5568	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	68.3	F695	F696		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	73.7	F697	F698		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	61.9	F699	F700		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	80.4	F701	F702		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	64.0	F703	F704	5542	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	57.3	F705	F706		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	73.0	F707	F708		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	58.1	F709	F710		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	53.1	F711	F712		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	63.9	F713	F714	5544	T	2	7/19/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/19/14	ELCO	50.3	F715	F716		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	60.4	F717	F718		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	70.1	F719	F720		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	65.6	F721	F722		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	65.2	F723	F724	555B	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	65.6	F725	F726		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	68.5	F727	F728		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	57.7	F729	F730		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	45.9	F731	F732	558E	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	63.5	F733	F734	5588	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	36.0	F735	F736	554B	T	2	7/19/14
Removal	1	1	7/19/14	STUN	34.6	F737	F738	5547	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	61.1	F739	F740		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	41.0	F741	F742	5551	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	45.6	F743	F744	554A	T	3	7/19/14
Removal	1	1	7/19/14	ELCO	60.9	F745	F746		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	57.7	F747	F748		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	52.0	F749	F750	5564	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	58.3	F751	F752		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	67.0	F753	F754	5578	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	59.4	F755	F756		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	64.9	F757	F758		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	48.1	F759	F760	5598	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	80.4	F761	F762		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	73.9	F763	F764	553B	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	75.4	F765	F766		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	57.3	F767	F768		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	72.6	F769	F770		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	65.6	F771	F772		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	70.4	F773	F774	5562	T	3	7/19/14
Removal	1	1	7/19/14	ELCO	61.0	F775	F776		T	1	7/19/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/19/14	ELCO	65.1	F777	F778		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	74.8	F779	F780		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	67.8	F781	F782		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	53.8	F783	F784	5576	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	82.6	F785	F786		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	69.1	F789	F790		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	53.0	F791	F792		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	63.5	F793	F794	5585	T	2	7/19/14
Removal	1	1	7/19/14	ELCO	65.7	F795	F796		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	68.0	F797	F798		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	67.0	F799	F800		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	76.4	F801	F802		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	62.2	F803	F804	557D	T	3	7/19/14
Removal	1	1	7/19/14	ELCO	70.1	F805	F806		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	66.3	F807	F808		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	65.9	F809	F810		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	50.2	F811	F812		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	59.3	F813	F814	556A	T	4	7/19/14
Removal	1	1	7/19/14	ELCO	71.4	F815	F816		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	70.1	F817	F818		T	2	7/19/14
Removal	1	1	7/19/14	ELCO	61.2	F819	F820		T	4	7/19/14
Removal	1	1	7/19/14	ELCO	76.5	F821	F822		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	79.8	F823	F824	5579	T	3	7/19/14
Removal	1	1	7/19/14	ELCO	61.8	F825	F826		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	56.1	F827	F828		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	64.1	F829	F830		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	69.1	F831	F832		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	77.2	F833	F834	5597	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	74.4	F835	F836		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	67.3	F837	F838		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	84.1	F839	F840		T	1	7/19/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/19/14	ELCO	74.0	F841	F842		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	61.6	F843	F844	558B	T	3	7/19/14
Removal	1	1	7/19/14	ELCO	63.0	F845	F846		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	71.5	F847	F848		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	69.7	F849	F850		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	41.9	F851	F852	5601	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	42.2	F853	F854	558C	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	50.6	F855	F856	557C	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	72.9	F857	F858		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	60.0	F859	F860		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	47.2	F861	F862	553E	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	51.7	F863	F864	5538	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	57.1	F865	F866		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	61.1	F867	F868		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	70.8	F869	F870		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	73.7	F871	F872		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	69.6	F873	F874	5569	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	77.4	F875	F876		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	62.1	F877	F878		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	58.4	F879	F880		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	69.5	F881	F882		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	65.7	F883	F884	559B	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	50.1	F885	F886		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	51.3	F887	F888		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	41.2	F889	F890	5650	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	45.6	F891	F892	5557	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	62.1	F893	F894	5543	T	3	7/19/14
Removal	1	1	7/19/14	ELCO	45.6	F895	F896	560A	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	43.7	F897	F898	5654	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	55.7	F899	F900		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	44.1	F901	F902	565A	T	1	7/19/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/19/14	ELCO	60.2	F903	F904	557F	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	45.8	F905	F906	558F	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	67.6	F907	F908		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	65.2	F909	F910		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	81.1	F911	F912		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	57.9	F913	F914	5613	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	62.0	F915	F916		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	69.2	F917	F918		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	78.9	F919	F920		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	67.4	F921	F922		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	65.5	F923	F924	555F	T	3	7/19/14
Removal	1	1	7/19/14	ELCO	66.8	F925	F926		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	54.5	F927	F928		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	74.4	F929	F930		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	76.8	F931	F932		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	71.4	F933	F934	557B	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	66.4	F935	F936		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	63.6	F937	F938		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	72.8	F939	F940		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	67.1	F941	F942		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	74.6	F943	F944	558D	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	68.5	F945	F946		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	70.6	F947	F948		T	3	7/19/14
Removal	1	1	7/19/14	ELCO	75.8	F949	F950		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	74.2	F951	F952		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	66.7	F953	F954	5591	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	49.4	F955	F956	5590	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	54.5	F957	F958		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	47.2	F959	F960	5581	T	1	7/19/14
Removal	1	1	7/19/14	ELCO	64.1	F961	F962		T	1	7/19/14
Removal	1	1	7/19/14	ELCO	47.2	F963	F964	5658	T	1	7/19/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	82.9	F965	F966		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	65.8	F967	F968		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	74.0	F969	F970		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	69.5	F971	F972		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	67.3	F973	F974	565D	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.3	F975	F976		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	72.1	F977	F978		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.6	F979	F980		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	62.1	F981	F982		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	66.8	F983	F984	5607	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	73.7	F985	F986		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.8	F987	F988		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	64.6	F989	F990		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	72.8	F991	F992		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	84.1	F993	F994	562F	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	77.0	F995	F996		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	63.2	F997	F998		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	68.9	D147	D148		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	60.7	D149	D150		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	60.3	D151	D152		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	58.4	D153	D154		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.9	D155	D156		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	67.0	D157	D158	55E7	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	52.0	D159	D160		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	54.2	D161	D162		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	91.6	D163	D164		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	42.2	D165	D166	55EC	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	76.1	D167	D168	55A5	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	83.8	D169	D170		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	79.3	D171	D172		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.3	D173	D174		T	3 to 4	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	63.8	D175	D176		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	71.5	D177	D178	55CA	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	73.6	D179	D180		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	61.2	D181	D182		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	89.1	D183	D184		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	90.5	D185	D186		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	52.6	D187	D188	55ED	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	74.3	D189	D190		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	80.0	D191	D192		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.6	D193	D194		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	68.8	D195	D196		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	68.2	D197	D198	55D4	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	66.3	D201	D200	55D3	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	70.5	D203	D202		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	60.8	D205	D204		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	71.9	D207	D206		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	51.9	D209	D208		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	52.9	D211	D210	55A6	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	76.6	D213	D212		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	69.3	D215	D214		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	73.2	D217	D216		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	64.1	D219	D218		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	74.4	D221	D220	55FE	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	59.4	D223	D222		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	63.6	D225	D224		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	65.7	D227	D226		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	64.5	D229	D228		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	49.5	D231	D230	55D2	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	78.3	D233	D232		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	69.5	D235	D234		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	63.6	D237	D236		T	2 to 3	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	72.2	D239	D238		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	65.6	D241	D240	55F1	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	77.1	D243	D242		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	69.9	D245	D244		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	63.5	D247	D246		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	59.5	D249	D248		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	64.2	D251	D250	55F5	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	62.0	D253	D252		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	63.5	D255	D254		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	65.4	D257	D256		T	2 to 3	7/23/14
Removal	1	1	7/22/14	STUN	56.2	D259	D258	55BF	T	2	7/23/14
Removal	1	1	7/22/14	ELCO	84.2	D261	D260	54CD	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	78.5	D263	D262		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	67.5	D265	D264		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	92.1	D267	D266		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	77.4	D269	D268		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	70.3	D271	D270	562C	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	79.6	D273	D272		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	81.8	D275	D274		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.8	D277	D276		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	78.4	D279	D278		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	72.5	D281	D280	55EA	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	64.6	D283	D282		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	77.8	D285	D284		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	67.5	D287	D286		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	72.0	D289	D288		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	71.1	D291	D290	55FF	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	83.0	D293	D292		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	61.6	D295	D294		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.5	D297	D296		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	73.1	D299	D298		T	3 to 4	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	54.5	D301	D300		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	58.9	D303	D302		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	71.2	D305	D304		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	66.9	D307	D306		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	73.9	D309	D308	55B1	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	68.9	E001	E000		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	76.1	E003	E002		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	87.4	E005	E004		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	66.4	E007	E006		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	65.9	E009	E008	560B	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	70.4	E011	E010		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	76.1	E013	E012		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	75.3	E015	E014		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	76.0	E017	E016		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	78.2	E019	E018	5657	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	75.1	E021	E020		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	80.5	E023	E022		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	81.5	E025	E024		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	62.0	E027	E026		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	85.0	E029	E028	5614	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	78.1	E031	E030		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.8	E033	E032		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	76.7	E035	E034		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	44.9	E037	E036	561A	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	77.7	E039	E038	5638	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	84.5	E041	E040		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	68.7	E043	E042		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	72.8	E045	E044		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	81.4	E047	E046		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	73.0	E049	E048	561C	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	78.0	E051	E050		T	3	7/22/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	69.2	E053	E052		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	73.4	E055	E054		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	56.4	E057	E056		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	76.4	E059	E058	564D	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	68.9	E061	E060		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	68.8	E063	E062		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.5	E065	E064		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	73.1	E067	E066		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	64.7	E069	E068	5612	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	60.8	E071	E070		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	83.8	E073	E072		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	82.8	E075	E074		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	78.8	E077	E076		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	81.3	E079	E078	5653	T	5	7/22/14
Removal	1	1	7/22/14	ELCO	77.9	E081	E080		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	76.9	E083	E082		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	82.5	E085	E084		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	78.2	E087	E086		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	74.9	E089	E088	5647	T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	79.9	E091	E090		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	76.6	E093	E092		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	62.4	E095	E094		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	69.4	E097	E096		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	66.5	E099	E098	563B	T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	73.4	E101	E100		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	75.7	E103	E102		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	75.4	E105	E104		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	70.7	E107	E106		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	76.1	E109	E108	565B	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	82.0	E111	E110		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	66.7	E113	E112		T	3	7/22/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	63.9	E115	E114		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	75.4	E117	E116		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	73.3	E119	E118	5619	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	79.1	E121	E120		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	76.8	E123	E122		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	71.1	E125	E124		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	74.1	E127	E126		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	80.3	E129	E128	5636	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	66.7	E131	E130		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	60.6	E133	E132		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	76.5	E135	E134		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	74.6	E137	E136		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	60.4	E139	E138	5642	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	72.8	E141	E140		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	79.1	E143	E142		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	81.0	E145	E144		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	71.0	E147	E146		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.4	E149	E148	5649	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	67.1	E151	E150		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	75.7	E153	E152		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	64.0	E155	E154		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	65.5	E157	E156		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	74.5	E159	E158	5625	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	84.4	E161	E160		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	64.9	E163	E162		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	63.3	E165	E164		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	46.7	E167	E166	563E	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	70.2	E169	E168	5663	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	68.1	E171	E170		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	62.4	E173	E172		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	66.4	E175	E174		T	4	7/22/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	75.5	E177	E176		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	64.1	E179	E178	5659	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.5	E181	E180		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	78.3	E183	E182		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	83.6	E185	E184		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	64.5	E187	E186		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.5	E189	E188	5652	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.9	E191	E190		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	69.9	E193	E192		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	81.4	E195	E194		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	66.7	E197	E196		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	71.8	E199	E198	561B	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	66.8	E201	E200		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	48.8	E203	E202	5661	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	73.9	E205	E204	560C	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	72.8	E207	E206		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	88.2	E209	E208		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	65.8	E211	E210		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	60.3	E213	E212		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	69.8	E215	E214	562B	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	66.7	E217	E216		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	71.4	E219	E218		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	65.0	E221	E220		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	72.6	E223	E222		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	78.8	E225	E224	5634	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	70.8	E227	E226		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	76.0	E229	E228		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	79.2	E231	E230		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	64.9	E233	E232		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	61.8	E235	E234	5610	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	50.5	E237	E236		T	3 to 4	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	51.7	E239	E238		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.9	E241	E240		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	66.7	E243	E242		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	72.1	E245	E244	5621	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	55.6	E247	E246		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	71.5	E249	E248		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	67.5	E251	E250		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	68.5	E253	E252		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	76.0	E255	E254	561F	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	75.0	E257	E256		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	57.8	E259	E258		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	67.1	E261	E260		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	66.9	E263	E262		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	59.3	E265	E264	5637	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	71.4	E267	E266		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.8	E269	E268		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	72.9	E271	E270		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	76.1	E273	E272		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	53.0	E275	E274	561D	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	61.8	E277	E276		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	68.2	E279	E278		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	49.3	E281	E280	5628	T	5	7/22/14
Removal	1	1	7/22/14	ELCO	65.0	E283	E282		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	72.3	E285	E284	5602	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	62.2	E287	E286		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	65.2	E289	E288		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	72.0	E291	E290		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.8	E293	E292		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	63.8	E295	E294	565F	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	78.5	E297	E296		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	59.0	E299	E298		T	3 to 4	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	77.4	E301	E300		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	69.2	E303	E302		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	73.6	E305	E304	560E	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	71.8	E307	E306		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	64.3	E309	E308		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.1	E311	E310		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	66.9	E313	E312		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	61.3	E315	E314	5639	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	69.3	E317	E316		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	68.1	E319	E318		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	53.3	E321	E320		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	59.4	E323	E322		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.9	E325	E324	564E	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	60.6	E327	E326		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	68.1	E329	E328		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	73.8	E331	E330		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	71.0	E333	E332		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	46.9	E335	E334	5623	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	72.4	E337	E336		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	65.2	E339	E338		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	70.5	E341	E340		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	71.3	E343	E342		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	81.6	E345	E344	5643	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	66.7	E347	E346		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	74.3	E349	E348		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	72.5	E351	E350		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	68.0	E353	E352		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	73.5	E355	E354	563A	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	58.4	E357	E356		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	68.5	E359	E358		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	84.0	E361	E360		T	3 to 4	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	75.9	E363	E362		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	71.0	E365	E364	563D	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	71.2	E367	E366		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	72.5	E369	E368		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	76.1	E371	E370		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	83.2	E373	E372		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	60.5	E375	E374	5648	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	82.3	E377	E376		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	73.8	E379	E378		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	64.1	E381	E380		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	72.4	E383	E382		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	81.6	E385	E384	5608	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	65.8	E387	E386		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.1	E389	E388		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	61.4	E391	E390		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	74.5	E393	E392		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	58.0	E395	E394	5629	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	72.4	E397	E396		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	82.9	E399	E398		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	73.2	E401	E400		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	76.7	E403	E402		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	78.6	E405	E404		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	76.6	E407	E406		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	71.0	E409	E408	5655	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	74.2	E411	E410		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	62.0	E413	E412		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	81.3	E415	E414		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	75.4	E417	E416		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	71.0	E419	E418	5605	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	67.8	E421	E420		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	66.5	E423	E422		T	3	7/22/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	69.1	E425	E424		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	82.7	E427	E426		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	50.9	E429	E428	5633	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	79.6	E431	E430		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	67.2	E433	E432		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	52.3	E435	E434		T	3	7/22/14
Removal	1	1	7/22/14	ELCO	98.7	E437	E436		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	82.2	E439	E438	55FB	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	69.1	E441	E440		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	69.7	E443	E442		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	69.3	E445	E444		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	69.9	E447	E446		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	63.4	E449	E448	55B2	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	63.8	E451	E450		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	84.3	E453	E452		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	62.0	E455	E454		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	70.0	E457	E456		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	70.1	E459	E458	55AB	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	78.2	E461	E460		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	62.1	E463	E462		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	76.0	E465	E464		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	65.5	E467	E466		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	64.0	E469	E468	55CA	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	61.9	E471	E470		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	66.4	E473	E472		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	57.1	E475	E474		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.0	E477	E476		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	72.0	E479	E478	55A9	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	70.8	E481	E480		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.7	E483	E482		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	66.8	E485	E484		T	5	7/22/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	57.9	E487	E486		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	73.2	E489	E488	55AD	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	73.1	E491	E490		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	71.1	E493	E492		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	68.6	E495	E494		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	44.7	E497	E496	55D7	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	62.4	E499	E498	55FC	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	79.5	E501	E500		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	68.5	E503	E502		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	67.9	E505	E504	5600	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	78.7	E507	E506		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.8	E509	E508		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	73.8	E511	E510		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	99.0	E513	E512		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.6	E515	E514	565E	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	73.8	E517	E516		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	78.7	E519	E518		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	71.5	E521	E520		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	67.5	E523	E522		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.1	E525	E524	5604	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	72.5	E527	E526		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	55.9	E529	E528		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	71.6	E531	E530		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	74.1	E533	E532		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	81.1	E535	E534	5624	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	64.4	E537	E536		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	63.6	E539	E538		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	72.5	E541	E540		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	90.0	E543	E542		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	67.9	E545	E544	562A	T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.2	E547	E546		T	4	7/22/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	60.0	E549	E548		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	86.6	E551	E550		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	74.8	E553	E552		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	70.2	E555	E554	5616	T	3	7/22/14
Removal	1	1	7/22/14	ELCO	54.5	E557	E556		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	75.7	E559	E558		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	71.2	E561	E560		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	63.9	E563	E562		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	59.4	E565	E564	5611	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	74.2	E567	E566		T	4	7/22/14
Removal	1	1	7/22/14	ELCO	96.1	E569	E568		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	58.7	E571	E570		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	69.6	E573	E572		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	73.3	E575	E574	564C	T	5	7/22/14
Removal	1	1	7/22/14	ELCO	67.6	E577	E576		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	70.4	E579	E578		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.4	E581	E580		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	70.5	E583	E582		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	66.9	E585	E584	562C	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	77.7	E587	E586		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	65.7	E589	E588		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.3	E591	E590		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	69.7	E593	E592		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	60.5	E595	E594	565C	T	5	7/22/14
Removal	1	1	7/22/14	ELCO	57.4	E597	E596		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	80.0	E599	E598		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	59.6	E601	E600		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.0	E602	E612		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	60.8	E603	E604	560D	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	69.8	E605	E614		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	69.6	E607	E606		T	3 to 4	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	68.4	E608	E615		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	63.9	E609	E613		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	81.8	E611	E610		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	70.9	E617	E616	5641	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	65.5	E619	E618		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	64.8	E621	E620		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	61.6	E623	E622		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	65.8	E625	E624	564F	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	78.3	E627	E626		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	65.5	E629	E628		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	59.8	E631	E630		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	80.3	E633	E632		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	71.5	E635	E634	5635	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	68.0	E637	E636		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	70.3	E639	E638		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.9	E641	E640		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	76.3	E643	E642		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	79.9	E645	E644	5632	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	73.3	E647	E646		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	61.1	E649	E648		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	66.8	E651	E650		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	70.8	E653	E652		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.1	E655	E654	5618	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	65.4	E657	E656		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	62.1	E659	E658		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.8	E661	E660		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	73.9	E663	E662		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	72.5	E665	E664	5630	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	61.4	E667	E666		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	76.1	E669	E668		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	71.3	E671	E670		T	3 to 4	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	84.4	E673	E672		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	65.4	E675	E674	5646	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	76.4	E677	E676		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	58.9	E679	E678		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	68.6	E681	E680		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	66.7	E683	E682		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	65.8	E685	E684	5609	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	69.2	E687	E686		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	74.7	E689	E688		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	83.2	E691	E690		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	62.6	E693	E692		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	64.7	E695	E694	5656	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	62.3	E697	E696		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	67.9	E699	E698		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	66.9	E701	E700		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	63.0	E703	E702		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	68.6	E705	E704	5615	T	5	7/22/14
Removal	1	1	7/22/14	ELCO	66.7	E707	E706		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	54.8	E709	E708		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	67.4	E711	E710		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	68.8	E713	E712		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	70.3	E715	E714	5644	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	59.4	E717	E716		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	61.2	E719	E718		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	57.8	E721	E720		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	67.1	E723	E722		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	67.7	E725	E724		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	76.6	E727	E726		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	78.1	E729	E728		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	76.1	E731	E730		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	78.7	E733	E732	5640	T	5	7/22/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	77.7	E735	E734		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	67.5	E737	E736		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	78.9	E739	E738		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	75.0	E741	E740		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	70.4	E743	E742	562D	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	68.8	E745	E744		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	66.2	E747	E746		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	65.3	E749	E748		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	73.2	E751	E750		T		7/23/14
Removal	1	1	7/22/14	ELCO	68.9	E753	E752	5631	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	74.3	E755	E754		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	86.9	E757	E756		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	67.8	E759	E758		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	75.8	E761	E760		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	66.9	E763	E762	561E	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	72.1	E765	E764		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	80.7	E767	E766		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	66.5	E769	E768		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	68.7	E771	E770		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	66.3	E773	E772	5628	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	63.8	E775	E774		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	64.1	E777	E776		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	71.1	E779	E778		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	60.5	E781	E780		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	51.1	E783	E782	560G	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	58.3	E785	E784		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	73.6	E787	E786		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	76.2	E789	E788		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.1	E791	E790		T		7/23/14
Removal	1	1	7/22/14	ELCO	58.8	E793	E792	564B	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	61.8	E795	E794		T	3 to 4	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	60.4	E797	E796		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	70.5	E799	E798		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	63.9	E801	E800		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	62.0	E803	E802	5622	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	66.1	E805	E804		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	80.1	E807	E806		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	60.9	E809	E808		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	71.5	E811	E810		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	55.5	E813	E812	5651	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	73.7	E815	E814		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	66.7	E817	D356		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	69.8	E819	E818		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	66.7	E821	E820		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	69.8	E823	E822	563F	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	47.4	E825	E824	5627	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	62.2	E827	E826		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	69.2	E829	E828		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	74.3	E831	E830		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	60.5	E833	E832	563C	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	51.2	E835	E834		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	65.6	E837	E836		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	63.6	E839	E838		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	79.1	E841	E840		T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	78.7	E843	E842	5645	T	5	7/22/14
Removal	1	1	7/22/14	ELCO	62.7	E845	E844		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	63.1	E847	E846		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	64.1	E849	E848		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	67.5	E851	E850		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	52.3	E853	E852	5617	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	73.7	E855	E854		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	66.0	E857	E856		T	3 to 4	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	53.5	E859	E858		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	65.2	E861	E860		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	57.9	E863	E862	5603	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	73.2	E865	E864		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	74.0	E867	E866		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	68.3	E869	E868		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	76.3	E871	E870		T		7/23/14
Removal	1	1	7/22/14	ELCO	78.5	E873	E872	5662	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	60.8	E875	E874		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	53.2	E877	E876		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	68.0	E879	E878		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	68.2	E881	E880		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	54.9	E883	E882		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	66.3	E885	E884	5606	T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	79.9	E887	E886		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	60.4	E889	E888		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	69.0	E891	E890		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	64.9	E893	E892	564A	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	48.9	E895	E894	560F	T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	68.6	E897	E896		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	67.7	E899	E898		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	53.5	E901	E900		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	63.6	E903	E902	55C1	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	55.9	E905	E904		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	73.1	E907	E906		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	58.3	E909	E908		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	70.7	E911	E910		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	79.0	E913	E912	55C3	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	77.4	E915	E914		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	77.5	E917	E916		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	77.7	E919	E918		T	3 to 4	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	70.2	E921	E920		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	60.7	E923	E922	55A4	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	71.5	E925	E924		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	66.3	E927	E926		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	68.0	E929	E928		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	71.2	E931	E930		T	5	7/22/14
Removal	1	1	7/22/14	ELCO	64.3	E933	E932	55C9	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	68.0	E935	E934		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	72.6	E937	E936		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	46.4	E939	E938	55D1	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	68.3	E941	E940		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	83.0	E943	E942	55CF	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	68.3	E945	E944		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	72.0	E947	E946		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	62.1	E949	E948		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	89.1	E951	E950		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	77.1	E953	E952	55C7	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	72.3	E955	E954		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	57.2	E957	E956		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	54.2	E959	E958		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	67.2	E961	E960		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	75.7	E963	E962	55CB	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	73.3	E965	E964		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	78.4	E967	E966		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	72.9	E969	E968		T	3 to 4	7/23/14
Removal	1	1	7/22/14	ELCO	57.0	E971	E970		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	65.3	E973	E972	559D	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	67.8	E975	E974		T		7/23/14
Removal	1	1	7/22/14	ELCO	74.9	E977	E976		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	58.5	E979	E978		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	65.9	E981	E980		T	2 to 3	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/22/14	ELCO	59.5	E983	E982		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	78.2	E985	E984		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	73.7	E987	E986		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	61.7	E989	E988		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	53.4	E991	E990		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	67.6	E993	E992	55DB	T	1 to 2	7/23/14
Removal	1	1	7/22/14	ELCO	63.8	E995	E994		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	47.5	E997	E996		T	2 to 3	7/23/14
Removal	1	1	7/22/14	ELCO	66.4	E999	E998		T	2 to 3	7/23/14
Removal	1	1	7/23/14	ELCO	63.3	D311	D310	55B0	T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	74.0	D313	D312		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	75.3	D315	D314		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	57.2	D317	D316		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	73.7	D319	D318		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	65.5	D321	D320	55B3	T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	81.4	D323	D322		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	68.0	D325	D324		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	58.0	D327	D326		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	59.0	D329	D328		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	65.7	D331	D330	55C6	T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	68.7	D333	D332		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	56.9	D335	D334		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	70.8	D337	D336		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	71.2	D339	D338		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	61.5	D341	D340	559C	T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	73.9	D343	D342		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	61.5	D345	D344		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	87.8	D347	D346		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	65.5	D349	D348		T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	61.2	D351	D350	562E	T	1 to 2	7/23/14
Removal	1	1	7/23/14	ELCO	63.4	D353	D352		T	1 to 2	7/23/14

Collection site	Collection site number	Pass	Date tagged	Species	Length	Tag 1	Tag 2	PIT tag	Relocation site	Relocation site number	Date relocated
Removal	1	1	7/23/14	ELCO	69.5	D355	D354		T	1 to 2	7/23/14
Removal	1	3	8/5/14	STUN	33.6	D357	D358	55E9	T	2	8/5/14

Appendix V. Study area and specimen photographs.



Creeper (*Strophitus undulatus*) collected from direct impact area



Eastern elliptio (*Elliptio complanata*) in flow-thru container awaiting relocation



Mussel demographic data collection and processing



Mussel tagging



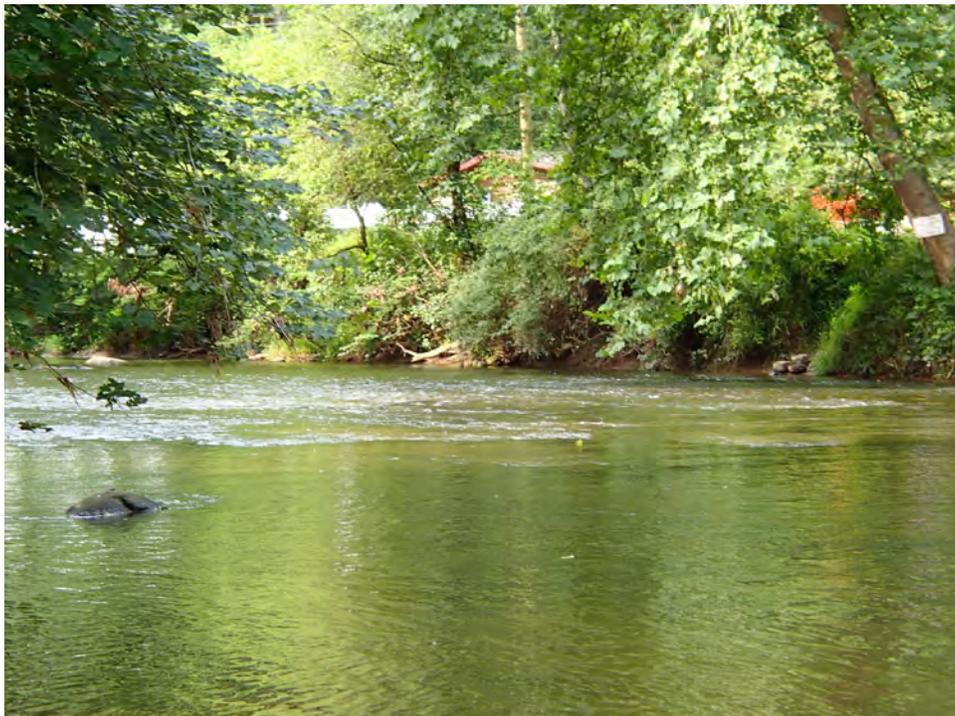
Eastern elliptio in substrate



Eastern elliptios in substrate



Mussel removal site looking upstream at confluence of Gladden Branch



Mussel removal site looking downstream at confluence of Gladden Branch