

Solutia inc.

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December 19, 2007

Ms. Pamela J. Langston Scully, P.E. Remedial Project Manager United States Environmental Protection Agency Atlanta Federal Center 61 Forsyth Street. S.W. Atlanta, GA 30303-3104

Re: Operable Unit 4 Phase 1 Ecological Survey Report

Dear Ms. Langston Scully:

On behalf of Pharmacia Corporation and Solutia Inc., as parties to the Partial Consent Decree (CD) for the Anniston Polychlorinated Biphenyl (PCB) Site, please find enclosed eight hard copies and 10 electronic copies of the *Operable Unit 4 Phase 1 Ecological Survey Report* (Ecological Survey Report).

P/S have completed a habitat assessment in OU-4. This work, which was described in the USEPA-approved August 2006 *Phase 1 Field Sampling Plan for Operable Unit 4* (OU-4 Phase 1 FSP), was carried out over the past year in a series of four seasonal surveys, and now a full year of current ecological information is available for OU-4. This Ecological Survey Report provides a summary of the Phase 1 ecological data. The Phase 1 results, in combination with data collected during the RCRA Program and additional data reported in the *Data Summary Report for Operable Unit 4* (BBL 2005), will serve as the foundation for developing the Phase 2 sampling approach. This approach will be described in the forthcoming *Phase 2 Field Sampling Plan for Operable Unit 4* (OU-4 Phase 2 FSP). These combined OU-4 data will also be applied as appropriate in the Baseline Ecological Risk Assessment Report, which will be developed and submitted following the completion of the Phase 2 sampling efforts and preparation of the Preliminary Site Characterization Summary Report for OU-4. The enclosed Ecological Survey Report will also be included as an attachment to the OU-4 Phase 2 FSP.

In keeping with the adaptive management approach adopted for the ecological work at the Site, the data collected as part of the fall 2006 effort were used to refine the scope of the surveys in the spring and summer of 2007 from what was presented in the OU-4 Phase 1 FSP. These modifications are described in a general sense in Section 1.1, and then specifically in the sections dedicated to each seasonal survey.

An initial assessment of the data indicates that there is a need to conduct an additional qualitative survey of the terrestrial amphibian and reptile community in the spring of 2008. This is described in Section 7. P/S will work closely with USEPA in the near future to develop the approach for this survey.

Please contact me if you have any questions or require additional information. I can be reached at (256) 231-8404.

Sincerely,

Craig R. Branchfield

Manager, Remedial Projects

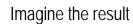
Enclosures

cc:

Mr. Phillip Davis (ADEM)

Mr. G. Douglas Jones, Esq. (Whateley Drake LLC) Mr. Thomas Dahl (Dahl Environmental Services)

Mr. Peter L. Virden Jr. (Monsanto)





Pharmacia Corporation and Solutia Inc.

Operable Unit 4 Phase 1 Ecological Survey Report

Anniston PCB Site Anniston, Alabama

December 2007

Operable Unit 4 Phase 1 Ecological Survey Report

Anniston PCB Site Anniston, Alabama

Prepared for:

Pharmacia Corporation and Solutia Inc.

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1. Introduction

Over the past year, Pharmacia Corporation and Solutia Inc. (collectively referred to as P/S) conducted a comprehensive quantitative habitat assessment in Operable Unit 4 (OU-4) of the Anniston Polychlorinated Biphenyl (PCB) Site (the Site). OU-4 is the most geographically expansive of the three OUs delineated at the Site. It is also the area that encompasses the majority of potentially suitable habitat for ecological receptors, and includes a variety of distinct habitats. P/S performed the habitat assessment to satisfy data needs for the ecological risk assessment for OU-4, which include identifying ecological receptor classes and representative feeding guilds (e.g., piscivorous birds) to refine Site-specific assessment and measurement endpoints developed in the Baseline Problem Formulation (BPF) portion of the ecological risk assessment (Blasland, Bouck & Lee, Inc. [BBL] 2006a).

The approach for the habitat assessment was developed and presented in the *Phase 1 Field Sampling Plan for Operable Unit 4 of the Anniston PCB Site* (OU-4 Phase 1 FSP; BBL 2006b). The OU-4 Phase 1 FSP, which was approved by the United States Environmental Protection Agency (USEPA) on February 27, 2007, provided an overview of Phase 1 ecological field work for OU-4 that built on the data gaps and needs identified in the approved *Data Summary Report for Operable Unit 4* (OU-4 DSR: BBL 2005) as well as a letter from the USEPA dated August 19, 2005 that clarified the Data Quality Objectives (DQOs) for the Site (included as Attachment A to the Phase 1 FSP).

1.1 Technical Approach

To address the identified data needs, the ecological assessment activities described in the OU-4 Phase 1 FSP were designed as a two-phased adaptively managed approach, with each phase of the process building on the findings from prior efforts. Phase 1, which is now complete, was a community level assessment of biological organisms in key aquatic and terrestrial habitats associated with Choccolocco Creek and its floodplain. The primary objective of Phase 1 was to survey biological communities in the floodplain and creek ecosystems to support selection and parameterization of appropriate exposure factors for ecological risk assessment. These parameters include habitat conditions, receptors, food web structure, and spatial and temporal relationships among biota and habitat types. Phase 1 was designed to provide fundamental information for planning and implementing Phase 2 investigations, as necessary and appropriate. Based on the Phase 1 findings, the Phase 2 efforts will likely include sampling directly related to the ecological risk assessment, including

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measured biota body burdens, data for dose calculations, and toxicity and bioaccumulation testing.

Given the size and complexity of OU-4, the ecological assessment activities were designed to be carried out within an adaptive management framework. P/S employed this approach—which, as described by the National Research Council (2004), allows decision makers "to respond in a timely manner to changing conditions, social objectives, and new knowledge"—to learn from information acquired throughout the two-phased program and adjust the scope and details of future efforts as appropriate.

Based on the adaptive management approach described in the OU-4 Phase 1 FSP, the findings of the fall 2006 surveys (as reported in the *Data Summary Report for Fall 2006 Phase 1 Ecological Surveys in Operable Unit 4* [ARCADIS BBL 2007b]) were used to modify the study plans for the spring and summer sampling events (the winter surveys described in the Phase 1 FSP were conducted according to the original scope, as sufficient time was not available between the fall and winter programs to incorporate modifications). The spring and summer surveys were refined to explicitly account for habitat in the context of downstream distance, and included additional investigation of the reference locations identified in the fall surveys to further test their applicability and comparability to conditions in OU-4. The specific modifications from the plans outlined in the OU-4 Phase 1 FSP are presented in Sections 2 (methods), 5 (spring surveys) and 6 (summer surveys).

1.2 Phase 1 Overview

This Operable Unit 4 Phase 1 Ecological Survey Report (Ecological Survey Report) presents the data collected during the Phase 1 surveys, which included work in both OU-4 and upstream reference locations. Survey methods are described in Section 2, and the data are presented in Sections 3 through 6. A brief summary is included in Section 7. This report provides a summary of the data with minimal interpretation or evaluation. Instead, the interpretation and application of the Phase 1 results—particularly with respect to the establishment of an ecological food web that can serve as the foundation for developing the Phase 2 sampling approach—will be described in the forthcoming Phase 2 Field Sampling Plan for Operable Unit 4 (OU-4 Phase 2 FSP).

The terrestrial and aquatic community surveys conducted during Phase 1 were conducted seasonally by a team of ecologists familiar with the local ecology and various Site habitats. Table 1 (below) illustrates the frequency of seasonal surveys for each type of terrestrial and aquatic community identified in OU-4.



TABLE 1
SUMMARY OF SEASONAL SURVEYS FOR TERRESTRIAL AND AQUATIC COMMUNITIES IN OU-4

	Terres	trial Commu	nities	Aquatic Communities			
	Soil Macro- invertebrates	Birds and Mammals	Reptiles and Amphibians	Benthic and Phytophilous Macro-invertebrates	Fish and Mollusks	Reptiles and Amphibians	Fish-eating Birds and Mammals
Fall 2006		Х		X	X ²		Х
Winter 2007		Х					Х
Spring 2007	X	Х	Х	X	χ^3	Х	Х
Summer 2007		X ¹			X ²		Х

- 1 Survey effort included birds only
- 2 Survey effort included fish only
- 3 Survey effort included mollusks only

The Phase 1 ecological surveys were a community level assessment of biological organisms in key aquatic and terrestrial habitats in OU-4. The survey work was designed to gather the necessary information to assess ecological risks associated with current conditions in three ecologically differentiable reaches (EDRs) of the Choccolocco Creek System (see Figure 1). The three EDRs are:

- Upper Reach. Includes the Choccolocco Creek backwater area from approximately 1 mile upstream of the Snow Creek confluence to just downstream of the Coldwater Creek confluence, where the floodplain influence of Coldwater Creek ends (as evidenced by the constriction of the floodplain). This region also includes the area of the Snow Creek floodplain downstream of Highway 78 to Interstate 20. In general, the upper reach has large floodplains and mild topography.
- Middle Reach. The area from just downstream of the Coldwater Creek confluence (where the floodplain influence of Coldwater Creek ends) downstream to approximately mile marker 19.5 where the floodplain rapidly expands. The floodplain in this reach is generally narrower than the upper reach, and is marked by steep topography at the downstream end.
- Lower Reach. Includes the area from mile marker 19.5 where the floodplain rapidly expands, downstream to Jackson Shoals. The upstream portion of this reach has wide floodplains, and like the middle reach, the floodplain narrows in the downstream direction.

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The activities described in this Ecological Survey Report were carried out in accordance with the most recent versions of the *Site-Wide Quality Assurance Project Plan* (Site-Wide QAPP) (BBL 2006c¹ and ARCADIS BBL 2007a) and the *Site-Wide Health and Safety Plan* (Site-Wide HASP) (BBL 2004).

¹ Although Revision 4 to the Site-Wide QAPP was issued in February 2007, Revision 3 is the version that was in effect at the time the Fall 2006 field work was conducted. Revision 4 was followed for the winter, spring, and summer surveys.



2. Phase 1 Ecological Surveys-Methods

When surveying the various targeted communities throughout OU-4 and the upstream reference locations, the methods employed across the four seasonal efforts remained generally consistent. The survey and sampling methods for each community are described in detail in the OU-4 Phase 1 FSP (BBL 2006b) and the Site-Wide QAPP (ARCADIS BBL 2007a), and summarized below.

2.1 Terrestrial Community Survey Methods

The terrestrial surveys included four communities: 1) soil macroinvertebrates, 2) terrestrial birds, wildlife, and habitat, 3) small terrestrial mammals, and 4) terrestrial reptiles and amphibians.

2.1.1 Soil Macroinvertebrates

Soil macroinvertebrate surveys were generally performed as described in Section 6.1.1.1 of the OU-4 Phase 1 FSP (BBL 2006b) and following the procedures described in Attachments A-1 and A-19 of the Site-Wide QAPP (ARCADIS BBL 2007a). Survey crews used pitfall traps and direct hand-searching methods at six locations in OU-4 (collecting a sample and a duplicate at each location for a total of 12 samples). Sample locations representing the lowest and highest levels of observed species diversity were selected based on data collected in the Phase 1 fall and winter surveys. Original plans had called for samples to be collected from along two of the three 200-meter transects established in each of the three terrestrial habitat types (forested floodplain, maintained fields, and successional old fields) in each EDR (for a total of up to 12 samples in each EDR and up to 36 total in OU-4), but initial data from the fall and winter survey efforts supported the refinement of the original approach.

Lindgren/pitfall traps were used to survey the soil macroinvertebrate community (see Attachment A-19 of ARCADIS BBL 2007a). Pitfall traps are a series of cones or pits that are designed to capture winged and crawling insects in the litter layer and upper soil column. Pitfall traps were used within the habitats adjacent to the existing small mammal transects. Three pitfall traps were placed at the start, middle, and end of each transect. Vegetable glycerine was used as a wetting agent within the traps to aid in the collection. The pitfall traps were installed within the top 4 to 6 inches of surface soil and were protected with a suspended cover to shield from rain, debris, and wildlife.



Hand collection was performed to supplement the pitfall traps and verify that earthworm abundance and diversity were evaluated. During installation of the pitfall traps, larger invertebrates were directly observed and captured on the ground surface, under debris and habitat structures (such as rocks and logs), and on tree trunks and branches. Use of the hand collection methods supported the characterization of the larger invertebrates that may have otherwise been under represented in the traps.

Macroinvertebrates were transferred to a sample container, labeled, and preserved using isopropyl alcohol. Chain-of-custody forms were filled out with the appropriate sample information, and samples were packaged and shipped according to the procedures described in Attachment A-1 of the Site-Wide QAPP (ARCADIS BBL 2007a). Samples were shipped to the Annapolis, Maryland office of ARCADIS BBL for taxonomic identification and enumeration.

2.1.2 Terrestrial Birds, Wildlife, and Habitats

Terrestrial bird, wildlife, and habitat surveys were performed following the procedures described in Section 6.1.1.1 of the OU-4 Phase 1 FSP (BBL 2006b), Attachment A-20 of the Site-Wide QAPP (ARCADIS BBL 2007a), and Bibby et al. (1992). Survey crews recorded observations while walking along each of the established 200-meter wildlife transects. When possible in the fall 2006 and winter 2007 efforts, three transects were surveyed in each habitat type per EDR, for a total of up to nine transects surveyed per EDR (potentially 27 total for OU-4). The approach for the spring and summer surveys was modified based on the fall and winter results to focus resources on transects reflecting the range of terrestrial biodiversity in each EDR. The field teams examined the community structure data obtained during the fall and winter surveys and identified the low and high species diversity survey locations found within each EDR. This refined approach yielded six survey locations within OU-4.

Habitat surveys were performed to characterize the flora within each habitat type surveyed. Survey crews recorded tree, shrub, vine, and herbaceous vegetation, noting dominant species which occurred along each of the 200-meter wildlife transects.

2.1.3 Small Terrestrial Mammals

The small terrestrial mammal surveys were conducted in accordance with the procedures described in Section 6.1.1.1 of the OU-4 Phase 1 FSP (BBL 2006b) and Attachment A-21 of the Site-Wide QAPP (ARCADIS BBL 2007a).



When possible in the fall 2006 and winter 2007 efforts, three approximately 200-meter long trapping grids (some grids were shorter than 200 meters due to limitations of habitat and/or topography) of 25 traps each were set in each major habitat type (forested floodplain, successional field, maintained field) in each EDR for a total of nine grids (up to 225 traps) per EDR. The approach for the spring survey was modified based on the fall and winter results, and field crews focused on six trap lines in OU-4 (which yielded up to 150 trap nights), selected based on areas representing the lowest and highest levels of observed species diversity in the first two seasons. As described in Section 6, small mammals were not surveyed in the summer.

Sherman® live traps were baited with rolled oats and peanut butter and set in areas where small mammals were likely to be present (e.g., near burrows, runs, feeding stations, log piles, etc.). Several cotton balls were inserted in each trap to increase small mammal survival. A photo of each location was taken and GPS coordinates were recorded at the beginning and end of each trapline, and each set was marked with labeled orange flagging.

Traps were baited, set, and checked at least once during the approximate 24-hour set period. If the trap was closed, indicating a potential capture, leather gloves were donned, and one crew member held a Ziploc® bag open downwind while another person released the door and emptied the contents of the trap into the bag. If an organism was present, its species, general condition, trap number, and trapline in which it was collected were recorded in the field notes prior to release². Photographs of a representative individual were also taken and recorded in the field notes. All potentially contaminated materials including the trap, plastic bag, cotton balls, and nitrile gloves were sealed inside a plastic bag and placed in a separate container for decontamination. After one 24-hour set, all traps were removed.

2.1.4 Terrestrial Reptiles and Amphibians

Terrestrial reptile and amphibian communities were surveyed generally following the procedures described in Section 6.1.1.1 of the OU-4 Phase 1 FSP (BBL 2006b) and Attachment A-22 of the Site-Wide QAPP (ARCADIS BBL 2007a). At each survey location, directed hand searches of at least one hour were conducted in the highest quality habitat identified in the area and individual reptiles and amphibians were

² To reduce stress and maximize survival rate of trapped animals, during the field studies described in this report individuals were released without being sexed, weighed, or photographed. Animals retained for body burden analysis in Phase 2 will be weighed and sexed as appropriate.

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identified in the field. This effort was supplemented by observations recorded while walking along the established 200-meter wildlife transects. All sightings, songs, and observations of herptiles were recorded in the field logs.

Original plans described in the OU-4 Phase 1 FSP called for surveys to be conducted along two transects in each habitat in each EDR, but based on the results of the fall and winter surveys and the relative paucity of amphibians and reptiles observed throughout OU-4 during other Site work, the approach was modified to focus on areas of low and high species diversity in each EDR.

This approach differs from the original program outlined in the OU-4 Phase 1 FSP (BBL 2006b). That plan called for the use of emplaced cover boards and drift fences as the primary collection method, but based on the Site-specific data and observations gathered during the fall 2006 and winter 2007 surveys (which indicated a lack of abundance of terrestrial reptiles and amphibians), the program was modified in an effort to target high quality reptile and amphibian habitat directly and maximize the opportunity of finding organisms in OU-4 and the reference locations.

2.2 Aquatic Community Survey Methods

The aquatic surveys included five communities: 1) aquatic birds and mammals, 2) benthic and phytophilous macroinvertebrates, 3) fish, 4) mollusks, and 5) aquatic reptiles and amphibians.

2.2.1 Aquatic Birds and Mammals

Aquatic bird and mammal surveys were conducted according to the methods outlined in Section 6.1.1.2 of the OU-4 Phase 1 FSP (BBL 2006b) and the procedures described in Attachment A-24 of the Site-Wide QAPP (ARCADIS BBL 2007a). Surveys were conducted by boat on Choccolocco Creek while moving at a consistent pace downstream through the three EDRs of OU-4. At each observation point, the field team stopped the boat to identify tracks or species, record notes, and mark the observation with a GPS unit. The team recorded the number of observations of bird and mammal use directly (if present) or by sign (i.e., song, scat, tracks, burrows, etc.). Data collection locations were recorded using a handheld GPS unit.



2.2.2 Benthic and Phytophilous Macroinvertebrates

Benthic and phytophilous macroinvertebrate surveys were performed as described in Section 6.1.1.2 of the OU-4 Phase 1 FSP (BBL 2006b) and following the procedures described in Attachments A-1 and A-18 of the Site-Wide QAPP (ARCADIS BBL 2007a). Spatial coverage for habitat selection and sample locations along Choccolocco Creek was limited to areas with existing access agreements. Sample locations within each EDR were selected based on the five habitat types of interest (i.e., riffle, run, emergent vegetation, depositional, and backwater). Two survey locations per habitat type were selected within each EDR. At each survey location, a sample and replicate were collected. Within EDR 2, a second suitable backwater area was not located for benthic macroinvertebrate sampling.

For riffle and run habitat locations, kick-netting techniques were used to survey the benthic macroinvertebrate community (as described in Attachment A-18 of ARCADIS BBL 2007a). Within these two habitat types, a composite sample was collected from multiple passes conducted within a segment of the habitat. Typically, five kick-net passes were performed within the riffle and run habitats to obtain a representative composite sample containing the desired amount of organisms. For riffle and run survey locations where organism abundance was limited, a 10-minute level of effort using the same kick-net techniques and passes was performed.

For backwater and depositional area habitat locations, a petite ponar dredge was used to survey the benthic macroinvertebrate community (as described in Attachment A-18 of ARCADIS BBL 2007a). Within these habitats, a single petite ponar dredge sample was collected within a representative area of soft substrate. The dredge contents were sieved using a standard U.S. no. 30 sieve, and the sieve contents were transferred to a sample container and preserved with isopropyl alcohol.

For emergent vegetation locations, sweep netting techniques were used to collect phytophilous (plant-dwelling) macroinvertebrates (as described in Attachment A-18 of ARCADIS BBL 2007a). Within this habitat, a composite sample was collected from multiple sweeps within a section of emergent vegetation. A composite sample was made up of 15 to 20 individual sweeps of the emergent vegetation. Each sweep was performed by jabbing the emergent vegetation at the surface of the substrate and sweeping upward to the water surface.

Samples were transferred to a sample container, labeled, and preserved with isopropyl alcohol. Chain-of-custody forms were filled out with the appropriate sample information

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and samples were packaged and shipped according to the procedures described in Attachment A-1 of the Site-Wide QAPP (ARCADIS BBL 2007a) to Normandeau Associates, Inc. for taxonomic identification and enumeration.

At each macroinvertebrate survey location, assessment techniques consistent with Rapid Bioassessment Protocols (RBPs) (Barbour et al. 1999) were used to evaluate Site conditions. When conducting a survey following the RBPs, a water quality and physical characterization data form is used to record specific sample location measurements and semi-quantitative assessment information. Water quality data (e.g., pH, temperature, dissolved oxygen), water depth, water velocity, and substrate characteristics were measured and/or assessed and recorded for each sample location. These field data sheets are provided in Appendix D. Water quality data (temperature, specific conductance, dissolved oxygen, pH, and turbidity) were collected using a Horiba U-22 meter for all survey locations.

2.2.3 Fish

Fish community surveys were performed following the procedures described in Attachment A-5 of the Site-Wide QAPP (ARCADIS BBL 2007a) and as described in Section 6.1.1.2 of the OU-4 Phase 1 FSP (BBL 2006b). The surveys were conducted using a Smith-Root® 2.5 GPP tote barge electrofishing unit. Survey events were performed in 10- to 15-minute shocking intervals in riffle, run, backwater, and emergent vegetation habitat types in each EDR. Two sampling events were performed within each habitat type for a total of eight surveys per EDR. Following the electrofishing event, field crews identified, enumerated, and measured the catch. When numerous fish of the same species were obtained, a subset of 25 fish was measured to represent the size class range. Photographs were taken of representative fish from each species, and gross lesions, external abnormalities, or other indicators of poor fish health were recorded and photographed. These observations, the number of species, length, shocking times, photo locations, and GPS coordinates were recorded in the field notes.

Actual fish sampling deviated from the methods proposed in the OU-4 Phase 1 FSP (BBL 2006b). During data collection it was determined that two sampling locations per habitat type (rather than three) were sufficient for characterizing the fish community.

2.2.4 Mollusks

The freshwater mollusk density surveys were generally conducted described in Attachment A-23 of the Site-Wide QAPP (ARCADIS BBL 2007a) and as outlined in

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Section 6.1.1.2 of the OU-4 Phase 1 FSP (BBL 2006b). Field crews searched for mollusk beds in each of the five aquatic habitat types (riffle, run, emergent vegetation, depositional, and backwater), and then identified 10 sampling locations (two per habitat type). In each identified habitat, the team randomly placed two 1.0 square meter (m²) quadrats. The percent cover of mollusks was visually estimated inside each quadrat, and the center of each quadrat was recorded using GPS. The original sampling plans in the OU-4 Phase 1 FSP called for up to three sample locations in each of three targeted habitats (riffle, run, and backwater) in each EDR (for a total of up to 27 sample locations in OU-4), but data from the fall 2006 and winter 2007 surveys indicated that the more focused approach described here was appropriate.

2.2.5 Aquatic Reptiles and Amphibians

The evaluations of the aquatic reptile and amphibian communities were carried out in conjunction with the aquatic wildlife observations. The survey was conducted by boat on Choccolocco Creek while moving at a consistent pace downstream through the three EDRs of OU-4. This approach differed from what was described in Section 6.1.1.2 of the OU-4 Phase 1 FSP (BBL 2006b), which called for searching cover by hand, turning structures, and conducting timed searches in up to two distinct locations in each of the five aquatic habitat types. Due to the paucity of reptiles and amphibians present in OU-4 at the time of the survey and observation results from the fall and winter efforts, field teams focused on recording observations of reptiles and amphibians. At each observation point, the field team stopped the boat to identify tracks or species, and record notes. The team recorded the number of observations directly (if present) or by sign (i.e., scat, tracks, burrows, amphibian call, etc.). Locations were recorded in field logbooks, on field maps, or in GPS.



3. Fall 2006 Survey Results

The Phase 1 effort included a series of four seasonal surveys, such that at the completion of Phase 1 a full year of current ecological information would be available for OU-4. The data gathered during the Fall 2006 surveys are presented below. Survey work in the fall focused on terrestrial birds and mammals, aquatic birds and mammals, benthic and phytophilous macroinvertebrates, and fish in OU-4. Surveys of terrestrial bird and wildlife communities, benthic and phytophilous macroinvertebrate communities, and fish communities were also carried out in three ecological reference areas.

3.1 Terrestrial Survey Results

Terrestrial birds and mammals are key ecological receptors, and the fall surveys of these communities were developed to gather the necessary Site-specific information to begin identifying appropriate receptor groups, refine exposure assumptions, evaluate feeding and breeding habits of key species, and develop a food web model. The results of the Fall 2006 terrestrial surveys are described below.

3.1.1 Terrestrial Bird, Wildlife, and Habitat Surveys

Terrestrial bird, wildlife, and habitat surveys were completed in three target habitats (forested floodplains, maintained fields, and successional old fields) within each of the three EDRs of OU-4. The results of the survey work, which took place between October 24 and November 1, 2006, are presented below.

3.1.1.1 Results/Findings

The locations of the 200-meter terrestrial bird and wildlife transects are presented on Figures 2, 3, and 4. Due to limited availability of target habitats, 22 surveys were conducted: 9 forested floodplain, 5 maintained field, and 8 successional field.

Within OU-4, a total of 41 bird species were observed. A summary of avian species occurring in each of the habitats is presented in Table 2. In terms of habitat, the greatest number of avian species occurred in forested floodplain and successional field habitats. In terms of geographic location, the greatest number of avian species occurred in EDR 1. A master list of all avian species observed within OU-4 during both the terrestrial and aquatic surveys is provided in Table 3 (fall aquatic bird surveys are discussed in Section 3.2.1.1).



A total of nine species of non-avian wildlife (i.e., mammals, reptiles, amphibians) or their signs were observed. A summary of wildlife species occurring in each of the habitats is presented in Table 4. In terms of habitat, the greatest number of species occurred in forested floodplain and successional field habitats. In terms of geographic location, the greatest number of species occurred in EDR 3.

A summary of the vegetation species occurring in forested floodplains, maintained fields, and successional fields is presented in Table 5. Results by habitat are as follows:

- Forested floodplain: A total of 23 species of trees were identified, and the
 dominant species were box elder, sweetgum, sycamore and water oak.
 Nineteen species of shrubs and vines were observed, and black willow and
 Chinese privet were dominant. A total of 14 species of herbaceous vegetation
 were observed.
- Maintained field: No tree, shrub, or vine species were identified. A total of nine species of herbaceous vegetation were observed; with grass species being dominant.
- Successional field: A total of 13 species of trees were present, and the
 dominant species were box elder, sweetgum, sycamore, and water oak. Six
 species of shrubs and vines were observed, and black willow and Chinese
 privet were dominant. A total of 23 species of herbaceous vegetation were
 observed.

3.1.2 Small Mammal Trapping Surveys

Small mammal trapping surveys were conducted from October 24 to November 1, 2006 in each of the three EDRs of OU-4 to determine the presence of small mammals in various habitats and to develop a preliminary species list to support future Phase 2 investigations.

3.1.2.1 Results/Findings

A total of 25 different traplines (nine in EDRs 1 and 2 and seven in EDR 3) were set in the various habitats of the three EDRs for a total of 625 trap nights. Due to a lack of accessible successional field habitat in EDR 3, only one trapline was set in this habitat, as opposed to the three targeted. The small mammal trapping locations are provided



on Figures 2, 3, and 4. Photographs of the survey locations are provided in Appendix A. A total of 31 small mammals were captured, representing seven different species (Table 6). Trapping success for each transect ranged from a minimum of 0% (no captures) to a maximum of 24%, with an overall average of 5%. The most abundant species was the harvest mouse with 10 individuals (32% of total catch), followed by the hispid cotton rat and cotton mouse with 8 individuals each (26% of total catch). EDR 1 had the largest number of individuals with 17 small mammals collected, followed by EDR 3 with 12 (despite having only 1 line in successional field habitat). Only 2 organisms were collected in EDR 2 (Table 6). The successional field was the most productive habitat type for small mammals with 16 of the 31 total organisms (52%) collected, despite the fact that only seven successional field traplines were set.

3.2 Aquatic Survey Results

Fish and aquatic invertebrates are key intermediaries in the food web in many ecosystems, and knowing the abundance and diversity of these organisms will provide Site-specific data for use in risk assessments. Further, Site-specific information on fish, aquatic invertebrates, and fish-eating birds and mammals will allow for the development of exposure parameters, exposure point concentrations, and exposure assumptions that are appropriate for the small-stream environment of OU-4. The results of the Fall 2006 aquatic surveys are described below.

3.2.1 Aquatic Bird and Mammal Surveys

Aquatic bird and mammal surveys were performed in OU-4 from October 25, 2006 through November 1, 2006. The survey observations were conducted in areas adjacent to the five major aquatic habitat types in OU-4 (e.g., riffles, runs, emergent vegetation, tributary confluences, and depositional environments).

3.2.1.1 Results/Findings

Data recorded during the surveys are presented in Table 7. Data in five categories were recorded during the survey: wildlife species, number of individuals (i.e., count), observation type, habitat, and location. Count is only applicable to those species which were observed directly. Observation type encompassed a wide range of categories, including: visual presence (sight), tracks, lodge/dam, burrows, chews, and slides. Habitat type was also diverse, and included: depositional bank/bar, bank, run, riffle, eroded bank, deadfall, backwater, and island. The northing and southing for each



location was recorded using a handheld GPS unit while the boat was stationary at the observation point.

Beaver and raccoon were the most common species observed during the survey. Muskrat, great blue heron, and kingfisher were the second most common. In only a few instances beaver and raccoon were observed directly. In most cases tracks, burrows, or slides were found on the bank. On stretches of the Creek bank within EDR 1, beaver slides were frequent (as many as ten slides per 100 feet). Towards the end of EDR 2, the field crew noted that they were observing the same great blue heron as they progressed downstream. This situation was not recognized until part way through the survey, and as a result the number of visual observations of great blue heron in EDRs 2 and 3 may be biased high.

3.2.2 Benthic and Phytophilous Macroinvertebrate Surveys

Benthic and phytophilous macroinvertebrate surveys were conducted within Choccolocco Creek (OU-4) from October 24 to October 29, 2006. The surveys focused on five major habitat types (riffles, runs, emergent vegetation, backwaters, and depositional areas) within each of the three EDRs of OU-4. The results and findings of the surveys are described below.

3.2.2.1 Results/Findings

For each survey location, assessment techniques consistent with RBPs (Barbour et al. 1999) were used to evaluate Site conditions. As with the Phase 1 surveys in OU-4, a water quality and physical characterization data form was used to record specific sample location measurements and semi-quantitative assessment information. Completed field data sheets are provided in Appendix D.

Water quality data for temperature, specific conductance, dissolved oxygen, pH, and turbidity were collected using a Horiba U-22 meter at all survey locations.

GPS coordinates were established and recorded for at location using a handheld GPS unit. Survey locations are presented on Figures 2, 3, and 4. Site photographs taken at each survey location are provided in Appendix B.

A total of 29 benthic and phytophilous macroinvertebrate locations were sampled within OU-4. A sample and a replicate were collected at each location, yielding a total



of 58 samples for taxonomic identification. Complete taxonomic results are provided in Tables 8a though 37a (one table for each location).

A total of 135 species were identified within the five habitat types sampled in OU-4. The dominant benthic and phytophilous orders include:

- Diptera (true flies): 37 species
- Odonata (dragonflies and damselflies): 21 species
- Ephemeroptera (mayflies): 14 species
- Trichoptera (caddisflies): 13 species
- Coleoptera (beetles): 12 species
- Tubificida (tube and naiad worms): 8 species

Within the five habitat types the fewest number of species (39) were identified in samples from depositional areas, and the greatest numbers of species (65) were identified in samples collected from emergent vegetation.

3.2.3 Fish Community Surveys

The Fall 2006 Phase 1 fish community surveys were conducted in OU-4 portions of Choccolocco Creek between November 2 and November 9, 2006. Fish community surveys were completed in target habitats (riffle, run, backwater, and emergent vegetation) within each of the three EDRs of OU-4. Survey results from Phase 1 will be used to document habitat conditions and the relative abundance and diversity of fish.

3.2.3.1 Results/Findings

Within OU-4, a total of 1,025 fish were collected comprising 35 species (including darter, sunfish and sucker species). Species diversity (i.e., the total number of species) within the four habitat types ranged from 5 (backwater) to 15 (run). The relative fish abundance (i.e., total number of individuals) from the four habitat types ranged from 172 (run) to 329 (backwater) (Tables 38 to 41). Results are summarized below.

Habitat	Total Fish Collected	Number of Fish Collected in Each Sampling Event (range)	Most Abundant Species	Number of Species Present (range)
Riffle	293	18 to 115	Darter species	6 in EDR 3 to 12 in EDR 2
Emergent Vegetation	231	18 to 58	Sunfish species	7 in EDR 2 to 11 in EDR 3
Run	172	10 to 43	Sunfish and Darter species	7 in EDR 2/3 to 15 in EDR 3
Backwater	329	19 to 112	Sunfish species	5 in EDR 2 to 14 in EDR 2

GPS coordinates were taken at each fish sampling location in OU-4, which are shown on Figures 2, 3, and 4. Photographs of fish survey locations are provided in Appendix C.

3.3 Reference Location Survey Results

Concurrent with the Phase 1 Fall survey efforts, based on past experience and knowledge of the region, field staff identified and surveyed three ecological reference areas – two aquatic and one terrestrial. Identifying and surveying multiple reference areas is necessary because it helps develop and define an "envelope" of reference conditions that can be compared to conditions encountered in the study area (OU-4) and document biological community structure parameters such as organism presence/absence and relative abundance.

During this effort, candidate reference areas in sub-watersheds in the Choccolocco Creek drainage basin were identified on topographic maps, and field staff conducted reconnaissance visits to assess habitat suitability. The sites selected were chosen to approximate flow and habitat conditions that are similar to those found in OU-4. The surveys of reference areas for terrestrial bird and wildlife communities, benthic and phytophilous macroinvertebrate communities, and fish communities are described below. Although the actual reference area scope of work was determined in the field, survey methods in the reference areas were the same as those described in Section 2.

3.3.1 Terrestrial Bird, Wildlife, and Habitat Reference Location Surveys

Terrestrial bird, wildlife, and habitat surveys were conducted in the reference areas on October 28, 2006. These surveys were completed in forested floodplain and successional field habitats in Reference Areas 1, 2, and 3.

3.3.1.1 Results/Findings

The location of each 200-meter wildlife transect established in the three reference areas is presented in Figures 5, 6, and 7. Due to limited habitat in each of the reference locations, only four surveys were conducted: three in forested floodplains and one in a successional field.

A listing of avian species occurring in each of the reference area habitats is presented in Table 2. A total of 22 bird species were observed. In terms of habitat, the greatest number of avian species occurred in forested floodplain habitat (Table 2). In terms of geographic location, the greatest number of avian species was observed in the forested floodplain REF-1 (Table 2).

A total of five species of non-avian wildlife or their signs were observed within the reference areas. A summary of species occurring in each of the habitats is presented in Table 4. In terms of habitat, the greatest number of species occurred in forested floodplain habitat (Table 4). In terms of geographic location, the greatest number of species occurred in the forested floodplain REF-1 (Table 4).

A summary of vegetative species occurring in forested floodplain reference habitats is presented in Table 42. Thirteen species of trees, 16 species of shrubs and vines, and 10 species of herbaceous vegetation were observed.

In the successional field reference area, two species of shrubs and vines and six species of herbaceous vegetation were observed. No tree species were observed (Table 42).

3.3.2 Benthic and Phytophilous Macroinvertebrate Community Reference Location Surveys

Benthic and phytophilous macroinvertebrate surveys were conducted within three reference locations on October 29, 2006 (Cheaha Creek), November 1, 2006 (Talladega Creek), and November 6, 2006 (Choccolocco Creek; upstream of Boiling Springs Road). Samples were collected in four habitat types—riffle, run, emergent aquatic vegetation, and backwater. Depositional areas were not surveyed because no suitable locations were identified in the reference areas. The results and findings of the surveys are described below.

3.3.2.1 Results/Findings

For each survey location, assessment techniques consistent with RBPs (Barbour et al. 1999) were used to evaluate Site conditions. As with the Phase 1 surveys in OU-4, a water quality and physical characterization data form was used to record specific sample location measurements and semi-quantitative assessment information. Completed field data sheets are provided in Appendix D.

GPS coordinates were established and recorded for each location using a handheld GPS unit. Survey locations are presented on Figures 5, 6, and 7. Photographs taken at each survey location are provided in Appendix B.

Water quality data for temperature, specific conductance, dissolved oxygen, pH, and turbidity were collected using a Horiba U-22 meter at all survey locations.

A total of 9 benthic and phytophilous macroinvertebrate reference locations were sampled. A sample and a replicate sample were collected at each location, yielding a total of 18 samples for taxonomic identification. Complete taxonomic results are provided on Tables 44a through 53a (one table for each sampling location).

A total of 122 species were identified within the four reference habitat types. The dominant benthic and phytophilous orders include:

- Diptera (true flies): 32 species
- Trichoptera (caddisflies): 16 species
- Coleoptera (beetles): 15 species
- Ephemeroptera (mayflies): 15 species
- Odonata (dragonflies and damselflies): 11 species
- Plecoptera (stoneflies): 6 species

Within the four habitat types sampled, the fewest number of species (15) was observed in samples from the backwater habitat, and the greatest number of species (67) was observed in samples from run habitats.

3.3.3 Fish Community Reference Location Survey

Fish community surveys were conducted in reference areas within Choccolocco Creek (REF-1), Cheaha Creek (REF-2), and Talladega Creek (REF-3) between October 30 and November 6, 2006.

In each reference area three of the four habitat types (riffle, run, backwater, and emergent vegetation) were surveyed. The decision of which habitat types to survey was made by field crews based on the existence and availability of habitat types that occurred in close proximity to stream access points. One sampling event took place within each surveyed habitat type for a total of three samples per reference area.

3.3.3.1 Results/Findings

Within the reference areas, a total of 769 fish were collected comprising 39 species (including darter, sunfish and sucker species). The number of species observed within the four habitat types ranged from 7 (riffle) to 20 (run) (Tables 38 to 41). Results are summarized below.

Habitat	Total Fish Collected	Number of Fish Collected in Each Sampling Event (range)	Most Abundant Species	Number of Species Present (range)
Riffle	174	69 to 105	Darter species	7 in REF 1 to 11 in REF 2
Emergent Vegetation	246	28 to 169	Sunfish species	8 in REF 1 to 18 in REF 2
Run	276	55 to 136	Sunfish species	15 in REF 1 to 20 in REF 2
Backwater	73	N/A	Sunfish species	11 in REF 3

GPS coordinates were taken at each fish sampling location in the reference areas and are shown on Figures 5, 6, and 7. Photographs of fish survey locations are provided in Appendix C.



4. Winter 2007 Survey Results

The data gathered during the Winter 2007 surveys – the second season of the Phase 1 sampling – are presented below. The winter effort was more limited than other seasons, and focused on birds and mammals in OU-4. Reference area surveys were not conducted in the winter.

4.1 Terrestrial Survey Results

4.1.1 Terrestrial Bird, Wildlife, and Habitat Surveys

Terrestrial bird, wildlife, and habitat surveys were completed in three target habitats (forested floodplains, maintained fields, and successional old fields) within each of the three EDRs of OU-4. The surveys were conducted on February 7, 2007, and the results are presented in the following sections.

4.1.1.1 Results/Findings

The locations of the 200-meter terrestrial bird and wildlife transects are presented on Figures 8, 9, and 10. Using the previous fall survey locations and results, the scope of the winter surveys focused on two survey locations for each of the three habitat types (maintained field, successional field, forested floodplain). From the fall 2006 survey results, a low and high species abundance location was targeted for each habitat type, while encompassing the overall spatial coverage for each of the three EDRs found within OU-4. The existing successional field habitat location within EDR-3 (EDR 3, transect 1) was surveyed despite the marginal habitat observed. To account for the marginal habitat, a third successional field transect within EDR 2 was added, for a total of seven winter survey transects.

Within OU-4, a total of 21 bird species were observed. A summary of species occurring in each of the habitats is presented in Table 2. In terms of habitat, the greatest number of avian species occurred in the forested floodplain. In terms of geographic location, the greatest number of avian species occurred in EDR 1. A master list of all avian species observed within OU-4 during both the terrestrial and aquatic surveys is provided in Table 3 (the winter 2007 aquatic bird surveys are discussed in Section 4.2.1.1).

A total of eight species of wildlife or their signs were observed. A summary of species occurring in each of the habitats is presented in Table 4. In terms of habitat, the

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greatest number of species occurred in the successional fields. In terms of geographic location, the greatest number of species occurred in EDR 1.

A thorough vegetative survey was conducted in the fall 2006 effort to establish the baseline species information; therefore, the observations during the winter effort were more qualitative. Within the forested floodplains, tree species included: oak, ash, and hickory. For maintained fields, a mixture of grasses and common pasture species (e.g., clovers) were dominant. Successional fields were dominated by shrub species of privet and honeysuckle with saplings of ash and oak. The dominant vegetation species were similar to those observed in the fall (presented in Table 5).

4.1.2 Small Mammal Trapping Surveys

Small mammal trapping surveys were conducted on February 6 and 7, 2007 in each of the three EDRs of OU-4. The surveys were conducted to document the presence of small mammals in various habitats, and to develop a preliminary species list to support future Phase 2 investigations.

4.1.2.1 Results/Findings

A total of 6 traplines (two in each of the EDRs) were set in the three habitats for a total of 150 trap nights. These locations are provided on Figures 8, 9, and 10. Photographs of the survey locations are provided in Appendix A. A total of 15 small mammals were captured representing six different species (Table 6). Trapping success for each transect ranged from a minimum of 0% (no captures) to a maximum of 28%, with an overall average of 10%. The most abundant species was the cotton mouse, with 8 individuals (53% of total catch), followed by the harvest mouse with 3 individuals (20% of total catch). During the winter survey the maintained field habitat produced the greatest number of individuals (8), and the forested floodplain habitat (4 individuals) and successional field habitat (3 individuals) yielded the remainder of the catch.

4.2 Aquatic Survey Results

4.2.1 Aquatic Bird and Mammal Surveys

Aquatic bird and mammal surveys were performed in OU-4 from February 6 to 8, 2007. The survey observations were conducted in areas adjacent to the five major aquatic habitat types in OU-4 (e.g., riffles, runs, emergent vegetation, tributary confluences, and depositional environments).

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4.2.1.1 Results/Findings

Data collection locations were recorded using a handheld GPS unit. The data recorded during the surveys are presented in Table 7. Data in five categories were recorded during the survey: wildlife species, count, observation type, habitat, and location. Count is only applicable to those species observed directly. Observation type encompassed a wide range of categories, including: visual presence (sight), tracks, lodge/dam, burrows, chews, and slides. Habitat type was also diverse, and included: depositional bank/bar, bank, run, riffle, eroded bank, deadfall, backwater, and island. The northing and southing for each location was recorded using a handheld GPS unit while the boat was stationary at the observation point.

Beaver and muskrat were the most common species observed during the survey. Raccoon, great blue heron, kingfisher, and wood duck were the second most common. Mink tracks were observed on two occasions within EDR 1. During the survey direct sightings of beaver and raccoon were not observed. In all cases tracks, burrows, or slides were found on the various habitats within the creek or surrounding floodplain. Beaver signs were most prevalent within EDR 2. The field crew made an effort to limit pushing piscivorous birds and waterfowl downstream to avoid biasing the observations high.

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5. Spring 2007 Survey Results

Consistent with the adaptive management approach described in the OU-4 Phase 1 FSP (BBL 2006b), the findings of the fall 2006 and winter 2007 surveys were used to modify the study plans for the spring and summer sampling events. The designs of the spring surveys were refined to explicitly account for habitat in the context of downstream distance. In addition, the reference locations identified in the fall surveys were further evaluated to test their applicability and comparability to conditions in OU-4.

The spring surveys were the most robust of all the Phase 1 sampling events. All terrestrial and aquatic communities (with the exception of fish) in OU-4 were targeted, and similar surveys were conducted in the reference areas (with the exception of aquatic reptiles and amphibians).

5.1 Terrestrial Survey Results

5.1.1 Soil Macroinvertebrate Surveys

Soil macroinvertebrate trapping surveys were conducted from May 15 to May 18, 2007 to determine the presence of soil macroinvertebrates in various habitats and to develop a preliminary species list. Traps were set in each of the three EDRs of OU-4.

5.1.1.1 Results/Findings

Three pitfall traps were set along each of the six transects established in OU-4. The locations are provided on Figures 11, 12, and 13. The traps were set for a total of 18 trap nights.

Results of the pitfall trapping indicated the presence of 16 varieties of soil macroinvertebrates (Table 54). Collembola species were the most abundant, and were caught in the greatest numbers in EDR 1. Of the larger macroinvertebrates, beetles, ants, and spiders were caught the most frequently and in similar numbers in each EDR. Centipedes, millipedes, flies, Opilionids, Lepidoptera, and Hemipteran species were captured less frequently.



5.1.2 Terrestrial Bird, Wildlife, and Habitat Surveys

Terrestrial bird, wildlife, and habitat surveys were completed in three target habitats (forested floodplains, maintained fields, and successional old fields) within each of the three EDRs of OU-4. The results of the survey work, which took place between May 29 and May 30, 2007, are presented below.

5.1.2.1 Results/Findings

The locations of the 200-meter terrestrial bird and wildlife transects are presented on Figures 11, 12, and 13. The transect approach used in the fall survey was modified to focus on two survey locations in each of the three EDRs. As described in Section 2.1.2, a low and high species abundance location was targeted for each EDR based on the fall 2006 results. In total, surveys were performed at 6 locations.

A summary of species occurring in each of the habitats is presented in Table 2. Within OU-4, a total of 13 bird species were observed. In terms of habitat, the greatest number of avian species occurred in the forested floodplains. In terms of geographic location, the greatest number of avian species occurred in EDR 3. A master list of all avian species observed within OU-4 during both the terrestrial and aquatic surveys is provided in Table 3 (spring 2007 aquatic bird surveys are discussed in Section 5.2.1.1).

A total of seven species of non-avian wildlife or their signs were observed. A summary of species occurring in each of the habitats is presented in Table 4. In terms of habitat, the greatest number of species occurred in the forested floodplains. In terms of geographic location, the greatest number of species occurred in EDR 3.

A thorough vegetative survey was conducted in the fall 2006 to establish the baseline community, and the spring survey observations were more qualitative in nature. The dominant vegetation species occurring in forested floodplains, maintained fields, and successional fields were similar to those observed during the fall (Table 5). Within the forested floodplains, tree species included oak, ash, and hickory. For maintained fields, a mixture of grasses and common pasture species (e.g., clovers) were dominant. Successional fields were dominated by shrub species of privet and honeysuckle with saplings of ash and oak.

5.1.3 Small Mammal Trapping Surveys

Small mammal trapping surveys were conducted from May 15 to May 18, 2007 in each of the three EDRs of OU-4 to determine the presence of small mammals in various habitats and develop a preliminary species list to support future Phase 2 investigations.

5.1.3.1 Results/Findings

A total of 6 different traplines were set (two in each of the EDRs) in the three habitats in OU-4, for a total of 150 trap nights. The locations are shown on Figures 11, 12, and 13. Photographs of the survey locations are provided in Appendix A. A total of 15 small mammals were captured representing seven different species (Table 6). Trapping success for each transect ranged from a minimum of 0% (no captures) to a maximum of 20%, with an overall average of 10%. The most abundant species was the deer mouse with 4 individuals (27% of total catch), followed by cotton and white-footed mice with 3 individuals each (combined 40% of total catch). During the survey an equal number of individuals (5) were caught in each of the three terrestrial habitats.

5.1.4 Terrestrial Reptile and Amphibian Surveys

Surveys of the terrestrial reptile and amphibian communities in the forested floodplain, maintained field, and successional field habitats were conducted in all three EDRs of OU-4 on May 29 and 30, 2007. The results are summarized below.

5.1.4.1 Results/Findings

The locations of the terrestrial reptile and amphibian survey transects were co-located with the six terrestrial bird and wildlife transects described in Section 5.1.2 and presented on Figures 11, 12, and 13.

Preliminary observations throughout OU-4 suggested that reptile and amphibian abundance and diversity was low, and the exceptionally dry conditions that persisted through the spring survey period likely suppressed reptile and amphibian activity. The overall lack of organisms was most pronounced for amphibians, but terrestrial reptile populations were also impacted. To provide the greatest opportunity of finding reptiles and amphibians, the field crews identified the best relevant habitat in the area of each of the transects included in the spring survey, and directed the hand searches in these locations. Very few terrestrial reptiles and amphibians were observed. Within OU-4, a



total of three species (black racer, river cooter, and an unknown turtle) were identified based on sight, sound, and/or sign. Results are presented on Table 55.

5.2 Aquatic Survey Results

5.2.1 Aquatic Bird and Mammal Surveys

Aquatic bird and mammal surveys were performed in OU-4 from May 21 through May 24, 2007. The survey observations were conducted in areas adjacent to the five major aquatic habitat types in OU-4 (e.g., riffles, runs, emergent vegetation, tributary confluences, and depositional environments).

5.2.1.1 Results/Findings

Data recorded during the surveys are presented in Table 7. Data in five categories were recorded during the survey: wildlife species, count, observation type, habitat, and location. Count is only applicable to those species which were observed directly. Observation type encompassed a wide range of categories, including: visual presence (sight), tracks, lodge/dam, burrows, chews, and slides. Habitat type was also diverse, and included: depositional bank/bar, bank, run, riffle, eroded bank, deadfall, backwater, and island. The northing and southing for each location was recorded using a handheld GPS unit while the boat was stationary at the observation point.

Beaver and raccoon were the most common species observed during the survey. Muskrat, great blue heron, kingfisher, and wood duck were the second most common species. Mink tracks were observed along a depositional bar within EDR 2. During the spring survey direct sightings of beaver and muskrat were observed on several occasions. In most cases tracks, burrows, or slides were found on the various habitats within the creek or surrounding floodplain. Beaver signs were most prevalent within EDR 1. The field crew made an effort to limit pushing piscivorous birds and waterfowl downstream to avoid biasing the observations high.

5.2.2 Benthic and Phytophilous Macroinvertebrate Surveys

Benthic and phytophilous macroinvertebrate surveys were conducted within Choccolocco Creek (OU-4) from May 14 to May 17, 2007. The surveys focused on the five major habitat types (riffles, runs, emergent vegetation, backwaters, and depositional areas) within each of the three EDRs of OU-4. The results of the surveys are described below.

5.2.2.1 Results/Findings

For each survey location, assessment techniques consistent with RBPs (Barbour et al. 1999) were used to evaluate Site conditions. As with the Phase 1 surveys in OU-4, a water quality and physical characterization data form was used to record specific sample location measurements and semi-quantitative assessment information. Completed field data sheets are provided in Appendix D.

Water quality data (e.g., pH, temperature, dissolved oxygen), water depth, water velocity, and substrate characteristics were measured and/or assessed and recorded for each sample location. GPS coordinates were established and recorded for each location using a handheld GPS unit. Survey locations are presented on Figures 11, 12, and 13. Site photographs taken at each survey location are provided in Appendix B.

Water quality data for temperature, specific conductance, dissolved oxygen, pH, and turbidity were collected using a Horiba U-22 meter for all survey locations.

A total of 30 benthic and phytophilous macroinvertebrate locations were sampled within OU-4. A sample and a replicate sample were collected at each location, yielding a total of 60 samples for taxonomic identification. Complete taxonomic results are provided in Tables 8b though 37b (one table for each location).

A total of 206 species were identified within the five habitat types sampled in OU-4. The dominant benthic and phytophilous orders include:

- Diptera (true flies): 74 species
- Trichoptera (caddisflies): 21 species
- Ephemeroptera (mayflies): 18 species
- Tubificida (tube and naiad worms): 10 species
- Coleoptera (beetles): 15 species
- Odonata (dragonflies and damselflies): 15 species



Within the five habitat types sampled, the fewest number of species (50) were observed in samples from the depositional areas, and the greatest numbers of species (112) were identified in samples collected in emergent vegetation.

5.2.3 Mollusk Surveys

Surveys of mollusk communities in Choccolocco Creek (OU-4) were carried out between May 14 and 17, 2007 in all five major habitat types (riffles, runs, emergent vegetation, backwaters, and depositional areas) within each of the three EDRs of OU-4. The results of the surveys are described below.

5.2.3.1 Results/Findings

Mollusk survey locations were co-located with the fall 2006 benthic community locations. Site-specific information regarding the water quality and physical conditions of each location were assessed as described previously in Section 5.2.2.1. The resulting RBP field data sheets are provided in Appendix D. GPS coordinates were established and recorded for each location using a handheld GPS unit. Survey locations are presented on Figures 11, 12, and 13. Site photographs taken at each survey location are provided in Appendix B.

Based on the results of the fall 2006 benthic and phytophilous community survey, mollusks surveys were targeted at locations of low and high species diversity in each of the five habitat types (backwater, depositional, emergent aquatic vegetation, riffle, run) for a total of 10 mollusk sampling locations in OU-4. A sample and a replicate sample were collected at each location, yielding a total of 20 samples. Although two species of clams (Asian clam and greater eastern pea clam) were identified within the five habitat types sampled in OU-4, freshwater mussels were not observed. The results are summarized below:

Table 56
Mollusk Community Survey Results

Habitat Type	Back	water	Depos	sitional	Emerç Vegeta		Rit	ffle	Ri	un
Species	EDR-1	EDR-3	EDR-2	EDR-3	EDR-2	EDR-3	EDR-1	EDR-2	EDR-1	EDR-3
Asian Clam (Corbicula fluminea)	0 (0)	2 (2)	1 (4)	10 (5)	21 (12)	6 (6)	56 (40)	61 (315)	26 (30)	133 (70)
Greater Eastern Peaclam (Pisidium dubium)	0 (0)	1 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6 (0)

Note:

(") – Number in parentheses indicates the replicate sample count.

5.2.4 Aquatic Reptile and Amphibian Surveys

Surveys of the aquatic reptile and amphibian communities were conducted within Choccolocco Creek (OU-4) between May 21 and 24, 2007. The surveys were carried out concurrent with the aquatic bird and mammal surveys within each of the three EDRs of OU-4. Results are described below.

5.2.4.1 Results/Findings

Ten species of aquatic reptiles and amphibians were observed in OU-4 during the spring surveys. Reptiles and amphibians were identified by sight, sign, or tracks, and often precise taxonomic identification was not made. The field crew observed four snake species (black racer, copperhead, cottonmouth, and garter) and six turtle species (common map, eastern painted, river cooter, snapping, softshell, and stinkpot). In terms of spatial distribution, the most numerous individuals and the greatest number of species (7) were observed in EDR 1 (Table 57).

5.3 Reference Location Survey Results

The reference site surveys were initially planned as a single effort concurrent with the work conducted in the fall of 2006. However, data collected in the fall survey demonstrated that habitat conditions and general biota communities in the candidate reference areas, while not precisely matched with OU-4 regarding watershed history



(except for the Choccolocco Creek upstream reference location), were potentially applicable for reference comparison with OU-4. As a result, additional surveys of the terrestrial and aquatic reference area communities were carried out in conjunction with both the spring and summer field efforts. In the spring, these surveys were conducted in representative habitat types in all three of the reference locations.

Although the actual scope of work for reference area surveys was determined in the field, survey methods were the same as those described in Section 2.

5.3.1 Soil Macroinvertebrate Reference Location Surveys

Soil macroinvertebrate surveys were conducted in each of the three reference areas between May 15 and May 18, 2007.

5.3.1.1 Results/Findings

Two transects were established in each of the three reference areas, and three pitfall traps were set along each transect. The locations are provided on Figures 14, 15, and 16. The traps were set for a total of 18 trap nights.

Results of the pitfall trapping indicated the presence of 16 varieties of macroinvertebrates (Table 54). Of the larger macroinvertebrates, beetles, ants, and spiders were caught the most frequently, and in similar numbers at the EDRs and reference locations. Earthworms and isopods were caught less frequently at the reference sites than the EDR locations. Centipedes, millipedes, flies, Opilionids, Lepidoptera, and Hemipteran species were captured infrequently.

5.3.2 Terrestrial Species Reference Location Surveys

Terrestrial bird, wildlife, reptile, amphibian, and habitat surveys were conducted in the reference areas on May 29 and May 30, 2007. These reference location surveys were completed in forested floodplain, maintained field, and successional field habitats.

5.3.2.1 Results/Findings

Three reference locations were surveyed (Figures 14, 15, and 16). At each location, transects were established in available maintained field, successional field, and forested floodplain habitat. A total of 5 transects were established within the reference locations. Transects in reference location #1 (Choccolocco Creek upstream of Snow

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Creek confluence) included a maintained field and forested floodplain transect. At reference location #2 (Cheaha Creek) a successional field and a forested floodplain transect were established, and at reference location #3 (Talladega Creek) a forested floodplain transect was established.

A summary of species by habitat is presented in Table 2. At the reference location transects a total of 10 bird species were observed. In terms of habitat, the greatest number of avian species occurred in the forested floodplain. In terms of geographic location, the greatest number of avian species occurred in reference location #1. A master list of all avian species observed within the reference locations during both the terrestrial and aquatic surveys is provided in Table 3 (spring aquatic bird surveys in the reference areas are discussed in Section 5.3.4.1).

Within the reference locations, a total of three species of non-avian wildlife or their signs were observed. A summary of species occurring in each of the habitats is presented in Table 4.

A thorough baseline vegetative survey was conducted in the fall 2006, and the spring surveys were more qualitative since the dominant vegetation species occurring in forested floodplains, maintained fields, and successional fields were similar to those observed during the fall (Table 5). Within the forested floodplains, tree species included oak, ash, and hickory. For maintained fields, a mixture of grasses and common pasture species (e.g., clovers) were dominant. Successional fields were dominated by shrub species of privet and honeysuckle with saplings of ash and oak.

Four reptile and amphibian surveys were performed in the available habitat at the three reference locations. Only one species (Carolina anole, in reference location #2) was observed. The summary of these results are presented in Table 55.

5.3.3 Small Mammal Reference Location Surveys

Small mammal surveys were conducted in reference areas within the surrounding floodplain habitat of Choccolocco Creek (REF-1), Cheaha Creek (REF-2), and Talladega Creek (REF-3) between May 15 and May 17, 2007. At each of the three reference locations, available habitat was surveyed to determine the presence of small mammals, compare to OU-4 surveys, and to develop a preliminary species list to support future Phase 2 investigations.

5.3.3.1 Results/Findings

Six traplines (two at each of the reference locations; see Figures 14, 15, and 16) were set for a total of 150 trap nights. Photographs of the survey locations are provided in Appendix A. A total of 10 small mammals were captured representing five different species (Table 6). Trapping success for each transect ranged from a minimum of 0% (no captures) to a maximum of 16%, with an overall average of 7%. The most abundant species were the house mouse and Norway rat with 3 individuals (combined 60% of total catch), followed by hispid cotton rat with 2 individuals (20% of total catch). During the survey an equal number of individuals (4) were caught in the maintained field and successional field habitats, and the fewest number of individuals (2) was caught in the forested habitat.

5.3.4 Aquatic Bird and Mammal Reference Location Surveys

Aquatic bird and mammal surveys were performed at the three reference locations on May 23 and May 24, 2007. The survey observations were conducted in areas adjacent to the five major aquatic habitat types (e.g., riffles, runs, emergent vegetation, tributary confluences, and depositional environments).

5.3.4.1 Results/Findings

Data in five categories were recorded during the survey: wildlife species, count, observation type, habitat, and location (Table 58). Count is only applicable to those species that were observed directly. Observation type encompassed a wide range of categories, including visual presence (sight), tracks, lodge/dam, burrows, chews, and slides. Habitat type was also diverse, and included depositional bank/bar, bank, run, riffle, eroded bank, deadfall, backwater, and island. The northing and southing for each location was recorded using a handheld GPS unit while the boat was stationary at the observation point. At the Cheaha Creek and Talladega Creek reference locations, the start and end points were recorded. These two locations are relatively small in area and the habitat was walked by field personnel.

Raccoon was the most common species observed during the survey at reference location 1 (upstream of Snow Creek confluence along Choccolocco Creek). The second most common species were beaver and turtle. Wood duck tracks were also observed. At Cheaha Creek, muskrat and beaver were observed, along with a few mallards. At Talladega Creek, a muskrat and/or beaver was observed along a vegetated bank, as well as a green frog.

5.3.5 Benthic and Phytophilous Macroinvertebrate Community Reference Location Surveys

Benthic and phytophilous macroinvertebrate surveys were conducted in the three reference locations in Cheaha Creek, Talladega Creek, and Choccolocco Creek (upstream of Boiling Springs Road) on May 16 and 17, 2007. Samples were collected in five habitat types, including riffles, runs, emergent vegetation, backwaters, and depositional areas. Unlike in the fall 2006 effort, suitable locations within the depositional areas were identified and surveyed. The following sections describe the results and findings of the surveys.

5.3.5.1 Results/Findings

For each survey location, assessment techniques consistent with RBPs (Barbour et al. 1999) were used to evaluate conditions. As with the surveys in OU-4, water quality and physical characterization data forms were used to record specific sample location measurements and semi-quantitative assessment information. Completed field data sheets are provided in Appendix D.

Water quality data (e.g., pH, temperature, dissolved oxygen), water depth, water velocity, and substrate characteristics were measured and/or assessed and recorded for each sample location. GPS coordinates were established and recorded for each location using a handheld GPS unit. Survey locations are presented on Figures 14, 15, and 16. Photographs taken at each survey location are provided in Appendix B.

Water quality data for temperature, specific conductance, dissolved oxygen, pH, and turbidity were collected using a Horiba U-22 meter at all survey locations.

A total of 11 benthic and phytophilous macroinvertebrate reference locations were sampled. A sample and replicate were collected at each location, yielding a total of 22 samples for taxonomic identification. Complete taxonomic results are provided on Tables 43 through 53b (one table for each sampling location).

A total of 139 species were identified within the five habitat types sampled in reference areas. The dominant benthic and phytophilous orders include:

Diptera (true flies): 51 species

Ephemeroptera (mayflies): 15 species



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- Trichoptera (caddisflies): 12 species
- Odonata (dragonflies and damselflies): 11 species
- Coleoptera (beetles): 13 species
- Tubificida (mayflies): 4 species

Within the five habitat types, the fewest number of species (4) were observed in samples from the backwater habitat, while the samples collected in emergent vegetation habitats yielded the greatest number of species (92) observed.



6. Summer 2007 Survey Results

The summer survey was a fairly limited effort, targeting only terrestrial and aquatic birds and wildlife and fish in OU-4. Surveys of fish and terrestrial birds and wildlife were also conducted in the reference areas. Original survey plans described in the OU-4 Phase 1 FSP included terrestrial small mammals, but the results from the fall, winter, and spring surveys in OU-4 (which totaled 1,050 trap nights) indicated a consistent community composition of mice, rats, and shorttail shrew (see Table 6). Live traps were used in the fall, winter, and spring surveys, and while mortality rates were low, there were casualties. Given the consistency of the small mammal species composition, to avoid unnecessary mortality the small terrestrial mammals were not surveyed in the summer effort.

The technical approach and methods for collecting the summer survey data were consistent with those described in the OU-4 Phase 1 FSP and the Site-Wide QAPP.

6.1 Terrestrial Survey Results

6.1.1 Terrestrial Bird, Wildlife, and Habitat Surveys

Terrestrial bird, wildlife, and habitat surveys were completed in three target habitats (forested floodplains, maintained fields, and successional old fields) within each of the three EDRs of OU-4. The results of the survey work, which took place on August 12, and 13, 2007 are presented below.

6.1.1.1 Results/Findings

The same 200-meter terrestrial bird and wildlife transects surveyed in the spring—two in each EDR representing areas of low and high species diversity as shown on Figures 17, 18, and 19—were visited again in the summer 2007. In total, 6 surveys were performed.

Within OU-4, a total of 24 bird species were observed. A summary of species occurring in each of the habitats in the summer is presented in Table 2. In terms of habitat, the greatest number of avian species occurred in the forested floodplain. In terms of geographic location, an equal number of avian species occurred in both EDR 1 and 2. A master list of all avian species observed within OU-4 during both the terrestrial and aquatic surveys is provided in Table 3 (summer aquatic bird surveys are discussed in Section 6.2.1.1).



A total of eight species of wildlife or their signs were observed. A summary of species occurring in each of the habitats is presented in Table 4. In terms of habitat, the greatest number of species occurred in the forested floodplain. In terms of geographic location, the greatest number of species occurred in EDR 3.

Vegetative observations in the summer survey were qualitative since the dominant vegetation species occurring in forested floodplains, maintained fields, and successional fields were similar to those observed during the fall (Table 5). Within the forested floodplains, tree species included oak, ash, sycamore, sweetgum, and hickory. For maintained fields a mixture of grasses and common pasture species (e.g., clovers) were dominant. Successional fields were dominated by shrub species of privet, honeysuckle, and trumpet vine with a groundcover of mixed grasses, poison ivy, and thistle with saplings of maple and willow.

6.2 Aquatic Survey Results

6.2.1 Aguatic Bird and Mammal Surveys

Aquatic bird and mammal surveys were performed in OU-4 from August 15 though August 18, 2007. The survey observations were conducted in areas adjacent to the five major aquatic habitat types in OU-4 (e.g., riffles, runs, emergent vegetation, tributary confluences, and depositional environments).

6.2.1.1 Results/Findings

Data recorded during the surveys are presented in Table 7. Data in five categories were recorded during the survey: wildlife species, count, observation type, habitat, and location. Count is only applicable to those species which were observed directly. Observation type encompassed a wide range of categories, including: visual presence (sight), tracks, lodge/dam, burrows, chews, and slides. Habitat type was also diverse, and included: depositional bank/bar, bank, run, riffle, eroded bank, deadfall, backwater, and island. The northing and southing for each location was recorded using a handheld GPS unit while the boat was stationary at the observation point.

Raccoon and muskrat were the most common species observed during the survey. Beaver, great blue heron, kingfisher, and wood duck were the second most common. Mink tracks were observed along a bank within EDR 2 and a depositional bar within EDR 3. During this survey, direct sightings of muskrat were observed on several occasions within EDR 1 and EDR 2. In most cases tracks, burrows, or slides of both

beaver and muskrat were found on the various habitats within the creek or surrounding floodplain. Beaver and muskrat signs were most prevalent within EDR 1. The field crew made an effort to limit the pushing piscivorous birds and waterfowl downstream to avoid biasing the observations high.

6.2.2 Fish Community Surveys

The summer 2007 Phase 1 fish community surveys were conducted in OU-4 in portions of Choccolocco Creek between August 8 and August 11, 2007. Fish community surveys were completed in four target habitats (riffle, run, backwater, and emergent vegetation) within each of the three EDRs of OU-4. Survey results from Phase 1 will be used to document habitat conditions and the relative abundance and diversity of fish.

6.2.2.1 Results/Findings

Within OU-4, a total of 3,128 fish were collected comprising 41 species (including various darter, sunfish, minnow, and sucker species). Species numbers within the four habitat types ranged from 11 (backwater and riffle) to 25 (riffle). The relative fish abundance from the four habitat types ranged from 380 (run) to 1,097 (riffle) (Tables 38 to 41). Results are summarized below.

Habitat	Total Fish Collected	Number of Fish Collected in Each Sampling Event (range)	Most Abundant Species	Number of Species Present (range)
Riffle	1,097	114 to 306	Minnow species	11 in EDR 1 to 25 in EDR 1
Emergent Vegetation	981	77 to 304	Minnow and Sunfish species	12 in EDR 1 to 22 in EDR 2
Run	380	36 to 85	Sunfish species	13 in EDR 2 to 20 in EDR 1
Backwater	670	39 to 165	Sunfish species	11 in EDR 3 to 19 in EDR 1

GPS coordinates were taken at each fish sampling location in OU-4, which are shown on Figures 17, 18, and 19. Photographs of fish survey locations are provided in Appendix C.



6.3 Reference Location Survey Results

As described in Section 5.3, although the initial plans for the reference area surveys were limited to a single effort concurrent with the work conducted in the fall of 2006, additional surveys of the terrestrial and aquatic reference area communities were carried out in conjunction with both the spring and summer field efforts. In the summer, these surveys were conducted in all three of the reference locations, and in representative habitat types found at each.

Survey methods employed in the reference areas were the same as those described in Section 2. The actual reference area scope of work was determined in the field.

6.3.1 Terrestrial Bird, Wildlife, and Habitat Reference Location Surveys

Terrestrial bird, wildlife, and habitat survey activities occurred in the reference areas on August 12 and 13, 2007. These reference area surveys were completed in forested floodplain, maintained field, and successional field habitats.

6.3.1.1 Results/Findings

Three reference locations were surveyed (Figures 20, 21, and 22). At each location, available maintained field, successional field, and forested floodplain habitat transects were established for the survey efforts. A total of 5 transects were established within the reference locations. At reference location #1 (Choccolocco Creek upstream of Snow Creek confluence), a maintained field and forested floodplain transect were established and surveyed. At reference location #2 (Cheaha Creek) a successional field and a forested floodplain transect were established and surveyed. At reference location #3 (Talladega Creek) a forested floodplain transect was established and surveyed.

Within the reference locations, a total of 13 bird species were observed. A summary of species occurring in each of the habitats is presented in Table 2. In terms of habitat, the greatest number of avian species occurred in the forested floodplain. In terms of geographic location, the greatest number of avian species occurred in reference location #1. A master list of all avian species observed within the reference locations is provided in Table 3.



Within the reference locations, a total of four species of non-avian wildlife or their signs were observed. A summary of species occurring in each of the habitats is presented in Table 4.

Dominant vegetation species occurring in forested floodplains, maintained fields, and successional fields of the reference locations were similar to those observed within the OU-4 habitats in the fall 2006 survey (Table 5). Within the forested floodplains, tree species included oak, ash, and hickory. For maintained fields, a mixture of grasses and common pasture species (e.g., clovers) were dominant. Successional fields were dominated by shrub species of privet and honeysuckle with saplings of ash and oak.

6.3.2 Fish Community Reference Location Survey

Fish community surveys were conducted in reference areas within Choccolocco Creek (REF-1), Cheaha Creek (REF-2), and Talladega Creek (REF-3) on August 6 and August 7, 2007.

In each reference area, three of the four habitat types (riffle, run, backwater, and emergent vegetation) were surveyed (REF-1 and REF-2: riffle, emergent vegetation, and run; REF-3: emergent vegetation, run, and backwater). The decision of which habitat types to survey was made by field crews based on the existence and availability of habitat types that occurred in close proximity to stream access points. One sampling event took place within each surveyed habitat type for a total of three samples per reference area.

6.3.2.1 Results/Findings

Within the reference areas, a total of 851 fish were collected comprising 39 species (including various darter, sunfish, minnow, and sucker species). Species numbers within the four habitat types ranged from 14 (backwater) to 30 (emergent vegetation) (Tables 38 to 41). Results are summarized below.



Habitat	Total Fish Collected	Number of Fish Collected in Each Sampling Event (range)	Most Abundant Species	Number of Species Present (range)
Riffle	475	236 to 239	Minnow species	16 in REF 2 to 21 in REF 1
Emergent Vegetation	164	40 to 84	Sunfish species	12 in REF 1 to 18 in REF 2
Run	145	35 to 72	Sunfish species	10 in REF 1 to 17 in REF 2
Backwater	67	N/A	Sunfish species	14 in REF 3

GPS coordinates were taken at each fish sampling location in the reference areas and are shown on Figures 20, 21, and 22. Photographs of fish survey locations are provided in Appendix C.

Operable Unit 4 Phase 1 Ecological Survey Report

ARCADIS BBL

Anniston PCB Site

7. Summary

The Phase 1 ecological survey effort was comprised of a series of four seasonal surveys, and the data collected are presented in this report. A full year of current ecological information is now available for OU-4, and an initial assessment of the data indicates that there is a need to conduct an additional qualitative survey of the terrestrial amphibian and reptile community in the spring of 2008. As described in Section 5, preliminary observations throughout OU-4 suggest that reptile and amphibian abundance and diversity are low, and that this may be an artifact of the flooding and drying cycles that control terrestrial biotic communities. P/S will work closely with USEPA to determine the need to conduct an additional survey of reptile and amphibian abundance and diversity in both OU-4 and the reference areas in spring 2008 to gather additional information on this community.

The results of the Phase 1 habitat and ecological community surveys will set the foundation for a Phase 2 sampling and surveying effort by supporting the development of an ecological food web structure and appropriate Site-specific measurement endpoints. The interpretation and analysis of the Phase 1 ecological survey results will be used to develop the forthcoming Phase 2 Field Sampling Plan for Operable Unit 4. This sampling plan will identify the technical approach for the Phase 2 ecological surveys, which will be designed to support tissue and/or body burden analyses, dose estimation, toxicity testing, and habitat suitability assessment, as appropriate.

During the development of the Phase 2 effort, the Phase 1 data presented in this report will be evaluated along with the relevant historical ecological data presented in the September 2005 OU-4 DSR (BBL 2005) as a basis for designing the Phase 2 data collection effort to account for chemical exposure gradients in the context of ecological heterogeneity and habitat gradients. The historical data and the Phase 1 and Phase 2 results will ultimately be compiled and used to estimate potential Site-wide risks by overlaying habitat maps and COPC concentration data.

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8. References

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Appendix A

Photographs of Small Mammal and Soil Macroinvertebrate Community Survey Locations

Appendix B

Photographs of Benthic Macroinvertebrate and Mollusk Community Survey Locations

Appendix C

Photographs of Fish Community Survey Locations

Appendix D

Physical Characteristics/Water Quality Field Data Sheets

Fall 2006 and Spring 2007

Tables

TABLE 2 TERRESTRIAL AVIAN SURVEY RESULTS SUMMARY

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Habitat T	уре:			Mai	ntained	Field							Fore	ested	Floo	dplain					Suc	cessiona	al Field		
	Locat	ion:	EDR	≀-1	EDR-2	EDR-	REI	F-1R	EF-2	REF-3	EDR	R-1	EDF	₹-2	EDF	₹-3	REF-1	REF-2	REF-3	EDR-1	ı	EDR-2	EDR-3	REF-1	REF-2	REF-3
Species	Scientific Name Tran	sect	1 2	3	1 2 3	1 ^b 2	3 1	а	1	1	1 2	3	1 2	3	1 2	3	1 ^a	1	1	1 2 3	3	1 2 3	1 2 3	1	1	1
Fall 2006																										
American Crow	Corvus brachyrhynchos				Х										Х	Х	х	х		х			х	Х		
American Goldfinch	Carduelis tristis		X	Х											Х		Х			хх		Х	х х			
American Robin	Turdus migratorius										Χ	Х								Х			х х			
Barred Owl	Strix varia														Х											
Belted Kingfisher	Ceryle alcyon														Х											
Black Vulture	Coragyps atratus																Х									
Black-throated Green Warbler	Dendroica virens													Х												
Blue Jay	Cyanocitta cristata		Х	х	Х						Χ		Х	Х	х	:	Х	х		хх		Х	х	х		
Blue-winged Warbler	Vermivora pinus														х											
Brown Thrasher	Toxostoma rufum														х	:	х			х						
Carolina Chickadee	Poecile carolinensis			х							х х		х			х	Х			хх		хх				
Carolina Wren	Thryothorus Iudovicianus			x							Х		х		х	х				хх						
Cedar Waxwing	Bombycilla cedrorum										хх				''					X						
Chipping Sparrow	Spizella passerina										, ,						х	x		~						
Common Grackle	Quiscalus quiscula		x										х				~	x		х						
Cooper's Hawk	Accipiter cooperii	- 1	^										^					^		X						
Dark-eyed Junco	Junco hyemalis																			^			х			
Downy Woodpecker	Picoides pubescens																	х					x			
Eastern Bluebird	Sialia sialis		x															^					^			
Eastern Phoebe	Sayornis phoebe		^											x	x x					x			х	х		
Eastern Towhee	Pipilo erythrophthalmus		х								х			^	^ ^	•	х			^			^	_ ^		
European Starling	Sturnus vulgaris		^								^						^			x						
Field Sparrow	Spizella pusilla																х			^				.,		
Gray Catbird	Dumetella carolinensis														١.,		Х							х		
,												Х		Х	Х					X		Х				
Great Blue Heron	Ardea herodius			Х																х						
Great Crested Flycatcher	Myiarchus crinitus														х											
Hairy Woodpecker	Picoides villosus		Х								Х	Х	Х							Х						
House Finch	Carpodacus mexicanus																			Х						
Northern Cardinal	Cardinalis cardinalis														Х		Х	Х		Х						
Northern Flicker	Colaptes auratus		Х		Х								Х					х		Х		Х				
Northern Mockingbird	Mimus polyglottos	1	X																	х						
Pileated Woodpecker	Dryocopus pileatus				Х																					
Pine Warbler	Dendroica pinus																Х									
Red-breasted Nuthatch	Sitta canadensis														Х											
Red-headed Woodpecker	Melanerpes erythrocephalus														Х											
Red-shouldered Hawk	Buteo lineatus																							х		
Red-tailed Hawk	Buteo jamaicensis																	х		Х						
Red-winged Blackbird	Agelaius phoeniceus		X																							
Ruby-crowned Kinglet	Regulus calendula																х									
Song Sparrow	Melospiza melodia	2	X																					х		
Tufted Titmouse	Baeolophus bicolor										х х		х		х	x				х						
Turkey Vulture	Cathartes aura												Х	х	l			х						1	1	
Unknown Empidonax Flycatcher	Empidonax sp.														х											
Unknown Parid	N/A										х															

TABLE 2 TERRESTRIAL AVIAN SURVEY RESULTS SUMMARY

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Habitat Type:		Ma	intained	Field				For	ested Flo	odplain				Suc	cessiona	al Field		
	Location:	EDR-1	EDR-2	EDR-3	REF-	1REF-2	REF-3	EDR-1	EDR-2	EDR-3	REF-1	REF-2	REF-3	EDR-1	EDR-2	EDR-3	REF-1	REF-2	REF-3
Species	Scientific Name Transect	1 2 3	1 2 3	1 ^b 2 3	3 1 ^a	1	1	1 2 3	1 2 3	1 2 3	1 ^a	1	1	1 2 3	1 2 3	1 2 3	1	1	1
White-throated Sparrow	Zonotrichia albicollis										х						х		
Yellow warbler	Dendroica petechia							х	х		х								
Yellow-rumped Warbler	Dendroica coronata	х							х х					хх	х				
Winter 2007								1	ı		_								
American Goldfinch	Carduelis tristis													Х			T .		
American Robin	Turdus migratorius								х	х				х		х			
Blue Jay	Cyanocitta cristata								х					х					
Carolina Chickadee	Poecile carolinensis								х										
Carolina Wren	Thryothorus Iudovicianus								x										
Cedar Waxwing	Bombycilla cedrorum	х							^					х					
Common Grackle	Quiscalus quiscula	X							x	x									
Eastern Bluebird	Sialia sialis	^							^	^				х					
Eastern Meadowlark	Sturnella magna	х												^					
Eastern Phoebe	Sayornis phoebe	^	x																
European Starling	Sturnus vulgaris	х	^																
Killdeer	Charadrius vociferus	×																	
Mourning Dove	Zenaida macroura	×												x					
Northern Cardinal	Cardinalis cardinalis	^								x				^	x				
Northern Flicker	Colaptes auratus									^					^				
Northern Mockingbird	Mimus polyglottos								х										
Red-bellied woodpecker										X				Х					
Red-headed Woodpecker	Melanerpes carolinus									Х									
	Melanerpes erythrocephalus								X										
Red-tailed Hawk Tufted Titmouse	Buteo jamaicensis								X										
	Baeolophus bicolor								х	X									
White-throated Sparrow	Zonotrichia albicollis						<u> </u>			Х			<u> </u>	Х					
Spring 2007	To "" :		1							T	ı	ı		1	1			ı	
Blue Jay	Cyanocitta cristata	-*		-							х	Х	х	Х				-	
Carolina Chickadee	Poecile carolinensis	-		-						Х								-	
Carolina Wren	Thryothorus Iudovicianus	-		-					Х		Х	Х		Х				-	
Common Grackle	Quiscalus quiscula	-		-							Х							-	
Eastern Kingbird	Tyrannus tyrannus	-	Х	-														-	
Eastern Towhee	Pipilo erythrophthalmus	-		-							Х	Х						-	
Gray Catbird	Dumetella carolinensis	-		-						Х								-	
Indigo Bunting	Passerina cyanea	-		-	Х					Х								-	
Northern Cardinal	Cardinalis cardinalis	-		-	х					Х	Х			Х				-	
Northern Mockingbird	Mimus polyglottos	-		-	х													-	
Red-bellied Woodpecker	Melanerpes carolinus	-		-	1					Х								-	
Red-eyed Vireo	Vireo olivaceus	-		-	1								х					-	
Tufted Titmouse	Baeolophus bicolor	-		-	1					Х								-	
Unknown Hummingbird	Trochilidae (family)	-		-			1	1	1	Х			х				1	-	
Unknown Vireo	Vireo sp.	-		-	1	1			х									-	
White-eyed Vireo	Vireo griseus	-		-	1						х	x						-	
Yellow Warbler	Dendroica petechia	-		-	1					х								-	
Yellow-rumped Warbler	Dendroica coronata	-		-	1	1			х				1				1	-	

TABLE 2 TERRESTRIAL AVIAN SURVEY RESULTS SUMMARY

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Habitat Type:		Mai	ntained F	ield				Fore	ested Floo	odplain				Suc	cessiona	l Field		
	Location:	EDR-1	EDR-2	EDR-3	REF-1	REF-2	REF-3	EDR-1	EDR-2	EDR-3	REF-1	REF-2	REF-3	EDR-1	EDR-2	EDR-3	REF-1	REF-2	REF-3
Species	Scientific Name Transect	1 2 3	1 2 3	1 ^b 2 3	1 ^a	1	1	1 2 3	1 2 3	1 2 3	1 ^a	1	1	1 2 3	1 2 3	1 2 3	1	1	1
Summer 2007																			
Carolina Wren	Thryothorus Iudovicianus		Х							Х						-*			
Chimney Swift	Chaetura pelagica	х							X		х					-			
Common Grackle	Quiscalus quiscula													х		-			
Common Yellowthroat	Geothlypis trichas	х														-			
Downy Woodpecker	Picoides pubescens								X							-			
Eastern Bluebird	Sialia sialis		Х													-			
Eastern Phoebe	Sayornis phoebe								Х							-			
Eastern Towhee	Pipilo erythrophthalmus									х						-			
European Starling	Sturnus vulgaris	х														-			
Grey Catbird	Dumetella carolinensis										х					-			
Indigo Bunting	Passerina cyanea									х	х			х		-			
Mourning Dove	Zenaida macroura	х	х								х		х	х		-		х	
Northern Cardinal	Cardinalis cardinalis				х				Х	х						-			
Northern Mockingbird	Mimus polyglottos												х			-			
Northern Rough-winged Swallow	Stelgidopteryx serripennis											х				-			
Red-bellied Woodpecker	Melanerpes carolinus										х					-			
Red-breasted Nuthatch	Sitta canadensis								X							-			
Red-winged Blackbird	Agelaius phoeniceus													х		-			
Ruby-throated Hummingbird	Archilochus colubris										х			х		-			
Tree Swallow	Tachycineta bicolor													х		-			
Turkey Vulture	Cathartes aura											х				-			

Notes:

General

N/A = Not available

X = Indicates presence during Fall, Winter, Spring, or Summer terrestiral wildlife surveys.

EDR = Ecologically differentiable reach

REF = Reference location

Fall

1. Avian surveys were conducted from October 24 to 27, 2006.

Winter

1. Winter avian surveys were conducted on February 7, 2007.

Spring

- 1. Spring avian surveys were conducted from May 29 to 30, 2007.
- * The "-" symbol is used to indicate that a survey was performed, but no species were observed. Empty boxes indicate that no survey was performed along that particular transect.
- [a] = Transect line different from previous investigations.
- [b] = Habitat classification was changed from successional to maintained due to a subsequent change in crop planting rotation.

Summer

- 1. Summer avian surveys were conducted from August 12 to 13, 2007.
- * The "-" symbol is used to indicate that a survey was performed, but no species were observed. Empty boxes indicate that no survey was performed along that particular transect.
- [a] = Transect line different from previous investigations.

TABLE 3 AVIAN SPECIES MASTER LIST

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

Species	Scientific Name
American Crow	Corvus brachyrhynchos
American Goldfinch	Carduelis tristis
American Kestrel	Falco sparverius
American Robin	Turdus migratorius
Anhinga	Anhinga anhinga
Barn Swallow	Hirundo rustica
Barred Owl	Strix varia
Belted Kingfisher	Ceryle alcyon
Black Vulture	Coragyps atratus
Black-throated Green Warbler	Dendroica virens
Blue Goose	Chen caerulescens
Blue Jay	Cyanocitta cristata
Blue-gray Gnatcatcher	Polioptila caerulea
Blue-winged Teal	Anas discors
Blue-winged Warbler	Vermivora pinus
Brown Thrasher	Toxostoma rufum
Brownheaded Cowbird	Molothrus ater
Canada Goose	Branta canadensis
Carolina Chickadee	Poecile carolinensis
Carolina Wren	Thryothorus ludovicianus
Cedar Waxwing	Bombycilla cedrorum
Chimney Swift	Chaetura pelagica
Chipping Sparrow	Spizella passerina
Common Grackle	Quiscalus quiscula
Common Yellowthroat	Geothlypis trichas
Cooper's Hawk	Accipiter cooperii
Dark-eyed Junco	Junco hyemalis
Downy Woodpecker	Picoides pubescens
Eastern Bluebird	Sialia sialis
Eastern Kingbird	Tyrannus tyrannus
Eastern Meadowlark	Sturnella magna
Eastern Phoebe	Sayornis phoebe
Eastern Towhee	Pipilo erythrophthalmus
European Starling	Sturnus vulgaris
Field Sparrow	Spizella pusilla
Goose spp.	Anatidae (family)
Gray Catbird	Dumetella carolinensis
Great Blue Heron	Ardea herodius
Great Crested Flycatcher	Myiarchus crinitus
Great Egret	Ardea alba
Greater Yellowlegs	Tringa melanoleuca
Green Heron	Butorides virescens
Hairy Woodpecker	Picoides villosus
Hawk sp.	Accipitridae (family)
Hooded Merganser	Lophodytes cucullatus
House Finch	Carpodacus mexicanus
Indigo Bunting	Passerina cyanea
Killdeer	Charadrius vociferus
Little Blue Heron	Egretta caerulea
Mallard Duck	Anas platyrhynchos
Mourning Dove	Zenaida macroura
Muscovy	Cairina moschata
Northern Cardinal	Cardinalis cardinalis

TABLE 3 AVIAN SPECIES MASTER LIST

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

Species	Scientific Name
Northern Flicker	Colaptes auratus
Northern Harrier	Circus cyaneus
Northern Mockingbird	Mimus polyglottos
Northern Rough-winged Swallow	Stelgidopteryx serripennis
Northern Shoveler	Anas clypeata
Orchard Oriole	Icterus spurius
Osprey	Pandion haliaetus
Owl sp.	Strigiformes (order)
Peacock	Pavo cristatus
Pileated Woodpecker	Dryocopus pileatus
Pine Warbler	Dendroica pinus
Prothonotary Warbler	Protonotaria citrea
Purple Martin	Progne subis
Red-bellied Woodpecker	Melanerpes carolinus
Red-breasted Nuthatch	Sitta canadensis
Red-eyed Vireo	Vireo olivaceus
Red-headed Woodpecker	Melanerpes erythrocephalus
Red-shouldered Hawk	Buteo lineatus
Red-tailed Hawk	Buteo jamaicensis
Red-winged Blackbird	Agelaius phoeniceus
Ruby-throated Hummingbird	Archilochus colubris
Ruby-crowned Kinglet	Regulus calendula
Sharp-shinned Hawk	Accipiter striatus
Snowy Egret	Egretta thula
Song Sparrow	Melospiza melodia
Tree Swallow	Tachycineta bicolor
Tufted Titmouse	Baeolophus bicolor
Turkey Vulture	Cathartes aura
Unknown Hummingbird	Trochilidae (family)
Unknown Parid	N/A
Unknown Vireo	Vireo sp.
Unkown Empidonax flycatcher	Empidonax sp.
White-eyed Vireo	Vireo griseus
White-throated Sparrow	Zonotrichia albicollis
Wood Duck	Aix sponsa
Yellow Warbler	Dendroica petechia
Yellow-bellied Sapsucker	Sphyrapicus varius
Yellow-rumped Warbler	Dendroica coronata

Notes:

1. This list presents all avian species observed during Phase 1 ecological community surveys within OU-4 and the upstream reference areas. Species listed include those documented during the formal avian surveys as well as the species types that were observed during the course of other ecological survey efforts.

N/A = Not available

TABLE 4 WILDLIFE SURVEY RESULTS

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Habitat Type:		Ma	inta	ined	Fie	eld						Fo	res	sted F	loc	dplai	n						Sı	ucc	essi	onal	Fie	ld	
		Location:		R - 1	E	DR -	2	EDF	₹ - 3	EC	R -	1	EDF	₹ - 2	Е	DR -	3 F	REF -	1 R	EF -	2 RI	EF - 3	EI	DR -	1	ED	R - 2	EI	DR -	3	Ref - 1
Species	Scientific Name	Transect	1	2 3	1	2	2	1 2	, 3	1	2	2	1 1	2	1	2	2	1	+	1			1	2	2	1	2 3	1	2	2	1
Fall 2006			•		Ė		_			t		+			† ·		_		+	•	-		Ė	_	Ť	•		÷	_	Ť	•
Beaver	Castor canadensis						т			х		_			Т		7		т				П		7			1		╛	
Cattle	Bos taurus		х	х х																											
Eastern Chipmunk	Tamias striatus															х				х											
Eastern Cottontail	Sylvilagus floridanus																			х			х								
Eastern Coyote	Canis latrans																	х					х					х		х	
Gray Squirrel	Sciurus carolinensis															х		Х													
Longtail Weasel a	Mustela frenata									х																					
Whitetail Deer	Odocoileus virginianus									1								х					х					х			
Woodchuck	Marmota monax																						x								
Winter 2007							Ė			_					_																
Armadillo	Dasypus novemcinctus						Т			П		Т			х		Т		Т		Т				Т			Т		П	
Cattle	Bos taurus			х			x																								
Eastern Cottontail	Sylvilagus floridanus																						х					х			
Eastern Coyote	Canis latrans			х																			х					х			
Gray Squirrel	Sciurus carolinensis						x						х																		
Racoon	Procyon lotor												x																		
Whitetail Deer	Odocoileus virginianus			х																			х								
Woodchuck	Marmota monax																						х								
Spring 2007					-														•		-		•							•	
Armadillo	Dasypus novemcinctus														Х																
Beaver	Castor canadensis																					х									
Cattle	Bos taurus			Х		х																									
Eastern Cottontail	Sylvilagus floridanus																						х								
Gray Squirrel	Sciurus carolinensis														х			Х													
Racoon	Procyon lotor												3	(
Whitetail Deer	Odocoileus virginianus														х					Х											
Summer 2007																															
Armadillo	Dasypus novemcinctus														х																
Beaver	Castor canadensis																					Х									
Bobcat	Felis rufus						- [1		- 1			х					1						
Cattle	Bos taurus			Х		Х									1															J	
Eastern Cottontail	Sylvilagus floridanus						- [1		- 1						х		1					J	
Gray Squirrel	Sciurus carolinensis						- [х		- 1	Х							1						
Racoon	Procyon lotor												2	(1																
Whitetail Deer	Odocoileus virginianus														х					Х											

Notes:

- 1. Observations on this table were made during terrestrial wildlife surveys. Aquatic survey observations are not included X = Indicates presence during Fall, Winter, Spring, or Summer terrestrial wildlife surveys
- EDR = Ecologically differentiable reach
- REF = Reference location

Fall

- Wildlife surveys were conducted from October 24 to 27, 2006.
 Field notes recorded observation as a shorttail weasel, but it was changed to longtail based on geographic range.

1. Wildlife surveys were conducted on February 7, 2007.

Spring

1. Wildlife surveys were conducted from May 29 to 30, 2007.

Summer

1. Wildlife surveys were conducted from August 12 to 13, 2007.

TABLE 5 VEGETATION SURVEY RESULTS

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

				EDR 1			EDR 2)		EDR	3
Stratum	Common Name	Scientific Name	FF	MF		FF	MF	SF	FF	MF	SF
Fall 2006			l l					'		!	
Tree	Allegany Chinkapin	Castanea pumila				Х					
	Ash, green	Fraxinus pennsylvanica							Χ		
	Box Elder	Acer negundo	Xd		X ^d			Х	Х		
	Cherry	Prunus sp.				Х		Х	Х		
	Eastern Hophornbean	Ostrya virginiana				Χ					
	Eastern Red Cedar	Juniperus virginiana				Х		Х			
	Elm	Ulmus sp.				X					
	Elm, American	Ulmus americana	Х		Х	X					
	Hickory	Carya sp.				Χ					
	Hickory, shagbark	Carya laciniosa				Χ					
	Honey Locust	Gleditsia triacanthos							Χ		
	Maple, red	Acer rubrum				Χ		Х			
	Maple, silver	Acer saccharinum	Х		Х						
	Oak, black/red	Quercus sp.	X		Х	Χ					
	Oak, swamp chesnut	Quercus prinus							Χ		
	Paw Paw	Asimina triloba				Χ		Х			
	Pecan	Carya sp.	X		Χ						
	Pine, long leaf	Pinus palustris				Χ		Х	Χ		
	Pine, short-leaved	Pinus echinata				Χ					
	Sweetgum	Liquidambar styrae	X ^d		Xd	Χ		Χ	Χ		
	Sycamore	Platanus occidentalis	X _q		Xd				Χ		
	Tulip Tree	Liriodendron tulipifera							Х		
	Water Oak	Quercus nigra	X ^d		Xd	X^d		Χ	Χ		
Shrubs/Vines	Ash, green	Fraxinus pennsylvanica							Χ		
	Black Willow	Salix nigra	X ^d		X ^d				Χ		
	Blackberry	Rubus sp.	Х		Х						
	Buckeye	Aesculus sp							Х		
	Chinaberry	Melia azedarach							Χ		
	Chinese Privet	Legustrum sinense	X ^d		Xd	Χ		Χ	Χ		
	Common Greenbrier	Smilax rotundifolia	Х		Х	Χ		Х	Х		
	Eastern Hophornbean	Ostrya virginiana				Χ			Χ		
	Eastern Red Cedar	Juniperus virginiana							Χ		
	Japanese Honeysuckle	Lonicera japonica	X		Χ				Χ		
	Maple, red	Acer rubrum				Χ			Χ		
	Oak, white	Quercus alba							Χ		
	Paw Paw	Asimina triloba			L.,				Х		
	Poison Ivy	Rhus radicans	X		Х						
	Sassafras	Sassafras albidum				.,			Х		
	Silktree Seedling	Albizia julibrissin			ļ	X			 		
	Southern Catalpa	Catalpa bignonioides		1	1	X			1		<u> </u>
	Sumac	Rhus sp.		1	1	Х			V		<u> </u>
	Sweetgum	Liquidambar styrae		<u> </u>]	ļ	Χ		

TABLE 5 **VEGETATION SURVEY RESULTS**

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

				EDR 1			EDR 2			EDR	3
Stratum	Common Name	Scientific Name	FF	MF	SF	FF	MF	SF	FF	MF	SF
Herbaceous	Aster	Aster sp.				Χ		Х			
	Bamboo	Banbusa sp.				Χ					
	Barley	Hordeum sp.				Χ					
	Bedstraw	Galium sp.									X
	Blackberry	Rubus sp.					Х				
	Bull Rush	Scirpus sp.	Χ		Χ						
	Cat Tail	Typha latifolia	Х		Χ						
	Chinese Lantern Plant	Physalis alkenkaengi	Χ		Χ						Х
	Chinese Privet	Legustrum sinense				Χ					
	Clover Species	Trifolium sp.					Х				
	Common Clotbur	Xanthium chinenese									Х
	Common Rush	Juncus effusus	Χ		Χ						
	Corn	Zea mays									Х
	Curly Dock	Rumex crispus					Х				Х
	Dandelion	Taraxacum officinale									Х
	Geranium	Geranium sp.									Х
	Goldenrod	Solidago sp.	Х		Χ	Χ		Χ	Χ		Х
	Grasses	Poa sp.	Х	X ^d	Х	Χ	Х			X ^d	
	Horse Nettle	Solanum carolinensis					Х				Χ
	Milo Water Pepper	Polygonum hydropiperoides									Χ
	Morning Glory	Ipomoea purpurea									Χ
	Mustard Seedling	N/A									Х
	Poison Ivy	Rhus radicans				Χ					
	Pokeweed	Phytolacca americana				Χ	Х				
	Prickly Lettuce	Lactuca scariola									Х
	Scarlet Morning Glory	Ipomoea sp.									Х
	Sedge, Shining	Cyperus sp.	Χ		Χ						
	Sickle Pod	Arabis canadensis									Х
	Smartweed	Polygonum sp.	Χ		Х		Х				
	Sorrel	Oxalis sp.									Х
	Star of Bethlehem	Ornithogalum sp.					Х				
	Strawberry	Fragaria sp.					Х				
	<u>, </u>						_			_	
		Species Diversity Per Transect:	22	1	22	30	9	12	25	1	16
		Species Diversity Per Habitat:		50							
		Forested Floodplain		56							
		Maintained Field		9							
		Successional Field	=	42							

Notes:

X = Indicates presence

d = Dominant species

N/A = Not available

EDR = Ecologically differentiable reach FF = Forested floodplain

MF = Maintained field

SF = Successional field

TABLE 6 SMALL MAMMAL SURVEY RESULTS

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	На	bitat Type:				Maintaiı	ned Fiel	d						For	rested F	oodplai	n					Sı	ıccessi	onal	Field		
		Location:	EDR -	1 E	DR - 2	EDR -	3 REF	- 1 REI	F - 2	REF - 3	EDR	- 1	EDR -	- 2	EDR - 3	REF -	1 REF -	2 REF - 3	ED	R - 1	EDR	- 2	EDR -	3 RE	EF - 1 F	REF - 2	REF - 3
Species	Scientific Name	Transect	1 2	3 1	2 3	1 2	3 1		1	1	1 2	3	1 2	3	1 2 3	1	1	1	1	2 3	1ª 2	3	1 2	3	1	1	1
Fall 2006																											
House Mouse Hispid Cotton Rat Harvest Mouse Cotton Mouse Eastern Wood Rat Rice Rat Shorttail Shrew	Mus musculus Sigmodon hispidus Reithrodontomys humulis Peromyscus gossypinus Neotoma floridana Oryzomys palustris Blarina brevicauda		0	1 1 0 0 0 0 0		0 1 0 0	2				0 0 0 1 0 0	0 0 0 2 0 1	0 0 0 1 0 0		0 0 0 0 0 0 1 1 0 0 0 0				2 0 0 0	0 0 3 0 0 0 1 1 0 1 0 0 0 0	0 0 0 0 0		0 0 6 0 0				
	Total	Organisms:	2	2		1	3				1	3	1		1 1				3	4 2	1		6				
Winter 2007		-	•															•									
Cotton Mouse Harvest Mouse Hispid Cotton Rat House Mouse Shorttail Shrew White-footed Mouse	Peromyscus gossypinus Reithrodontomys humulis Sigmodon hispidus Mus musculus Blarina brevicauda Preomyscus leucopus					0 1 0 0 0	0				0 0 0 0 0		3 1 0 0 0						0 1 1 1 0 0		0 0 0 0 0						
	Total	Organisms:		I		1	7				0		4						3		0			I			
Spring 2007			•																								-
Cotton Mouse Deer Mouse Golden Mouse Harvest Mouse Hispid Cotton Rat House Mouse Norway Rat White-footed Mouse	Peromyscus gossypinus Peromyscus maniculatus Peromyscus nuttalli Reithrodontomys humulis Sigmodon hispidus Mus musculus Rattus norvegicus Preomyscus leucopus					0 0 0 0 0	0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0			0 0 0 1 0 3	0 0 0 0 0 0		0 4 0 0 0 1 0			0 0 1 0 0 0	0 1 0 0 0 0		3 0 0 1 0 0		0 0 0 0 0 0 1					0 0 0 0 1 0 0	0 0 0 0 0 3 0
	Total	Organisms:				3	2 0			4	0		5			1	1		4		1					1	3

Notes:

General

EDR = Ecologically differentiable reach

REF = Reference location

Fall

- 1. Only one successional field transect was set in EDR 3.
- 2. A total of 25 traplines (consisting of 25 traps each) were set in the three habitat types for a total of 625 trap nights
- 3. Small mammal surveys were conducted from October 24 to November 1, 2006.

Winter

- 1. A total of 6 traplines (consisting of 25 traps each) were set in the three habitat types for a total of 150 trap nights
- 2. Small mammal surveys were conducted from February 6 to 7, 2007.

Spring

- 1. A combined total of 12 traplines (consisting of 25 traps each) were set in the three habitat types for a total of 300 trap nights. Six of the traplines were set in the EDRs for a total of 150 trap nights; the remaining 6 traplines were set in the reference locations for a total of 150 trap nights
- 2. Small mammal surveys were conducted from May 15 to 18, 2007.

TABLE 7 AQUATIC BIRD, MAMMAL, AMPHIBIAN, AND REPTILE SURVEY RESULTS

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
Fall 2006							
10_25_06	1	Swallows	10	Sight	Riffle (under bridge)	33°36.026′	85°49.691'
10_25_06	1	Great Blue Heron	N/A	Tracks	Depositional Bank/Bar	33°36.007'	85°49.691'
10_25_06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°35.862'	85°49.837'
10_25_06	1	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°35.848′	85°49.838'
10_25_06	1	Kingfisher	N/A	Burrows	Eroded Bank	33°35.820′	85°49.847'
10_25_06	1	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°35.820′	85°49.847'
10_25_06	1	Muskrat	N/A	Burrows	Depositional Bank/Bar	33°35.794'	85°49.811'
10_25_06	1	Cattle	N/A	Tracks	Depositional Bank/Bar	33°35.786′	85°49.793'
10_25_06	1	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°35.786′	85°49.793'
10_25_06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°35.786′	85°49.793'
10_25_06	1	Woodchuck	N/A	Burrows	Eroded Bank	33°35.786′	85°49.793'
10_25_06	1	Cattle	N/A	Tracks	Depositional Bank/Bar	33°35.776′	85°49.696'
10_25_06	1	Swallow/Kingfisher	N/A	Burrows	Eroded Bank	33°35.756′	85°49.700'
10_25_06	1	Woodchuck	N/A	Burrows	Eroded Bank	33°35.756′	85°49.700'
10_25_06	1	Beaver	N/A	Chews	Run	33°35.650'	85°49.772'
10_25_06	1	Cattle	N/A	Tracks	Depositional Bank/Bar	33°35.450′	85°49.928'
10_25_06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°35.450′	85°49.928'
10_25_06	1	Great Blue Heron	1	Sight	Depositional Bank (Deadfall)	33°35.423′	85°49.966'
10_25_06	1	Beaver	N/A	Slides	Eroded Bank	33°35.350′	85°50.011'
10_25_06	1	Robins	5	Sight	Island	33°35.350′	85°50.011'
10_25_06	1	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°35.340′	85°50.042'
10_25_06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°35.340′	85°50.042'
10_25_06	1	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°35.304'	85°50.080'
10_25_06	1	Deer	N/A	Tracks	Depositional Bank/Bar	33°35.304′	85°50.080'
10_25_06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°35.304'	85°50.080'
10_25_06	1	Great Blue Heron	N/A	Tracks	Depositional Bank/Bar	33°35.304′	85°50.080'
10_25_06	1	Beaver	N/A	Slide/Chews	Depositional Bank/Bar	33°35.253'	85°50.137'
10_25_06	1	Great Blue Heron	1	Sight	Run	33°35.253'	85°50.137'
10_25_06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°35.253'	85°50.137'
10_25_06	1	Beaver	N/A	Slides	Eroded Bank	33°35.230'	85°50.216'
10_25_06	1	Wood Duck	3	Sight	Run	33°35.232'	85°50.272'
10_25_06	1	Beaver	N/A	Tracks	Run	33°35.232'	85°50.272'
10_25_06	1	Great Blue Heron	N/A	Tracks	Run	33°35.232'	85°50.272'
10_25_06	1	Beaver	N/A	Slide	Depositional Bank/Bar	33°35.209'	85°50.431'
10_25_06	1	Kingfisher	1	Sight	Deadfall	33°35.209'	85°50.431'
10_25_06	1	Deer	N/A	Tracks	Island	33°35.176′	85°50.554'
10_25_06	1	Kingfisher	N/A	Burrows	Eroded Bank	33°35.170′	85°50.592'
10_25_06	1	Great Blue Heron	N/A	Tracks	Depositional Bank/Bar	33°35.121'	85°50.721'
10_25_06	1	Beaver	N/A	Slides/Burrows	Depositional Bank/Bar	33°35.121'	85°50.721'
10_26_06	1	Beaver	N/A	Tracks	Depositional Bank/Bar	33°35.026′	85°51.219'
10_26_06	1	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°35.026′	85°51.219'
10 26 06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°35.026′	85°51.219'
10_26_06	1	Chipmunk	N/A	Tracks	Depositional Bank/Bar	33°35.026′	85°51.219'
10_26_06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°34.972'	85°51.149'
10_26_06	1	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°34.972'	85°51.149'
10_26_06	1	Beaver	N/A	Slides	Eroded Bank	33°34.996'	85°51.254'
10_26_06	1	Raccoon	N/A	Tracks	Backwater Habitat	33°34.868'	85°51.318'
10_26_06	1	Beaver	N/A	Tracks	Backwater Habitat	33°34.868'	85°51.318'
10_26_06	1	Deer	N/A	Tracks	Backwater Habitat	33°34.868'	85°51.318'
10_26_06	1	Muskrat	N/A	Tracks	Backwater Habitat	33°34.868'	85°51.318'
10_26_06	1	Deer	N/A	Tracks	Depositional Bank/Bar	33°34.867'	85°51.403'
10_26_06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°34.867'	85°51.403'
10_26_06	1	Beaver	N/A	Tracks	Depositional Bank/Bar	33°34.867'	85°51.403'
10_26_06	1	Coyote	N/A	Tracks	Depositional Bank/Bar	33°34.867'	85°51.403'
10_26_06	1	Beaver	N/A	Chews	Eroded Bank	33°34.825'	85°51.561'
10_26_06	1	Red-headed Woodpecker	1 1	Sight	Overhang	33°34.825'	85°51.561'
10_26_06	1	Deer	N/A	Tracks	Oxbow Backwater	33°34.718'	85°51.684'
10_26_06	1	Raccoon	N/A N/A	Tracks	Oxbow Backwater	33°34.718'	85°51.684'
	1		N/A N/A			33°34.718 33°34.694'	85°51.891'
10_26_06		Beaver		Slides	Adjacent to Airport Property	33°34.694' 33°34.654'	85°51.891° 85°51.956'
10_26_06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar		
10_26_06	1	Beaver Man Turtle	N/A	Tracks	Depositional Bank/Bar	33°34.654'	85°51.956'
10_26_06	1	Common Map Turtle	1	Sight	Deadfall	33°34.641′	85°51.901'
10_26_06	1	Wood Duck	N/R	Sight	Run	33°34.641′	85°51.901'

TABLE 7 AQUATIC BIRD, MAMMAL, AMPHIBIAN, AND REPTILE SURVEY RESULTS

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

10_30_66 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Raccoon N/A Tracks Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Kingfisher 1 Sight Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Wood Duck 2 Sight Run 33°34.753' 85°54.622' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.753' 85°54.697' 10_30_06 1 Turkey N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Longtail Weasel N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Misk N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' <th>Date</th> <th>EDR</th> <th>Wildlife Species</th> <th>Count</th> <th>Observation Type</th> <th>Habitat</th> <th>Location (Northing)</th> <th>Location (Southing)</th>	Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
19.26	10_26_06	1	Red-tailed Hawk	2	Sight	Depositional Bank/Bar	33°34.595'	85°52.101'
10,26,06	10_26_06	1	Beaver	N/A	Tracks	Depositional Bank/Bar	33°34.595'	85°52.101'
10, 26, 00 1 River Cooler 1 Sight Run 33"34.51" 85"52.318 10, 26, 00 1 Doere N/A Tracks Dependence Bank-Bar 33"34.526 85"52.318 10, 26, 00 1 Doere N/A Tracks Dependence Bank-Bar 33"34.526 85"52.318 10, 26, 00 1 Doere N/A Surrows Ercode Bank 33"34.526 85"52.319 10, 26, 00 1 Doere N/A Surrows Ercode Bank 33"34.527 85"52.307 10, 26, 00 1 Reacoon N/A Tracks Dependence Bank-Bar 33"34.502 85"52.405 10, 26, 00 1 Reacoon N/A Tracks Dependence Bank-Bar 33"34.573 85"52.605 10, 26, 00 1 Reacoon N/A Tracks Dependence Bank-Bar 33"34.573 85"52.505 10, 26, 00 1 Beaver N/A Tracks Dependence Bank-Bar 33"34.573 85"52.505 10, 26, 00 1 Beaver N/A Tracks Dependence Bank-Bar 33"34.573 85"52.506 10, 26, 00 1 General Bunk-Bar 33"34.578 85"52.506 10, 26, 00 1 General Bunk-Bar 33"34.518 85"32.506 10, 26, 00 1 General Bunk-Bar 33"34.518 85"32.506 10, 26, 00 1 General Bunk-Bar 33"34.518 85"32.506 10, 26, 00 1 General Bunk-Bar 33"34.519 85"33.518 10, 26, 00 1 General Bunk-Bar 33"34.519 85"33.519 10, 26, 00 1 General Bunk-Bar 33"34.519 85"33.519 10, 26, 00 1 General Bunk-Bar 33"34.519 85"33.519 10,	10_26_06	1	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°34.595'	85°52.101'
10,28.06 1 Deer	10_26_06	1	Beaver	N/A	Tracks	Depositional Bank/Bar	33°34.579'	85°52.214'
10, 28, 06 1 Domestic Dog N/A Tracks Depositional Banviblar \$3"34.85" \$5"52.318"	10_26_06	1	River Cooter	1	Sight	Run	33°34.541'	85°52.324'
10, 26, 06	10_26_06	1	Deer	N/A	Tracks	Depositional Bank/Bar	33°34.525'	85°52.318'
10, 26, 06	10_26_06	1	Domestic Dog	N/A	Tracks	Depositional Bank/Bar	33°34.525'	85°52.318'
10,26,06	10_26_06	1	Kingfisher	N/A	Burrows	Eroded Bank	33°34.487'	85°52.367'
10, 26, 06	10 26 06	1		N/A	Tracks	Depositional Bank/Bar	33°34.502'	85°52.405'
10,26,06		1		N/A	Tracks		33°34.502'	85°52.405'
10,26,06		1	Beaver	N/A	Tracks	Depositional Bank/Bar	33°34.573'	
10,26.06		1		1				
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10, 26, 06						· · · · · · · · · · · · · · · · · · ·		
19.26.06 1 Great Blue Heron N/A Tracks Depositional Bank/Bar 33°34.595 85°52.687 19.26.06 1 Deer N/A Tracks Depositional Bank/Bar 33°34.448 85°52.295 19.26.06 1 Reccoon N/A Tracks Depositional Bank/Bar 33°34.448 85°52.295 19.26.06 1 Muskvat 1 Sight Depositional Bank/Bar 33°34.448 85°52.295 19.26.06 1 Cattle N/A Tracks Depositional Bank/Bar 33°34.448 85°52.295 19.26.06 1 Cattle N/A Tracks/Access Shallows 33°34.489 85°53.019 19.26.06 1 Deever N/A Tracks Depositional Bank/Bar 33°34.619 85°53.131 19.26.06 1 Muskvat N/A Tracks Depositional Bank/Bar 33°34.519 85°53.131 19.26.06 1 Muskvat N/A Tracks Depositional Bank/Bar 33°34.519 85°53.131 19.26.06 1 Red-shalled Hawk 1 Sight Depositional Bank/Bar 33°34.519 85°53.131 19.26.06 1 Red-shalled Hawk 1 Sight Depositional Bank/Bar 33°34.519 85°33.131 19.26.06 1 Beaver N/A Sildes Bank/Bar 33°34.519 85°33.131 19.26.06 1 Beaver N/A Sildes Bank/Bar 33°34.519 85°33.311 19.26.06 1 Beaver N/A Sildes Bank/Bar 33°34.519 85°33.311 19.26.06 1 Beaver N/A Sildes Bank/Bar 33°34.519 85°33.341 19.26.06 1 Beaver N/A Sildes Bank/Bar 33°34.611 85°33.401 19.26.06 1 Beaver N/A Tracks Depositional Bank/Bar 33°34.611 85°33.401 19.26.06 1 Beaver N/A Tracks Depositional Bank/Bar 33°34.611 85°33.401 19.26.06 1 Beaver N/A Tracks Depositional Bank/Bar 33°34.611 85°33.401 19.26.06 1 Beaver N/A Tracks Depositional Bank/Bar 33°34.611 85°33.401 19.26.06 1 Beaver N/A Den (hole) Bank/Bar 33°34.614 85°33.401 19.26.06 1 Beaver N/A Den (hole) Bank/Bar 33°34.614 85°33.401 19.26.06 1 Beaver N/A Den (hole) Bank/Bar 33°34.614 85°33.401 19.26.06 1 Beaver N/A Den (hole) Bank/Bar 33°34.617 85°43.								
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10_26_06 1 Common Map Turtle 3 Sight Deadfall 33°34.528' 85°53.805' 10_26_06 1 Kingfisher N/A Burrows Overhang 33°34.507' 88°53.862' 10_26_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.615' 86°53.929' 10_26_06 1 Beaver N/A Tracks Bank 33°34.615' 86°53.929' 10_26_06 1 Wood Duck 8 Sight River 33°34.744' 86°53.929' 10_26_06 1 Kingfisher N/A Burrows Eroded Bank 33°34.830' 86°54.004' 10_26_06 1 Deer N/A Tracks Island Depositional Bar 33°35.060' 86°53.963' 10_26_06 1 Cattle Sight Sight Stream 33°34.787' 86°54.221' 10_26_06 1 Kingfisher 1 Sight Depositional Bank/Bar 33°34.787' 85°54.421' 10_26_06 1				_	+			
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10_30_06 1 Domestic Dog N/A Tracks Depositional Bank/Bar 33°34.787' 85°54.445' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Raccoon N/A Tracks Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Kingfisher 1 Sight Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Wood Duck 2 Sight Run 33°34.769' 85°54.622' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Turkey N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Longtail Weasel N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832'	10_30_06	1	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°34.787'	
10_30_66 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Raccoon N/A Tracks Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Kingfisher 1 Sight Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Wood Duck 2 Sight Run 33°34.769' 85°54.622' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.753' 85°54.622' 10_30_06 1 Turkey N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Longtail Weasel N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Misk N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' <td>10_30_06</td> <td>1</td> <td>Chipmunk</td> <td>N/A</td> <td>Tracks</td> <td>Depositional Bank/Bar</td> <td></td> <td>85°54.445'</td>	10_30_06	1	Chipmunk	N/A	Tracks	Depositional Bank/Bar		85°54.445'
10_30_06 1 Raccoon N/A Tracks Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Kingfisher 1 Sight Depositional Bank/Bar 33°34.769' 85°54.622' 10_30_06 1 Wood Duck 2 Sight Run 33°34.769' 85°54.622' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.622' 10_30_06 1 Turkey N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Longtail Weasel N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Mink N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Mink N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832'	10_30_06		Ŭ					
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10_30_06 1 Wood Duck 2 Sight Run 33°34.769' 85°54.622' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.753' 85°54.697' 10_30_06 1 Turkey N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Longtail Weasel N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Mink N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Common Map Turtle 2 Sight Deadfall 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Backwater 33°34.774' 85°54.832' 10_30_06 2 Raccoon N/A Tracks Depositional Bank/Bar 33°34.741' 85°55.804'	10_30_06	1	Raccoon	N/A	Tracks			
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10_30_06 1 Turkey N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Longtail Weasel N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Mink N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Common Map Turtle 2 Sight Deadfall 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Backwater 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Backwater 33°34.774' 85°54.832' 10_30_06 2 Raccoon N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 2 Raccoon N/A Tracks Depositional Bank/Bar 33°34.741' 85°55.064'	10_30_06	1	Wood Duck	2	Sight	Run	33°34.769'	85°54.622'
10_30_06 1 Longtail Weasel N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Mink N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Common Map Turtle 2 Sight Deadfall 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Backwater 33°34.820' 85°54.964' 10_30_06 2 Raccoon N/A Tracks Depositional Bank/Bar 33°34.741' 85°55.021' 10_30_06 2 Kingfisher 2 Sight Overhang 33°34.452' 85°55.364' 10_30_06 2 Great Blue Heron 1 Sight Overhang 33°34.308' 85°55.523' 10_30_06 2 Great Blue Heron 3 Sight Overhang 33°34.239' 85°55.812' 10	10_30_06	1	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°34.753'	85°54.697'
10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Mink N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Common Map Turtle 2 Sight Deadfall 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Backwater 33°34.820' 85°54.964' 10_30_06 2 Raccoon N/A Tracks Depositional Bank/Bar 33°34.741' 85°55.021' 10_30_06 2 Kingfisher 2 Sight Overhang 33°34.452' 85°55.364' 10_30_06 2 Great Blue Heron 1 Sight Riffle 33°34.308' 85°55.523' 10_30_06 2 Great Blue Heron 3 Sight Overhang 33°34.239' 85°55.812' 10_30_06 2 Muskrat N/A Tracks/Burrows Bank Slope 33°34.239' 85°55.812' 10_30_06	10_30_06	1	Turkey	N/A	Tracks	Depositional Bank/Bar	33°34.774'	85°54.832'
10_30_06 1 Muskrat N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Mink N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Common Map Turtle 2 Sight Deadfall 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Backwater 33°34.820' 85°54.964' 10_30_06 2 Raccoon N/A Tracks Depositional Bank/Bar 33°34.741' 85°55.021' 10_30_06 2 Kingfisher 2 Sight Overhang 33°34.452' 85°55.364' 10_30_06 2 Great Blue Heron 1 Sight Riffle 33°34.308' 85°55.523' 10_30_06 2 Great Blue Heron 3 Sight Overhang 33°34.239' 85°55.812' 10_30_06 2 Muskrat N/A Tracks/Burrows Bank Slope 33°34.239' 85°55.812' 10_30_06	10_30_06	1	Longtail Weasel	N/A	Tracks	Depositional Bank/Bar	33°34.774'	85°54.832'
10_30_06 1 Mink N/A Tracks Depositional Bank/Bar 33°34.774' 85°54.832' 10_30_06 1 Common Map Turtle 2 Sight Deadfall 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Backwater 33°34.820' 85°54.964' 10_30_06 2 Raccoon N/A Tracks Depositional Bank/Bar 33°34.741' 85°55.021' 10_30_06 2 Kingfisher 2 Sight Overhang 33°34.452' 85°55.364' 10_30_06 2 Great Blue Heron 1 Sight Riffle 33°34.308' 85°55.523' 10_30_06 2 Great Blue Heron 3 Sight Overhang 33°34.308' 85°55.523' 10_30_06 2 Muskrat N/A Tracks/Burrows Bank Slope 33°34.239' 85°55.812' 10_30_06 2 Beaver N/A Tracks Bank Slope 33°34.239' 85°55.812' 10_30_06 2	10_30_06	1	Muskrat	N/A		Depositional Bank/Bar	33°34.774'	85°54.832'
10_30_06 1 Common Map Turtle 2 Sight Deadfall 33°34.774' 85°54.832' 10_30_06 1 Muskrat N/A Tracks Backwater 33°34.820' 85°54.964' 10_30_06 2 Raccoon N/A Tracks Depositional Bank/Bar 33°34.741' 85°55.021' 10_30_06 2 Kingfisher 2 Sight Overhang 33°34.452' 85°55.364' 10_30_06 2 Great Blue Heron 1 Sight Riffle 33°34.308' 85°55.523' 10_30_06 2 Great Blue Heron 3 Sight Overhang 33°34.308' 85°55.523' 10_30_06 2 Muskrat N/A Tracks/Burrows Bank Slope 33°34.239' 85°55.812' 10_30_06 2 Beaver N/A Tracks Bank Slope 33°34.239' 85°55.812' 10_30_06 2 River Cooter 1 Sight Bank 33°33.809' 85°56.043'		1	Mink	N/A		Depositional Bank/Bar	33°34.774'	
10_30_06 1 Muskrat N/A Tracks Backwater 33°34.820' 85°54.964' 10_30_06 2 Raccoon N/A Tracks Depositional Bank/Bar 33°34.741' 85°55.021' 10_30_06 2 Kingfisher 2 Sight Overhang 33°34.452' 85°55.364' 10_30_06 2 Great Blue Heron 1 Sight Riffle 33°34.308' 85°55.523' 10_30_06 2 Great Blue Heron 3 Sight Overhang 33°34.239' 85°55.523' 10_30_06 2 Muskrat N/A Tracks/Burrows Bank Slope 33°34.239' 85°55.812' 10_30_06 2 Beaver N/A Tracks Bank Slope 33°34.239' 85°55.812' 10_30_06 2 River Cooter 1 Sight Bank 33°33.809' 85°56.043'	10_30_06	1	Common Map Turtle	2		Deadfall	33°34.774'	85°54.832'
10_30_06 2 Raccoon N/A Tracks Depositional Bank/Bar 33°34.741' 85°55.021' 10_30_06 2 Kingfisher 2 Sight Overhang 33°34.452' 85°55.364' 10_30_06 2 Great Blue Heron 1 Sight Riffle 33°34.452' 85°55.364' 10_30_06 2 Great Blue Heron 3 Sight Overhang 33°34.308' 85°55.523' 10_30_06 2 Muskrat N/A Tracks/Burrows Bank Slope 33°34.239' 85°55.812' 10_30_06 2 Beaver N/A Tracks Bank Slope 33°34.239' 85°55.812' 10_30_06 2 River Cooter 1 Sight Bank 33°33.809' 85°56.043'								
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10_30_06 2 Great Blue Heron 1 Sight Riffle 33°34.452' 85°55.364' 10_30_06 2 Great Blue Heron 3 Sight Overhang 33°34.308' 85°55.523' 10_30_06 2 Muskrat N/A Tracks/Burrows Bank Slope 33°34.239' 85°55.812' 10_30_06 2 Beaver N/A Tracks Bank Slope 33°34.239' 85°55.812' 10_30_06 2 River Cooter 1 Sight Bank 33°33.809' 85°56.043'						· · · · · · · · · · · · · · · · · · ·	33°34.452'	
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10_30_06 2 River Cooter 1 Sight Bank 33°33.809' 85°56.043'						·		
	10_30_06	2	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°33.809'	85°56.043'

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
10_30_06	2	Kingfisher	N/A	Sight	Overhang	33°33.809'	85°56.043'
10_30_06	2	Beaver	N/A	Tracks	Depositional Bank/Bar	33°33.708'	85°56.437'
10_30_06	2	Great Blue Heron	N/A	Tracks	Depositional Bank/Bar	33°33.708'	85°56.437'
10_30_06	2	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°33.708'	85°56.437'
10_31_06	2	Beaver	N/A	Tracks	Depositional Bank/Bar	33°33.756'	85°56.582'
10_31_06	2	Red-headed Woodpecker	2	Sight	Snags	33°33.756'	85°56.582'
10_31_06	2	Great Blue Heron	1	Sight	Run	33°33.813'	85°56.737'
10_31_06	2	Muskrat	1	Sight	Run	33°33.908'	85°56.826′
10_31_06	2	Cooper's Hawk	1	Sight	Riparian Corridor	33°33.908'	85°56.826′
10_31_06	2	Great Blue Heron	1	Sight	Run	33°34.100'	85°56.925'
10_31_06	2	Red-shouldered Hawk	2	Sight	Riparian Corridor	33°34.100'	85°56.925'
10_31_06	2	Kingfisher	N/A	Burrows	Bank Slope	33°34.100'	85°56.925'
10_31_06	2	Beaver	N/A	Tracks	Depositional Bank/Bar	33°34.032'	85°57.208'
10_31_06	2	Wood Duck	8	Sight	Run	33°34.007'	85°57.259'
10_31_06	2	Beaver	N/A	Tracks	Depositional Bank/Bar	33°33.937'	85°57.344'
10_31_06	2	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°33.937'	85°57.344'
10_31_06	2	Great Blue Heron	2	Sight	Run	33°33.883'	85°57.422'
10_31_06	2	Beaver	N/A	Chews	Depositional Bank/Bar	33°33.810'	85°57.621'
10_31_06	2	Cattle	N/A	Tracks	Depositional Bank/Bar	33°33.797'	85°57.759'
10_31_06	2	Beaver	N/A	Tracks	Depositional Bank/Bar	33°33.797'	85°57.759'
10_31_06	2	Mussel	N/A	Tracks	Depositional Bank/Bar	33°33.797'	85°57.759'
10_31_06	2	Mallard Duck	4	Sight	Run	33°33.792'	85°57.972'
10_31_06	2	River Cooter	N/R	Sight	Run	33°33.792'	85°57.972'
10 31 06	2	Beaver	N/A	Tracks/Chew	Backwater Cut	33°33.698'	85°58.067'
10_31_06	2	Sharpshin Hawk	1	Sight	Overhang	33°33.426'	85°58.509'
10_31_06	2	Wood Duck	N/R	Sight	Backwater Cut	33°33.131'	85°58.380'
10 31 06	2	Kingfisher	1	Sight	Riffle Habitat	33°33.257'	85°59.009'
10_31_06	2	Beaver	N/A	Tracks	Depositional Bank/Bar	33°33.190'	85°59.071'
10 31 06	2	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°33.190'	85°59.071'
10_31_06	2	Domestic Dog	N/A	Tracks	Depositional Bank/Bar	33°33.190'	85°59.071'
10_31_06	2	Domestic Cat	N/A	Tracks	Depositional Bank/Bar	33°33.190'	85°59.071'
10 31 06	2	Beaver	N/A	Slides	Bank	33°33.158'	85°59.393'
10 31 06	2	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°32.842'	85°59.397'
10 31 06	2	Common Map Turtle	1	Sight	Deadfall	33°32.651'	85°59.358'
10_31_06	2	Great Blue Heron	1	Sight	Deadfall	33°32.651'	85°59.358'
10 31 06	2	Beaver	N/A	Dam	Small Tributary	33°32.568'	85°59.328'
10_31_06	2	Common Map Turtle	N/R	Sight	Logs	33°32.493'	85°59.474'
10_31_06	2	Beaver	N/A	Slides	Bank	33°32.493'	85°59.474'
10 31 06	2	Turtle	N/A	Nest	Island Bar	33°32.546'	85°59.499'
10_31_06	2	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°32.546'	85°59.731'
10_31_06	2	Beaver	N/A	Tracks	Depositional Bank/Bar	33°32.546'	85°59.731'
10_31_06	2	Great Blue Heron	1	Sight	Deadfall	33°32.546'	85°59.731'
10 31 06	2	Great Blue Heron	1	Sight	SAV (alligator weed)	33°32.472'	85°59.795'
10_31_06	2	Beaver	N/A	Dam	Run	33°32.472'	85°59.795'
10_31_06	2	Deer	N/A	Tracks	Bank	33°32.695'	85°59.832'
		•					
10_31_06	3	Kingfisher	1	Sight	Power lines Below Bridge	33°33.160′	86°00.416′
10_31_06	3	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°33.230'	86°00.492'
10_31_06	3	Beaver	N/A	Tracks	Depositional Bank/Bar	33°33.370′	86°00.612'
10_31_06	3	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°33.370′	86°00.612'
10_31_06	3	Wood Duck	1	Sight	Backwater Cut	33°33.647'	86°00.771'
10_31_06	3	Deer	N/A	Tracks	Backwater Cut	33°33.585′	86°00.920'
10_31_06	3	Cooper's Hawk	1	Sight	Backwater Cut	33°33.585′	86°00.920'
10_31_06	3	Domestic Dog	N/A	Tracks	Backwater Cut	33°33.585′	86°00.920'
10_31_06	3	Kingfisher	N/A	Burrows	Depositional Bank/Bar	33°33.320'	86°00.790'
10_31_06	3	Beaver	N/A	Slides	Depositional Bank/Bar	33°33.320'	86°00.790'
10_31_06	3	Great Blue Heron	1	Sight	SAV (alligator weed)	33°33.212'	86°00.841'
10_31_06	3	Beaver	N/A	Runs	Bank	33°33.212'	86°00.841'
10_31_06	3	Muskrat	N/A	Forage	Depositional Island	33°33.212'	86°00.841'
10_31_06	3	Mink	N/A	Tracks	Depositional Bank/Bar	33°33.089'	86°01.052'
10_31_06	3	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°33.089'	86°01.052'
		Great Blue Heron	1	Sight	Deadfall	33°33.152'	86°01.301'
	3	Great Dide Heron					
10_31_06 10_31_06	3	Kingfisher	1	Sight	Overhang	33°33.152'	86°01.301'

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
10 31 06	3	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°33.276'	86°01.520′
10_31_06	3	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°33.276'	86°01.520′
10_31_06	3	Mink	N/A	Tracks	Depositional Bank/Bar	33°33.198'	86°01.844′
10_31_06	3	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°33.198′	86°01.844′
10_31_06	3	Kingfisher	1	Sight	Overhang	33°33.198'	86°01.844′
10_31_06	3	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°33.086′	86°02.105'
10_31_06	3	Beaver	N/A	Tracks	Depositional Bank/Bar	33°33.086′	86°02.105′
10_31_06	3	Kingfisher	1	Sight	Overhang	33°33.086′	86°02.105'
10_31_06	3	Great Blue Heron	1	Sight	Overhang	33°33.086′	86°02.105′
10_31_06	3	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°32.942'	86°02.143'
10_31_06	3	Beaver	N/A	Tracks	Depositional Bank/Bar	33°32.942'	86°02.143'
10_31_06	3	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°32.798′	86°02.164'
10_31_06	3	Cattle	N/A	Tracks	Depositional Bank/Bar	33°32.674'	86°02.500'
11_01_06	3	Muskrat	N/A	Tracks	Depositional Bank/Bar	33°32.494′	86°02.791'
11_01_06	3	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°32.494'	86°02.791'
11_01_06	3	Great Blue Heron	N/A	Tracks	Depositional Bank/Bar	33°32.494'	86°02.791'
11_01_06	3	Beaver	1	Sight	Bank	33°32.404′	86°02.902'
11_01_06	3	Wood Duck	N/R	Sight	Run	33°32.305′	86°03.005′
11_01_06	3	Cattle	N/A	Access	Bank	33°32.409'	86°03.496'
11_01_06	3	Red-shouldered Hawk	1	Sight	Floodplain	33°32.560'	86°03.578'
11_01_06	3	Wood Duck	1	Sight	Run	33°32.560'	86°03.578′
11_01_06	3	Great Blue Heron	1	Sight	Run	33°32.560'	86°03.578′
11_01_06	3	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°32.560'	86°03.578'
11_01_06	3	Red-tailed Hawk	1	Sight	Floodplain	33°32.642'	86°03.618'
11_01_06	3	Beaver	1	Sight	Floodplain	33°32.642'	86°03.618'
11_01_06	3	Raccoon	N/A	Tracks	Depositional Bank/Bar	33°32.721'	86°03.881'
11_01_06	3	Beaver	N/A	Tracks	Depositional Bank/Bar	33°32.721'	86°03.881'
11 01 06	3	Great Blue Heron	1	Sight	Deadfall	33°32.378'	86°03.838'
11 01 06	3	Raccoon	1	Sight	Floodplain	33°32.454'	86°04.219'
11 01 06	3	Anhinga	1	Sight	Overhang	33°32.854'	86°04.293'
11_01_06	3	Raccoon	N/A	Tracks	Backwater Habitat	33°33.187'	86°04.612'
11_01_06	3	Beaver	N/A	Tracks	Backwater Habitat	33°33.187'	86°04.612'
11 01 06	3	Beaver	1	Sight	Bank	33°33.178'	86°04.711'
11_01_06	3	Kingfisher	1	Sight	Overhang	33°33.178'	86°04.711'
Winter 2007		1 3					
2_6_07	1	Great Blue Heron	N/A	Tracks	Depositional	33° 34' 55"	85° 54' 22"
2_6_07	1	Muskrat	N/A	Tracks	Depositional	33° 34' 55"	85° 54' 22"
2_6_07	1	Beaver	N/A	Tracks	Depositional	35° 34' 50"	85° 54' 24"
2_6_07	1	Raccoon	N/A	Tracks	Depositional	35° 34' 50"	85° 54' 24"
2_6_07	1	King Fisher	1	Sight	Stream Canopy	35° 34' 50"	85° 54' 24"
2_7_07	1	Opossum	N/A	Tracks	Run	33° 32' 40"	86° 2' 30"
2_7_07	<u>1</u> 1	Raccoon Beaver	N/A N/A	Tracks Tracks	Run Run	33° 32' 40" 33° 32' 40"	86° 2' 30" 86° 2' 30"
2_7_07 2 7 07	1	Muskrat	N/A N/A	Sign	Run	33° 35' 56"	85° 49' 46"
2 7 07	1	Muskrat	N/A	Tracks	Run	33° 35' 51"	85° 49' 51"
2 7 07	1	Great Blue Heron	1	Sight	Run	33° 35' 51"	85° 49' 51"
2_7_07	1	Kingfisher	N/A	Sign	Run	33° 35' 51"	85° 49' 51"
2_7_07	1	Livestock	N/A	Sight	Run	33° 35' 47"	85° 49' 48"
2_7_07	1	Great Blue Heron	N/A	Tracks	Run	33° 35' 47"	85° 49' 48"
2_7_07	1	Muskrat	N/A	Tracks	Run	33° 35' 47"	85° 49' 48"
2_7_07	1	Wood Duck	N/A	Sight	Run	33° 35' 27"	85° 49' 57"
2_7_07	1	Great Blue Heron	1	Sight	Run	33° 35' 27"	85° 49' 57"
2_7_07 2 7 07	11	Beaver Wood Duck	N/A	Sign	Run	33° 35' 16" 33° 35' 16"	85° 50' 7" 85° 50' 7"
2_7_07	1 1	Wood Duck Muskrat	2 N/A	Sight Tracks	Run Run	33° 35' 16"	85° 50' 7"
2 7 07	1	Mink	N/A	Tracks	Run	33° 35' 14"	85° 50' 15"
2_7_07	1	Muskrat	N/A	Tracks	Run	33° 35' 14"	85° 50' 15"
2_7_07	1	Raccoon	N/A	Tracks	Run	33° 35' 14"	85° 50' 15"
2_7_07	1	Kingfisher	1	Sight	Run	33° 35' 13"	85° 50' 26"
2_7_07	1	Wood Duck	2	Sight	Run	33° 35' 13"	85° 50' 26"
2_7_07	1	Great Blue Heron	N/A	Tracks	Run	33° 35′ 11″	85° 50' 36"
2_7_07	11	Great Blue Heron	2	Sight	Run	33° 35' 11"	85° 50' 36"
2_7_07	1	Beaver	N/A	Sign	Run	33° 35' 7"	85° 50' 40"
2_7_07	11	Kingfisher	1	Sight	Run	33° 35' 7"	85° 50' 47"
2_7_07	<u>1</u> 1	Muskrat Beaver	N/A N/A	Tracks Tracks	Run Run	33° 35' 5" 33° 35' 5"	85° 50' 54" 85° 50' 54"
2_7_07 2_8_07	1	Muskrat	N/A N/A	Tracks	Run	33° 34' 47"	85° 54' 26"
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Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
2_8_07	1	Beaver	N/A	Tracks	Run	33° 34′ 47″	85° 54' 26"
2_8_07	1	Raccoon	N/A	Tracks	Run	33° 34' 47"	85° 54' 26"
2_8_07	1	Grey Fox	N/A	Tracks	Run	33° 34' 47"	85° 54' 26"
2_8_07	1	Mink	N/A	Tracks	Run	33° 34' 47"	85° 54' 33"
2_8_07	1	Beaver	N/A	Sign	Run	33° 34' 47"	85° 54' 33"
2_8_07	1	Raccoon	N/A	Tracks	Run	33° 34' 47"	85° 54' 33"
2_8_07	1	Beaver	N/A	Sign	Run	33° 34' 47"	85° 54' 50"
2_8_07	1	Red-shouldered Hawk	2	Sight	Stream Canopy	33° 34' 48" 33° 34' 48"	85° 54' 57"
2_8_07	1	Raccoon	N/A	Tracks	Run	33" 34 48	85° 54' 57"
2_8_07	2	Hooded Merganser	2	Sight	Run	33° 34' 40"	85° 55' 9"
2_8_07	2	Great Blue Heron	1	Sight	Run	33° 34' 40"	85° 55' 9"
2_8_07	2	Wood Ducks	2	Sight	Run	33° 34' 40"	85° 55' 9"
2_8_07	2	Beaver	N/A	Sign	Run	33° 34' 15"	85° 55' 48"
2_8_07	2	Great Blue Heron	1	Sight	Run	33° 34' 15"	85° 55' 48"
2_8_07	2	Hooded Merganser	2	Sight	Run	33° 34' 15"	85° 55' 48"
2_8_07	2	Muskrat	N/A	Sign	Run	33° 34' 15"	85° 55' 48"
2_8_07	2	Kingfisher	1	Sight	Run	33° 34' 15"	85° 56' 3"
2_8_07	2	Red-tailed Hawk	1	Sight	Stream Canopy	33° 34' 4"	85° 56' 4"
2_8_07 2 8 07	2	Beaver Muskrat	N/A N/A	Tracks Tracks	Run Run	33° 34' 3" 33° 34' 3"	85° 56' 4" 85° 56' 4"
2 8 07	2	Muskrat Beaver	N/A N/A	Sign	Run	33° 34′ 3″ 33° 33′ 41″	85° 56' 4" 85° 56' 18"
2_8_07	2	Muskrat	N/A N/A	Sign	Bank	33° 33' 44"	85° 56' 32"
2 7 07	2	Beaver	N/A	Tracks	Bank	33° 33' 44"	85° 56' 32"
2_7_07	2	Wood Duck	17	Sight	Run	33° 33' 59"	85° 56' 52"
2 7 07	2	Raccoon	N/A	Tracks	Backwater	33° 34' 6"	85° 56' 48"
2_7_07	2	Kingfisher	N/A	Sign	Run	33° 34' 3"	85° 56' 39"
2_7_07	2	Beaver	N/A	Sign	Bank	33° 34' 3"	85° 56' 39"
2_7_07	2	Muskrat	N/A	Tracks	Run	33° 34' 9"	85° 56' 38"
2_7_07	2	Beaver	N/A	Sign	Run	33° 34' 9"	85° 56' 38"
2_7_07	2	Red-shouldered Hawk	2	Sight	Stream Canopy	33° 34' 12"	85° 57' 0"
2_7_07	2	Muskrat	N/A	Tracks	Run	33° 34′ 6″	85° 57' 6"
2_7_07	2	Beaver	N/A	Tracks	Run	33° 34' 6"	85° 57' 6"
2_7_07	2	Wood Duck	10	Sight	Run	33° 33′ 56″	85° 57' 21"
2_7_07	2	Beaver	N/A	Sign	Run	33° 33′ 56″	85° 57' 21"
2_7_07	2	Turkey Vulture	1	Sight	Stream Canopy	33° 33' 56"	85° 57' 21"
2_7_07	2	Muskrat	N/A	Sign	Run	33° 33' 50"	85° 57' 29"
2_7_07	2	Red-shouldered Hawk	1	Sight	Run Run	33° 33' 48"	85° 57' 36" 85° 57' 51"
2_7_07 2_7_07	2	Mallard Duck Raccoon	5 N/A	Sight Tracks	Run	33° 33' 46" 33° 33' 48"	85° 58' 4"
2 7 07	2	Wood Duck	2	Sight	Run	33° 33' 48"	85° 58' 4"
2_7_07	2	Mallard Duck	4	Sight	Run	33° 33' 37"	85° 58' 4"
2 7 07	2	Red-shouldered Hawk	2	Sight	Stream Canopy	33° 33' 31"	85° 58' 22"
2_7_07	2	Red-shouldered Hawk	1	Sight	Stream Canopy	33° 33' 13"	85° 58' 53"
2 7 07	2	Beaver	N/A	Sign	Run	33° 33' 13"	85° 58' 53"
2_7_07	2	Beaver	N/A	Sign	Run	33° 33' 11"	85° 59' 18"
2_7_07	2	Muskrat	N/A	Sign	Run	33° 33' 11"	85° 59' 18"
2_7_07	2	Ruby-throated Hummingbird	N/A	Sign	Stream Canopy	33° 33' 11"	85° 59' 18"
2_7_07	2	Red-shouldered Hawk	N/A	Sign	Stream Canopy	33° 33′ 11″	85° 59' 18"
2_7_07	2	Muskrat	N/A	Sign	Run	33° 32′ 51″	85° 59' 24"
2_7_07	2	Wood Duck	10	Sight	Run	33° 32' 43"	85° 59' 23"
2_7_07	2	Beaver	N/A	Sign	Run	33° 32' 34"	85° 59' 20"
2_7_07	2	Turtle	7	Sight	Run	33° 32' 29"	85° 59' 27"
2_7_07	2	Mallard Duck	2	Sight	Run	33° 32' 29"	85° 59' 48"
2_7_07	2	Wood Duck	2 N/A	Sight	Run	33° 32' 29"	85° 59' 48"
2_7_07 2_7_07	2	Beaver Kingfisher	N/A 1	Sign Sight	Run Run	33° 32' 29" 33° 32' 31"	85° 59' 48" 85° 59' 52"
2 7 07	2	Kingfisher	<u>1</u> 1	Sight Sight	Riffle	33° 32′ 31″ 33° 32′ 49″	85° 59' 52" 85° 59' 51"
2_1_01		rangionoi	'	Gigit	Milie	JJ JZ 43	00 00 01
2_7_07	3	Great Blue Heron	1	Sight	Run	33° 32' 55"	85° 59' 54"
2_7_07	3	Wood Duck	2	Sight	Run	33° 32' 55"	85° 59' 54"
2_7_07	3	Muskrat	N/A	Tracks	Run	33° 32' 55"	85° 59' 54"
2_7_07	3	Mallard Duck	3	Sight	Run	33° 32' 55"	85° 59' 54"
2_7_07	3	Raccoon	N/A	Tracks	Run	33° 32' 55"	85° 59' 54"
2_7_07	3	Snapping Turtle	1	Sight	Run	33° 33′ 16″	86° 0' 31"
2_7_07	3	Common Map Turtle	3	Sight	Run	33° 33' 20"	86° 0' 34"
2_7_07	3	Mallard Duck	2	Sight	Run	33° 33' 38"	86° 0' 45"
2_7_07	3	Kingfisher	N/A	Sign	Riffle	33° 33' 46"	86° 0' 52"
2_7_07	3	Beaver	N/A	Sign	Run	33° 34' 0"	86° 1' 5"
2_7_07	3	Raccoon	N/A	Tracks	Run	33° 34' 0"	86° 1' 5"
2_7_07	3	Beaver	N/A	Tracks	Run	33° 34' 0"	86° 1' 5"

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
2_7_07	3	Muskrat	N/A	Tracks	Run	33° 34' 0"	86° 1' 5"
2_7_07	3	Whitetail Deer	1	Tracks	Run	33° 34' 0"	86° 1' 5"
2_7_07	3	Muskrat	N/A	Tracks	Run	33° 33′ 18″	86° 0' 47"
2_7_07	3	Beaver	N/A	Tracks	Run	33° 33' 18"	86° 0' 47"
2_7_07	3	Wood Duck Common Map Turtle	1	Sight Sight	Run Run	33° 33' 18" 33° 33' 6"	86° 0' 47" 86° 0' 58"
2_7_07	3	Wood Duck	4	Sight	Run	33° 33' 6"	86° 0' 58"
2 7 07	3	Raccoon	1	Tracks	Run	33° 33' 5"	86° 1' 3"
2 7 07	3	Great Blue Heron	1	Sight	Run	33° 33' 5"	86° 1' 3"
2_7_07	3	Coyote	N/A	Sign	Run	33° 33' 15"	86° 1' 24"
2_7_07	3	Raccoon	N/A	Tracks	Run	33° 33' 15"	86° 1' 24"
2_7_07	3	Red-tailed Hawk	1	Sight	Stream Canopy	33° 33′ 14″	86° 37' 38"
2_7_07	3	Great Blue Heron	1	Sight	Run	33° 33′ 14″	86° 37' 38"
2_7_07	3	Wood Duck	2	Sight	Run	33° 33' 12"	86° 1' 49"
2_7_07	3	Wood Duck Wood Duck	2	Sight	Run Run	33° 33' 11" 33° 32' 60"	86° 1' 55" 86° 2' 7"
2_7_07	3	Beaver	N/A	Sight Tracks	Run	33° 32' 60"	86° 2' 7"
2 7 07	3	Common Map Turtle	1	Sight	Run	33° 32' 42"	86° 2' 23"
2_7_07	3	Beaver	N/A	Tracks	Run	33° 32' 42"	86° 2' 23"
2_7_07	3	Raccoon	N/A	Tracks	Run	33° 32' 42"	86° 2' 23"
Spring 2007							
5_21_07	1	Domestic Cat	1	Sight	Bank	33° 36' 0.9"	85° 49' 1.3"
5_21_07	1	Beaver	N/A N/A	Sign	Bank	33° 35' 58.9" 33° 35' 58.4"	85° 49' 3.7" 85° 49' 43.7"
5_21_07 5_21_07	1	Skunk Beaver	N/A N/A	Sign Sign	Leaf Litter Bank	33° 35' 58.4" 33° 35' 52.2"	85° 49' 43.7" 85° 49' 50.3"
5_21_07	1	Kingfisher	1	Sight	NA NA	33° 35' 52.2"	85° 49' 50.3"
5_21_07	1	Great Blue Heron	1	Sight	NA NA	33° 35' 52.2"	85° 49' 50.3"
5_21_07	1	Muskrat	N/A	Track	Bank	33° 35' 51.6"	85° 49' 50.1"
5_21_07	1	Wood Duck	4	Sight	Deposition	33° 35' 49.4"	85° 49' 50.4"
5_21_07	1	Kingfisher	N/A	Sign	Bank	33° 35' 49.4"	85° 49' 50.4"
5_21_07	1	Raccoon	N/A	Track	Bank	33° 35' 49.4"	85° 49' 50.4"
5_21_07	1	Kingfisher	N/A	Sign	NA	33° 35' 49.4"	85° 49' 50.4"
5_21_07	1	Kingfisher	2	Sight	NA NA	33° 35' 47.7"	85° 49' 45.5"
5_21_07 5_21_07	1	Beaver Raccoon	N/A N/A	Sign Track	Backwater Backwater	33° 35' 41.8" 33° 35' 41.8"	85° 49' 44.0" 85° 49' 44.0"
5_21_07	1	Beaver	N/A	Track	Backwater	33° 35' 41.8"	85° 49' 44.0"
5 21 07	1	Snapping Turtle	1	Sight	Backwater	33° 35' 41.8"	85° 49' 44.0"
5 21 07	1	Domestic Dog	N/A	Track	Backwater	33° 35' 14.1"	85° 50' 16.1"
5_21_07	1	Raccoon	N/A	Track	Backwater	33° 35' 14.1"	85° 50' 16.1"
5_21_07	1	Beaver	N/A	Track	Bank	33° 35' 14.1"	85° 50' 16.1"
5_21_07	1	Domestic Dog	N/A	Track	Mud Bar	33° 35' 25.8"	85° 49' 57.5"
5_21_07	1	Great Blue Heron	N/A	Track	Mud Bar	33° 35' 25.8"	85° 49' 57.5"
5_21_07	1	Duck	N/A	Track	Mud Bar	33° 35' 25.8"	85° 49' 57.5" 85° 49' 57.5"
5_21_07 5 21 07	1	Copperhead Beaver	1 N/A	Sight Track	Mud Bar Mud Bar	33° 35' 25.8" 33° 35' 25.8"	85° 49' 57.5"
5 21 07	1	Raccoon	N/A	Sign	Deadfall	33° 35' 20.4"	85° 50' 02.7"
5_21_07	1	Deer	N/A	Track	Bank	33° 35' 17.9"	85° 50' 04.5"
5_21_07	1	Beaver	N/A	Track	Bank	33° 35' 17.9"	85° 50' 04.5"
5_21_07	1	Domestic Dog	N/A	Track	Bank	33° 35' 17.9"	85° 50' 04.5"
5_21_07	1	Wood Duck	N/A	Track	Bank	33° 35' 17.9"	85° 50' 04.5"
5_21_07	1	River Cooter	1	Sight	Gravel Bar	33° 35' 17.9"	85° 50' 04.5"
5_21_07	1	Beaver	N/A	Sign	Bank Mud Flot	33° 35' 14.1"	85° 50' 10.9"
5_21_07 5_21_07	1	Canine sp. Muskrat	N/A N/A	Track Track	Mud Flat Mud Flat	33° 35' 14.1" 33° 35' 14.1"	85° 50' 10.9" 85° 50' 10.9"
5_21_07	1	Raccoon	N/A N/A	Track	Mud Flat	33° 35' 14.1"	85° 50' 10.9"
5_21_07	1	Beaver	1	Sight	Run	33° 35' 12.2"	85° 50' 27.0"
5_21_07	1	Deer	N/A	Track	Island	33° 35' 10.8"	85° 50' 33.0"
5_21_07	1	Muskrat	N/A	Track	Island	33° 35' 10.8"	85° 50' 33.0"
5_21_07	1	Raccoon	N/A	Track	Island	33° 35' 10.8"	85° 50' 33.0"
5_21_07	1	Beaver	N/A	Track	Island	33° 35' 10.8"	85° 50' 33.0"
5_21_07	1	Killdeer	1	Sight	Island	33° 35' 10.8"	85° 50' 33.0"
5_21_07	1	Stinkpot	1	Sight	Island Cand Dar	33° 35' 10.8"	85° 50' 33.0"
5_21_07	1	Turtle Great Blue Heron	N/A	Sign Sight	Sand Bar	33° 35' 07.9" 33° 35' 07.1"	85° 50' 39.6" 85° 50' 41.3"
5_21_07 5_21_07	1	Great Blue Heron Beaver	1 N/A	Sight Sign	NA NA	33° 35' 07.1"	85° 50' 41.3"
5_21_07	1	Snake	1 1	Sight	NA NA	33° 35' 07.1"	85° 50' 41.3"
5_21_07	1	Copperhead	1	Sight	Water	33° 35' 07.2"	85° 50' 45.8"
5_21_07	1	Beaver	N/A	Sign	Deposition	33° 35' 07.2"	85° 50' 45.8"
5_21_07	1	Raccoon	N/A	Track	Deposition	33° 35' 07.2"	85° 50' 45.8"
5_21_07	1	Turtle	N/A	Sign	Deposition	33° 35' 03.1"	85° 51' 01.4"
5_21_07	1	Deer	N/A	Track	Deposition	33° 35' 03.6"	85° 51' 03.5"

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
5_21_07	1	Beaver	N/A	Track	Deposition	33° 35' 03.6"	85° 51' 03.5"
5_21_07	1	Raccoon	N/A	Track	Deposition	33° 35' 03.6"	85° 51' 03.5"
5_21_07	1	Skunk	N/A	Track	Deposition	33° 35' 03.6"	85° 51' 03.5"
5_21_07	1	Raccoon	N/A	Track	Deposition	33° 35' 03.6"	85° 51' 03.5"
5_21_07	1	Deer	N/A	Track	Deposition	33° 35′ 03.6″	85° 51' 03.5"
5_21_07	1	Turtle	N/A	Sign	Bank	33° 34' 54.4"	85° 51' 13.4"
5_21_07	1	Raccoon	N/A	Track	Mud Flat	33° 34' 54.4"	85° 51' 13.4"
5_21_07	1	Beaver	N/A	Track	Mud Flat	33° 34′ 54.4″	85° 51' 13.4"
5_21_07	1	Squirrel	N/A	Track	Mud Flat	33° 34′ 54.4″	85° 51' 13.4"
5_21_07	1	Raccoon	N/A	Track	NA	33° 34′ 52.6″	85° 51' 5117"
5_21_07	1	Raccoon	N/A	Track	Oxbow	33° 34′ 52.1″	85° 51' 18.9"
5_21_07	1	Beaver	N/A	Track	Oxbow	33° 34′ 52.1″	85° 51' 18.9"
5_21_07	1	Great Blue Heron	N/A	Track	Oxbow	33° 34′ 52.1″	85° 51' 18.9"
5_21_07	1	Wood Duck	N/A	Track	Oxbow	33° 34′ 52.1″	85° 51' 18.9"
5_21_07	1	Raccoon	N/A	Track	Island	33° 34′ 52.2″	85° 51' 25.5"
5_21_07	1	Beaver	N/A	Track	Island	33° 34' 52.2"	85° 51' 25.5"
5_21_07	1	Deer	N/A	Track	Island	33° 34' 52.2"	85° 51' 25.5"
5_21_07	1	Copperhead	1	Sight	Island	33° 34' 52.2"	85° 51' 25.5"
5_21_07	1	Raccoon	N/A	Track	Deposition	33° 34' 52.4"	85° 51' 28.4"
5_21_07	1	Great Blue Heron	N/A	Track	Deposition	33° 34' 52.4"	85° 51' 28.4"
5_21_07	1	Beaver	N/A	Track	Deposition	33° 34' 52.4"	85° 51' 28.4"
5_21_07	1	Turtle	N/A	Track	Deposition	33° 34' 52.4"	85° 51' 28.4"
5_21_07	1	Muskrat	N/A	Track	Deposition	33° 34' 52.4"	85° 51' 28.4"
5_21_07	1	Beaver	N/A	Track	Oxbow	33° 34' 50.9"	85° 51' 32.3"
5_21_07	1	Great Blue Heron	1	Sight	Oxbow	33° 34' 50.9"	85° 51' 32.3"
5_21_07	1	Beaver	1	Track	Bank	33° 34' 41.3"	85° 51' 52.8"
5_21_07	1	Raccoon	1	Track	Bank	33° 34' 41.3"	85° 51' 52.8"
5_21_07	1	Frog	1	Sight	Bank	33° 34' 41.3"	85° 51' 52.8"
5_21_07	1	Turtle	1	Sight	Log	33° 34' 38.9"	85° 51' 56.4"
5 21 07	1	Beaver	N/A	Track	Gravel Bar	33° 34' 38.9"	85° 51' 56.4"
5 21 07	1	Great Blue Heron	1	Sight	Gravel Bar	33° 34' 36.6"	85° 52' 04.3"
5_21_07	1	Beaver	N/A	Track	Bank	33° 34' 36.6"	85° 52' 04.3"
5 21 07	1	Turtle	1	Sight	Log	33° 34' 34.5"	85° 52' 07.9"
5 21 07	1	Killdeer	1	Sight	Bank	33° 34' 34.1"	85° 52' 12.9"
5 21 07	1	Raccoon	N/A	Track	Bank	33° 34' 34.1"	85° 52' 12.9"
5_21_07	1	Great Blue Heron	N/A	Track	Bank	33° 34' 34.1"	85° 52' 12.9"
5_21_07	1	Red-tailed Hawk	1	Sight	Stream Canopy	33° 34' 34.1"	85° 52' 12.9"
5 21 07	1	Black Racer	1	Sight	Bank	33° 34' 34.1"	85° 52' 12.9"
5 21 07	1	Muskrat	N/A	Sign	Bank	33° 34' 33.0"	85° 52' 16.0"
5 21 07	1	Beaver	N/A	Track	Bank	33° 34' 33.0"	85° 52' 16.0"
5_21_07	1	Frog	1	Sight	Bank	33° 34' 33.0"	85° 52' 16.0"
5 21 07	1	Beaver	N/A	Track	Bank	33° 34' 32.2"	85° 52' 27.3"
5_21_07	1	Red-tailed Hawk	1	Sight	Stream Canopy	33° 35' 34.4"	85° 52' 30.2"
5_21_07	1	Green Heron	1	Sight	Stream Canopy	33° 35' 34.4"	85° 52' 30.2"
5_21_07	1	Beaver	N/A	Track	Bank	33° 34' 35.0"	85° 52' 37.1"
5_21_07	1	Beaver	N/A	Track	Deposition	33° 34' 35.1"	85° 52' 38.2"
5 21 07	1	Wood Duck	N/A	Track	Deposition	33° 34' 35.1"	85° 52' 38.2"
5_21_07	1	Great Blue Heron	N/A	Track	Deposition	33° 34' 35.1"	85° 52' 38.2"
5_21_07	1	Raccoon	N/A	Track	Deposition	33° 34' 35.1"	85° 52' 38.2"
5_21_07 5_21_07	1	Muskrat	N/A	Track	Deposition	33° 34' 35.1"	85° 52' 38.2"
5_21_07	1	Groundhog	1	Sight	Deposition	33° 34' 31.6"	85° 52' 44.0"
5_21_07	1	Wood Duck	4	Sight	Deposition	33° 34' 31.6"	85° 52' 44.0"
5_21_07 5_21_07	1	Turtle	4	Sight	Deposition	33° 34' 31.6"	85° 52' 44.0"
5_21_07	1	Garter Snake	1	Sight	Deposition	33° 34' 31.6"	85° 52' 44.0"
5_21_07	1	Beaver	N/A	Sign	Deposition	33° 34' 31.6"	85° 52' 44.0"
5_21_07 5_21_07	1	Beaver	N/A	Track	Bank	33° 34' 25.6"	85° 52' 49.0"
5_21_07 5_21_07	1	Beaver	N/A N/A	Track	Bank	33° 34' 25.5"	85° 52' 55.1"
5_21_07 5_21_07	1	Beaver	N/A N/A	Track	Sand Bar	33° 34' 27.9"	85° 53' 04.4"
5_21_07 5_21_07	1	Raccoon	N/A N/A	Sign	Bank	33° 34' 27.5"	85° 53' 06.4"
5_21_07 5_21_07	1		N/A N/A		Bank	33° 34' 27.5 33° 34' 30.4"	85° 53' 08.0"
		Beaver		Track			85° 53' 10.4"
5_21_07	1	Raccoon	N/A N/A	Track Track	Deposition	33° 34' 31.2" 33° 34' 31.2"	85° 53' 10.4"
5_21_07		Squirrel Great Blue Horon	N/A N/A		Deposition		
5_21_07	1	Great Blue Heron		Track	Deposition	33° 34' 31.9"	85° 53' 14.0"
5_21_07	1	Raccoon	N/A	Track	Deposition	33° 34' 31.9"	85° 53' 14.0"
5_21_07	1	Wood Duck	N/A	Track	Deposition	33° 34' 31.9"	85° 53' 14.0"
5_21_07	1	Beaver Demostic Dog	N/A	Track	Deposition	33° 34' 31.9"	85° 53' 14.0"
5_21_07	1	Domestic Dog	N/A	Track	Bank	33° 34' 32.5"	85° 53' 17.7"
5_21_07	1	Wood Duck	N/A	Track	Bank	33° 34' 32.5"	85° 53' 17.7"
5_21_07	1	Rodent	1	Sight	Bank	33° 34' 32.5"	85° 53' 17.7"
5_21_07	1	Beaver Raccoon	N/A N/A	Track	Bank	33° 34' 35.5"	85° 53' 20.1"
5_21_07			i Ν//Λ	Track	Bank	33° 34' 35.5"	85° 53' 20.1"

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
5_21_07	1	Deer	N/A	Track	Bank	33° 34' 35.5"	85° 53′ 20.1″
5_22_07	1	Common Map Turtle	1	Sight	Bank	33° 34' 53.1"	85° 54' 22.1"
5_22_07	1	Great Blue Heron	N/A	Track	Deposition	33° 34' 50.7"	85° 54' 24.2"
5_22_07	1	Raccoon	N/A	Track	Deposition	33° 34' 50.7"	85° 54' 24.2"
5_22_07	1	Beaver	N/A	Track	Deposition	33° 34' 50.7"	85° 54' 24.2"
5_22_07	1	Deer	N/A	Track	Deposition	33° 34' 50.7"	85° 54' 24.2"
5_22_07	1	Beaver	N/A	Track	Deposition	33° 34' 47.6"	85° 54' 25.4"
5_22_07	1	Raccoon	N/A	Track	Deposition	33° 34' 47.6"	85° 54' 25.4"
5_22_07	1	Deer	N/A	Track	Deposition	33° 34' 47.6"	85° 54' 25.4"
5_22_07	1	Squirrel	N/A	Track	Deposition	33° 34' 47.6"	85° 54' 25.4"
5_22_07	1	Raccoon	N/A	Track	Deposition	33° 34' 47.2"	85° 54' 31.0"
5_22_07	1	Great Blue Heron	N/A	Track	Deposition	33° 34' 47.2"	85° 54' 31.0"
5_22_07	1	Wood Duck	N/A	Track	Deposition	33° 34' 47.2"	85° 54' 31.0"
5_22_07	1	Beaver	N/A	Track	Deposition	33° 34' 47.2"	85° 54' 31.0"
5_22_07	1	Deer	N/A	Track	Deposition	32° 34' 47.7"	85° 54' 32.3"
5_22_07	1	Weasel	N/A	Track	Deposition	32° 34' 47.7"	85° 54' 32.3"
5_22_07	1	Beaver	N/A	Sign	Deposition	32° 34' 47.7"	85° 54' 32.3"
5_22_07	1	Beaver	N/A	Track	Bank	32° 34' 46.2"	85° 54' 36.2"
5_22_07	1	Squirrel	N/A	Track	Bank	32° 34' 46.2"	85° 54' 36.2"
5_22_07	1	Raccoon	N/A	Track	Bank	32° 34' 46.2"	85° 54' 36.2"
5_22_07	1	Deer	N/A	Track	Deposition	32° 34' 45.9"	85° 54' 38.3"
5_22_07	1	Raccoon	N/A	Track	Deposition	32° 34' 45.9"	85° 54' 38.3"
5 22 07	1	Common Map Turtle	8	Sight	Deadfall	32° 34' 45.3"	85° 54' 42.2"
5 22 07	1	Turtle	1	Sight	Mid-Channel	32° 34' 45.9"	85° 54' 47.8"
5 22 07	1	Copperhead	1	Sight	Mid-Channel	32° 34' 45.9"	85° 54' 47.8"
5 22 07	1	Raccoon	N/A	Track	Bank	32° 34' 47.2"	85° 54' 52.5"
5 22 07	1	Beaver	1	Sight	Mid-Channel	32° 34' 45.0"	85° 55' 01.2"
5_22_07	1	Beaver	N/A	Track	Bank	32° 34' 45.0"	85° 55' 01.2"
5_22_07	1	Raccoon	N/A	Track	Bank	32° 34' 45.0"	85° 55' 01.2"
5_22_07	1	Beaver	N/A	Track	Bank	33° 34' 43.0"	85° 55' 02.8"
5 22 07	1	Raccoon	N/A	Track	Bank	33° 34' 43.0"	85° 55' 02.8"
5_22_07	1	Squirrel	1	Sight	Bank	33° 34' 43.0"	85° 55' 02.8"
5_22_07	<u> </u>	equirei	· ·	Oignt	Bank	00 04 40.0	00 00 02.0
5_22_07	2	Mallard Duck	6	Sight	NA	33° 34' 34.6"	85° 55' 13.5"
5 22 07	2	Black Vulture	1	Sight	Stream Canopy	33° 34' 34.6"	85° 55' 13.5"
5 22 07	2	Raccoon	N/A	Track	Deposition	33° 34' 30.1"	85° 55' 19.0"
5_22_07	2	Deer	N/A	Track	Deposition	33° 34' 30.1"	85° 55' 18.8"
5_22_07	2	Duck sp.	N/A	Track	Deposition	33° 34' 30.1"	85° 55' 18.8"
5_22_07	2	Raccoon	N/A	Track	Deposition	33° 34' 30.1"	85° 55' 18.8"
5 22 07	2	Mink	N/A	Track	Deposition	33° 34' 30.1"	85° 55' 18.8"
5_22_07	2	Beaver	N/A	Track	Deposition	33° 34' 30.1"	85° 55' 18.8"
5 22 07	2	Small Bird	N/A	Track	Deposition	33° 34' 30.1"	85° 55' 18.8"
5_22_07	2	Raccoon	N/A	Track	Deposition	33° 34' 26.1"	85° 55' 21.4"
5_22_07	2	Muskrat	N/A	Track	Deposition	33° 34' 26.1"	85° 55' 21.4"
5_22_07	2	Small Bird	N/A	Track	Deposition	33° 34' 26.1"	85° 55' 21.4"
5_22_07	2	Wood Duck	N/A	Track	Deposition	33° 34' 26.1"	85° 55' 21.4"
5_22_07	2	Deer	N/A	Track	Deposition	33° 34' 26.1"	85° 55' 21.4"
5_22_07	2	Muskrat	1	Sight	Deposition	33° 34' 26.1"	85° 55' 21.4"
5_22_07	2	Mallard Duck	1	Sight	·	33° 34' 26.1"	85° 55' 21.4"
	2		N/A		Deposition NA		
5_22_07		Beaver	N/A	Sign	Deposition	33° 34' 15.2"	85° 55' 43.8"
5_22_07 5_22_07	2	Beaver Raccoon	N/A N/A	Track Track	Deposition	33° 34' 14.7" 33° 34' 14.7"	85° 55' 48.9" 85° 55' 48.9"
5_22_07	2	Muskrat	1 1	Sight	Mid-Channel	33° 34' 14.7' 33° 34' 15.5"	85° 55' 57.2"
5_22_07	2	Raccoon	N/A	Track	Deposition	33° 34' 15.5"	85° 56' 01.1"
		Wood Duck	N/A N/A	Track	Deposition	33° 34' 15.1"	85° 56' 01.1"
5_22_07	2						
5_22_07	2	Turtle	1	Sight	Deadfall	33° 34' 10.9"	85° 56' 04.7"
5_22_07	2	Great Blue Heron	1	Sight	Deadfall	33° 34' 10.9"	85° 56' 04.7"
5_22_07	2	Raccoon	N/A	Track	Backwater	33° 33' 44.1"	85° 56' 02.3"
5_22_07	2	Duck sp.	N/A	Track	Backwater	33° 33' 44.1"	85° 56' 02.3"
5_22_07	2	Beaver	N/A	Sign	Backwater	33° 33' 44.1"	85° 56' 02.3"
5_22_07	2	Beaver	N/A	Track	Deposition	33° 33' 40.6"	85° 56' 04.1"
5_22_07	2	Muskrat	1	Sight	Bank	33° 33' 40.5"	85° 56' 06.7"
5_22_07	2	Beaver	N/A	Track	Deposition	33° 33' 40.5"	85° 56' 06.7"
5_22_07	2	Raccoon	N/A	Track	Deposition	33° 33' 40.5"	85° 56' 06.7"
5_22_07	2	Great Blue Heron	2	Sight	Stream Canopy	33° 33' 42.8"	85° 56' 14.4"
5_22_07	2	Kingfisher	N/A	Sign	Stream Canopy	33° 33' 42.8"	85° 56' 14.4"
5_22_07	2	Raccoon	N/A	Track	Deposition	33° 33' 43.9"	85° 56' 30.1"
5_22_07	2	Muskrat	N/A	Track	Deposition	33° 33' 43.9"	85° 56' 30.1"
5_22_07	2	Wood Duck	N/A	Track	Deposition	33° 33' 43.9"	85° 56' 30.1"
	2	Raccoon	N/A	Track	Deposition	33° 33' 45.4"	85° 56' 33.6"
5_22_07 5_22_07	2	Common Map Turtle	1	Sight	Deposition	33° 33' 47.5"	85° 56' 40.4"

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
5_22_07	2	Turtle	2	Sight	Mud Bar	33° 33' 49.0"	85° 56' 44.5"
5_22_07	2	Raccoon	N/A	Track	Mud Bar	33° 33′ 49.0″	85° 56' 44.5"
5_22_07	2	Turtle	1	Sight	Bank Edge	33° 34' 07.5"	85° 56' 55.7"
5_22_07	2	Beaver	N/A	Track	NA	33° 34' 06.1"	85° 56' 48.9"
5_22_07	2	Raccoon	N/A	Track	NA	33° 34' 06.1"	85° 56' 48.9"
5_22_07	2	Kingfisher	2	Sight	Stream Canopy	33° 34' 06.1"	85° 56' 48.9"
5_22_07	2	Beaver	N/A	Track	Sand Bar	33° 34' 06.5"	85° 57' 06.0"
5_22_07	2	Raccoon	N/A	Track	Sand Bar	33° 34' 06.5"	85° 57' 06.0"
5_22_07	2	Raccoon	N/A	Track	Deposition	33° 34' 01.3"	85° 57' 13.8"
5_22_07	2	Beaver	N/A	Track	Deposition	33° 34' 01.3"	85° 57' 13.8"
5_22_07	2	Muskrat	1	Sight	Backwater	33° 33' 57.2"	85° 57' 19.1"
5_22_07	2	Raccoon	N/A	Track	Backwater	33° 33' 57.2"	85° 57' 19.1"
5_22_07	2	Red-tailed Hawk	1	Sight	Stream Canopy	33° 33' 56.3"	85° 57' 21.9"
5_22_07	2	Common Map Turtle	1	Sight	Log	33° 33' 56.3"	85° 57' 21.9"
5_22_07 5_22_07	2	Mallard Duck	2	Sight	Stream Canopy	33° 33' 50.9"	85° 57' 28.4"
	2	Wood Duck	N/A	Sight	Stream Canopy	33° 33' 50.9"	85° 57' 28.4" 85° 57' 36.7"
5_22_07 5 22 07	2	Muskrat Raccoon	N/A N/A	Sign Track	Bank Bank	33° 33' 49.5" 33° 33' 49.5"	85° 57' 36.7"
5_22_07	2	Beaver	N/A N/A	Sign	Bank	33° 33' 49.5"	85° 57' 36.7"
5 22 07	2	Stinkpot	1 1	Sight	Bank	33° 33' 49.5"	85° 57' 36.7"
5 22 07	2	Green Heron	1	Sight	Stream Canopy	33° 33' 47.7"	85° 57' 48.4"
5_22_07	2	Beaver	N/A	Track	NA	33° 33' 47.7"	85° 57' 48.4"
5_22_07	2	Raccoon	N/A N/A	Sign	Island	33° 33' 48.0"	85° 58' 03.4"
5_22_07	2	Raccoon	N/A	Sign	Island	33° 33' 45.6"	85° 58' 05.1"
5_22_07	2	Mallard Duck	N/A	Sight	NA	33° 33' 34.0"	85° 58' 14.3"
5_22_07	2	Muskrat	1	Sight	Mid-Channel	33° 33' 34.0"	85° 58' 14.3"
5 22 07	2	Raccoon	N/A	Track	Riffle	33° 33' 22.3"	85° 58' 34.1"
5_22_07	2	Kingfisher	1	Sight	Riffle	33° 33' 18.6"	85° 58' 33.5"
5 22 07	2	Kingfisher	1	Sight	Backwater	33° 33' 07.7"	85° 58' 35.5"
5_22_07	2	Great Blue Heron	1	Sight	Backwater	33° 33' 07.7"	85° 58' 35.5"
5 22 07	2	Beaver	1	Sight	Backwater	33° 33' 07.7"	85° 58' 35.5"
5_22_07	2	Wood Duck	1	Sight	Backwater	33° 33' 07.7"	85° 58' 35.5"
5_22_07	2	Eastern Painted Turtle	1	Sight	Mid-Channel	33° 33' 10.0"	85° 58' 45.3"
5 22 07	2	Great Blue Heron	1	Sight	Stream Canopy	33° 33' 10.0"	85° 58' 45.3"
5_22_07	2	Beaver	1	Sight	Bank	33° 33' 14.9"	85° 58' 55.1"
5_22_07	2	Great Blue Heron	1	Sight	Riffle	33° 33' 12.1"	85° 59' 05.9"
5_22_07	2	Great Blue Heron	1	Sight	Riffle	33° 33' 11.0"	85° 59' 16.4"
5_22_07	2	Mallard Duck	N/A	Sight	Mid-Channel	33° 33' 11.0"	85° 59' 16.4"
5_22_07	2	Kingfisher	1	Sight	Stream Canopy	33° 33' 11.0"	85° 59' 16.4"
5_22_07	2	Wood Duck	2	Sight	Mid-Channel	33° 33' 11.0"	85° 59' 16.4"
5_22_07	2	Turtle	1	Sight	Mid-Channel	33° 33' 11.0"	85° 59' 16.4"
5_22_07	2	Beaver	N/A	Track	Bank	33° 32' 46.3"	85° 59' 23.2"
5_22_07	2	Beaver	N/A	Track	Bank	33° 32′ 36.9″	85° 59' 21.8"
5_22_07	2	Raccoon	N/A	Track	Bank	33° 32′ 36.9″	85° 59' 21.8"
5_22_07	2	Muskrat	N/A	Track	Bank	33° 32' 25.1"	85° 59' 23.1"
5_22_07	2	Beaver	N/A	Track	Bank	33° 32' 25.1"	85° 59' 23.1"
5_22_07	2	Raccoon	N/A	Track	Bank	33° 32' 25.1"	85° 59' 23.1"
5_22_07	2	Wood Duck	1	Sight	Bank	33° 32' 28.8"	85° 59' 25.9"
5_22_07	2	Raccoon	N/A	Track	Bank	33° 32' 39.4"	85° 59' 34.5"
5_22_07	2	Beaver	N/A	Track	Bank	33° 32' 39.4"	85° 59' 34.5"
5_22_07	2	Wood Duck	3	Sight	Bank	33° 32' 40.6"	85° 59' 40.0"
5_22_07	2	Mallard Duck	N/A	Sight	Bank	33° 32' 40.6"	85° 59' 40.0"
5_22_07	2	Muskrat	N/A	Track	Deposition	33° 32' 28.3"	85° 59' 48.0"
5_22_07	2	Beaver	N/A	Track	Deposition	33° 32' 28.3"	85° 59' 48.0"
5_22_07	2	Raccoon	N/A	Track	Deposition	33° 32' 28.3"	85° 59' 48.0"
5_22_07	2	Muskrat	1	Sight	Deposition	33° 32' 28.3"	85° 59' 48.0"
5_22_07	2	Raccoon	N/A	Track	Deposition	33° 32' 33.4"	85° 59' 52.9"
5_22_07	2	Raccoon	N/A	Track	Deposition	33° 32' 46.9"	85° 59' 51.1"
5_22_07	2	Beaver	N/A	Track	Deposition	33° 32' 46.9"	85° 59' 51.1"
5_22_07	2	Muskrat	N/A	Track	Mud Flat	33° 32' 53.5"	85° 59' 53.0"
5_22_07	2	Raccoon	N/A	Track	Mud Flat	33° 32' 53.5"	85° 59' 53.0"
5_22_07	2	Deer	N/A	Track	Mud Flat	33° 32' 53.5"	85° 59' 53.0"
5_22_07	2	Beaver	N/A	Track	Mud Flat	33° 32' 53.5"	85° 59' 53.0"
5_22_07	2	Snake	1 N/A	Sight	Mid-Channel	33° 32' 59.1"	86° 00' 01.3"
5_22_07	2	Turtle	N/A	Sight	NA NA	33° 33' 04.8"	86° 00' 14.2"
5_23_07	3	Beaver	N/A	Track	NA	33° 33' 10.0"	86° 00' 25.2"
5_23_07	3	Beaver	1 1	Sight	NA NA	33° 33' 24.0"	86° 00' 45.8"
5_23_07	3	Muskrat	N/A	Track	Deposition	33° 33' 24.0"	86° 00' 38.2"
5_23_07	3	Raccoon	N/A	Track	Deposition	33° 33' 27.2"	86° 00' 40.3"
5_23_07	3	Muskrat	N/A N/A	Track	Mud Flat	33° 33' 28.1"	86° 00' 41.9"
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Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
5_23_07	3	Raccoon	N/A	Track	Mud Flat	33° 33' 28.1"	86° 00' 41.9"
5_23_07	3	Stinkpot	1	Sight	Sand Bar	33° 33' 30.4"	86° 00' 42.7"
5_23_07	3	Softshell Turtle	1	Sight	Sand Bar	33° 33' 37.1"	86° 00' 45.9"
5_23_07	3	Raccoon	N/A	Track	Sand Bar	33° 33' 37.1"	86° 00' 45.9"
5_23_07	3	Beaver	N/A	Track	Sand Bar	33° 33' 37.1"	86° 00' 45.9"
5_23_07	3	Deer	N/A	Track	Island	33° 33' 41.2"	86° 00' 40.5"
5_23_07	3	Goose sp.	5	Sight	Island	33° 33' 41.2"	86° 00' 40.5"
5_23_07	3	Goose sp.	N/A	Track	Deposition	33° 33' 48.3"	86° 00' 55.7"
5_23_07	3	Red-tailed Hawk	1	Sight	Stream Canopy	33° 33' 48.3"	86° 00' 55.7"
5_23_07	3	Deer Coope	N/A	Track	Deposition	33° 33' 48.3"	86° 00' 55.7"
5_23_07 5_23_07	3	Canada Goose	N/A N/A	Track Track	Deposition Deposition	33° 33' 48.3" 33° 33' 48.3"	86° 00' 55.7" 86° 00' 55.7"
5_23_07	3	Raccoon Cottonmouth	1 1	Sight	Bank	33° 33' 41.1"	86° 01' 02.6"
5_23_07	3	Red-tailed Hawk	N/A	Sign	Bank	33° 33' 41.1"	86° 01' 02.6"
5_23_07	3	Eastern Painted Turtle	1	Sight	Bank	33° 33' 39.2"	86° 01' 05.1"
5_23_07	3	Stinkpot	1	Sight	Bank	33° 33' 38.8"	86° 01' 05.1"
5_23_07	3	Raccoon	N/A	Track	Bank	33° 33' 38.8"	86° 01' 05.1"
5 23 07	3	Beaver	N/A	Sign	Bank	33° 33' 36.5"	86° 01' 02.3"
5_23_07	3	Raccoon	N/A	Track	Bank	33° 33' 39.2"	86° 01' 59.5"
5 23 07	3	Raccoon	N/A	Track	Bank	33° 33' 34.3"	86° 01' 0158"
5_23_07	3	Raccoon	N/A	Track	Bank	33° 33' 34.0"	86° 01' 56.2"
5_23_07	3	Goose sp.	N/A	Track	Bank	33° 33' 34.0"	86° 01' 56.2"
5_23_07	3	Wood Duck	2	Sight	Stream Canopy	33° 33' 06.8"	86° 00' 57.1"
5_23_07	3	Beaver	N/A	Sign	Bank	33° 33' 06.8"	86° 00' 57.1"
5_23_07	3	Stinkpot	1	Sight	Deadfall	33° 33' 05.1"	86° 01' 06.3"
5_23_07	3	Raccoon	N/A	Track	Bank	33° 33' 11.3"	86° 01' 17.5"
5_23_07	3	Muskrat	N/A	Track	Bank	33° 33' 11.3"	86° 01' 17.5"
5_23_07	3	Common Map Turtle	1	Sight	Bank	33° 33' 17.0"	86° 01' 29.4"
5_23_07	3	Raccoon	N/A	Track	Bank	33° 33' 16.4"	86° 01' 32.4"
5_23_07	3	Deer	N/A	Track	Bank	33° 33' 16.4"	86° 01' 32.4"
5_23_07	3	Raccoon	N/A	Track	Sand Bar	33° 33' 10.8"	86° 01' 52.7"
5_23_07	3	Frog	1	Sight	Sand Bar	33° 33' 10.8"	86° 01' 52.7"
5_23_07	3	Common Map Turtle	1	Sight	Sand Bar	33° 33' 07.1"	86° 02' 04.1"
5_23_07	3	Raccoon	N/A	Track	Sand Bar	33° 33' 07.1"	86° 02' 04.1"
5_23_07	3	Raccoon	N/A	Track	Sand Bar	33° 32' 52.4"	86° 02' 09.8"
5_24_07	3	Raccoon	N/A	Track	Deposition	33° 32' 38.2"	86° 02' 34.1"
5_24_07	3	Turkey Vulture	1	Sight	Stream Canopy	33° 32' 38.2"	86° 02' 34.1"
5_24_07	3	Common Map Turtle	1	Sight	Mud Flat	33° 32' 36.4"	86° 02' 36.2"
5_24_07	3	Raccoon	N/A	Track	Mud Flat	33° 32' 33.9"	86° 02' 40.1"
5_24_07	3	Turtle	N/A	Sign	Mud Flat	33° 32' 33.9"	86° 02' 40.1"
5_24_07	3	Northern Harrier	1	Sight	Stream Canopy	33° 32' 18.3"	86° 03' 00.2"
5_24_07	3	Beaver	N/A 1	Track	NA NA	33° 32' 18.3" 33° 32' 18.3"	86° 03' 00.2" 86° 03' 00.2"
5_24_07		Frog	1	Sight			
5_24_07 5_24_07	3	Common Map Turtle Raccoon	N/A	Sight Track	Log Deposition	33° 32' 16.7" 33° 32' 15.9"	86° 03' 04.6" 86° 03' 09.5"
5_24_07	3	Beaver	N/A N/A	Track	Deposition	33° 32' 15.9"	86° 03' 09.5"
5 24 07	3	Raccoon	N/A	Track	Bank	33° 32' 19.6"	86° 03' 23.0"
5_24_07	3	Beaver	N/A	Track	Deposition	33° 32' 38.6"	86° 03' 37.9"
5 24 07	3	Deer	N/A	Track	Deposition	33° 32' 38.6"	86° 03' 37.9"
5_24_07	3	Raccoon	N/A	Track	Bank	33° 32' 44.8"	86° 03' 48.5"
5_24_07	3	Goose sp.	N/A	Track	Bank	33° 32' 44.8"	86° 03' 48.5"
5_24_07	3	Cow	N/A	Track	Bank	33° 32' 44.8"	86° 03' 48.5"
5_24_07	3	Red-tailed Hawk	1	Sight	Stream Canopy	33° 32' 44.8"	86° 03' 48.5"
5_24_07	3	Green Heron	1	Sight	Bank	33° 32' 22.0"	86° 03' 50.0"
5_24_07	3	Beaver	3	Sight	Bank	33° 32' 22.0"	86° 03' 50.0"
5_24_07	3	Beaver	N/A	Track	Bank	33° 32' 30.3"	86° 04' 14.2"
5_24_07	3	Great Blue Heron	1	Sight	Stream Canopy	33° 32' 37.9"	86° 04' 15.2"
5_24_07	3	Red-tailed Hawk	1	Sight	Stream Canopy	33° 32' 37.9"	86° 04' 15.2"
5_24_07	3	Copperhead	1	Sight	Mid-Channel	33° 33' 01.3"	86° 04' 27.2"
5_24_07	3	Turtle	1	Sight	Mid-Channel	33° 33' 08.6"	86° 04' 31.7"
5_24_07	3	Beaver	N/A	Track	Mud Flat	33° 33' 11.8"	86° 04' 41.6"
5_24_07	3	Muskrat	N/A	Track	Bank	33° 32' 48.5"	86° 04' 40.8"
5_24_07	3	Turtle	1	Sight	Log	33° 32' 33.4"	86° 04' 50.2"
5_24_07	3	Great Egret	1	Sight	Stream Canopy	33° 32' 30.9"	86° 04' 57.0"
5_24_07	3	Beaver	N/A	Track	Bank	33° 32' 30.9"	86° 04' 57.0"
5_24_07	3	Great Blue Heron	1	Sight	Bank	33° 32' 36.1"	86° 05' 06.6"
5_24_07	3	Snowy Egret	5	Sight		Jackson Shoals Dam	
Summer 200							
8_18_2007	1	Beaver	N/A	Tracks	Deposition	33° 35' 58"	85° 49' 44"
8_18_2007	1	Deer	N/A	Tracks	Deposition	33° 35' 57"	85° 49' 46"
8_18_2007	1	Green Heron	1	Sight	Deposition	33° 35′ 57″	85° 49' 46"

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
8_18_2007	1	Raccoon	N/A	Tracks	Deposition	33° 35' 54"	85° 49' 49"
8_18_2007	1	Great Blue Heron	1	Sight	Deposition	33° 35′ 49″	85° 49' 20"
8_18_2007	1	Beaver	N/A	Tracks	Deposition	33° 35' 49"	85° 49' 20"
8_18_2007	1	Kingfisher	N/A	Sign	Deposition	33° 35' 49"	85° 49' 20"
8_18_2007	1	Cow	1	Sight	Mid-Channel	33° 35′ 46″	85° 49' 45"
8_18_2007	1	Muskrat	N/A	Tracks	Deposition	33° 35′ 41″	85° 49' 45"
8_18_2007	1	Deer	N/A	Tracks	Deposition	33° 35′ 41″	85° 49' 45"
8_18_2007	1	Raccoon	N/A	Tracks	Deposition	33° 35′ 41″	85° 49' 45"
8_18_2007	1	Raccoon	N/A	Tracks	Deposition	33° 35' 35"	85° 49' 50"
8_18_2007	1	Beaver	N/A	Tracks	Deposition	33° 35' 32"	85° 49' 55"
8_18_2007	1	Beaver	N/A	Tracks	Deposition	33° 35' 26"	85° 49' 58"
8_18_2007	1	Muskrat	N/A	Tracks	Deposition	33° 35' 26"	85° 49' 58"
8_18_2007	1	Great Blue Heron	2	Sight	Deposition	33° 35' 20"	85° 50' 3"
8_18_2007	1	Great Blue Heron	10	Sight	Deposition	33° 35' 14"	85° 50' 16" 85° 50' 16"
8_18_2007	<u>1</u> 1	Great Egret	2	Sight	Deposition	33° 35' 14"	
8_18_2007	1	Green Heron	N/A	Sight	Deposition	33° 35' 10" 33° 35' 10"	85° 50' 36"
8_18_2007 8 18 2007	1	Muskrat Red-shouldered Hawk	1 1 1	Tracks	Deposition Street Canany	33° 35' 7"	85° 50' 36" 85° 50' 41"
8_18_2007	1	Beaver	N/A	Sight Tracks	Stream Canopy Deposition	33° 35' 7"	85° 50' 41"
8 18 2007	1	Raccoon	N/A N/A	Tracks	Deposition	33° 35' 6"	85° 50' 53"
8_18_2007	1	Muskrat	N/A	Tracks	Deposition	33° 35' 6"	85° 50' 53"
8 18 2007	1	Raccoon	N/A N/A	Tracks	Deposition	33° 35' 4"	85° 51' 4"
8_18_2007	1	Beaver	N/A N/A	Tracks	Deposition	33° 35' 4"	85° 51' 4"
8 18 2007	1	Muskrat	N/A N/A	Tracks	Deposition	33° 35' 4"	85° 51' 4"
8_18_2007	<u>'</u> 1	Snapping Turtle	1 1 1	Sight	Deposition	33° 35' 4"	85° 51' 4"
8 15 2007	1	Hawk sp.	1	Sight	Deadfall	33° 34' 59"	85° 51' 9"
8 15 2007	1	Beaver	N/A	Tracks	Bank	33° 34' 59"	85° 51' 9"
8_15_2007	1	Red-tailed Hawk	1	Sight	Stream Canopy	33° 34' 55"	85° 51' 12"
8_15_2007	1	Green Heron	1	Sight	Bank	33° 34' 55"	85° 51' 12"
8_15_2007	1	Common Map Turtle	2	Sight	Deadfall	33° 34' 55"	85° 51' 12"
8_15_2007	1	Beaver	N/A	Tracks	Bank	33° 34' 52"	85° 51' 19"
8_15_2007	1	Raccoon	N/A	Tracks	Bank	33° 34' 52"	85° 51' 26"
8 15 2007	1	Beaver	N/A	Tracks	Bank	33° 34' 52"	85° 51' 26"
8_15_2007	1	Deer	N/A	Tracks	Deposition	33° 34' 49"	85° 51' 34"
8_15_2007	1	Muskrat	N/A	Tracks	Deposition	33° 34' 49"	85° 51' 34"
8_15_2007	1	Raccoon	N/A	Tracks	Deposition	33° 34' 49"	85° 51' 34"
8_15_2007	1	Muskrat	N/A	Tracks	Deposition	33° 34' 44"	85° 51' 41"
8_15_2007	1	Wood Duck	4	Sight	Deposition	33° 34' 44"	85° 51' 41"
8_15_2007	1	Eastern Painted Turtle	1	Sight	Deposition	33° 34' 44"	85° 51' 41"
8_15_2007	1	Great Blue Heron	1	Sight	NA	33° 34' 42"	85° 51' 56"
8_15_2007	1	Deer	1	Sight	NA	33° 34' 38"	85° 51' 54"
8_15_2007	1	Muskrat	1	Sight	NA	33° 34' 38"	85° 51' 54"
8_15_2007	1	Great Blue Heron	1	Sight	Deposition	33° 34' 31"	85° 51' 56"
8_15_2007	1	Wood Duck	4	Sight	Deposition	33° 34' 31"	85° 51' 56"
8_15_2007	1	Raccoon	N/A	Tracks	Deposition	33° 34' 31"	85° 51' 56"
8_15_2007	1	Beaver	N/A	Tracks	Deposition	33° 34' 36"	85° 52' 3"
8_15_2007	1	Muskrat	N/A	Tracks	Deposition	33° 34' 34"	85° 52' 8"
8_15_2007	1	Beaver	N/A	Tracks	Deposition	33° 34' 34"	85° 52' 8"
8_15_2007	1	Common Map Turtle	1	Sight	Deposition	33° 34' 34"	85° 52' 8"
8_15_2007	1	Great Blue Heron	2	Sight	Stream Canopy	33° 34' 33"	85° 52' 14"
8_15_2007	1	Great Blue Heron	N/A	Tracks	Bank	33° 34' 33"	85° 52' 18"
8_15_2007	1	Duck	N/A	Tracks	Bank	33° 34' 33"	85° 52' 18"
8_15_2007	1	Hawk sp.	1	Sight	Stream Canopy	33° 34' 29"	85° 52' 23"
8_15_2007	1	Muskrat	1	Sight	Bank	33° 34' 33"	85° 52' 27"
8_15_2007	1	Common Map Turtle	N/A	Sight	Deposition	33° 34' 35"	85° 52' 37"
8_15_2007	1	Beaver	N/A	Tracks	Deposition	33° 34' 35"	85° 52' 37"
8_15_2007	1	Raccoon	N/A	Tracks	NA	33° 34' 35"	85° 52' 37"
8_15_2007	1	Dog	N/A	Tracks	NA	33° 34' 35"	85° 52' 37"
8_15_2007	11	Great Blue Heron	2	Sight	Stream Canopy	33° 34' 35"	85° 52' 37"
8_15_2007	1	Red-tailed Hawk	1	Sight	Deadfall	33° 34' 24"	85° 52' 51"
8_15_2007	1	Raccoon	N/A	Tracks	Deposition	33° 34' 27"	85° 53' 5"
8_15_2007	1	Muskrat	N/A	Tracks	Deposition	33° 34' 27"	85° 53' 5"
8_15_2007	1	Beaver	N/A	Sign	Deposition	33° 34' 29"	85° 53' 7"
8_15_2007	1	Muskrat	N/A	Tracks	Deposition	33° 34' 29"	85° 53' 7"
8_15_2007	1	Muskrat	1	Sight	Run	33° 34' 33"	85° 53' 15"
8_15_2007	1	Beaver	N/A	Sign	Bank	33° 34' 36"	85° 53' 20"
8_15_2007	1	Raccoon	N/A	Tracks	Deposition	33° 34' 35"	85° 53' 32"
8_15_2007	1	Beaver	N/A	Tracks	Deposition	33° 34' 35"	85° 53' 32"
8_15_2007	1	Raccoon	N/A	Tracks	Deposition	33° 34' 36"	85° 53' 39"
8_15_2007	1	Muskrat	N/A	Tracks	Deposition	33° 34' 36"	85° 53' 39"
8_15_2007	1	Great Blue Heron	1	Sight	Stream Canopy	33° 34' 38"	85° 53' 45"

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
8_15_2007	1	Dog	N/A	Tracks	Deposition	33° 34' 38"	85° 53' 45"
8_15_2007	1	Muskrat	N/A	Tracks	Deposition	33° 34' 38"	85° 53' 45"
8_15_2007	1	Deer	N/A	Tracks	Deposition	33° 34' 32"	85° 53' 47"
8_15_2007	1	Muskrat	N/A	Tracks	Deposition	33° 34' 32"	85° 53' 47"
8_15_2007	1	Cottonmouth	1	Sight	Mid-Channel	33° 34' 32"	85° 53' 54"
8_15_2007	1	Raccoon	N/A	Tracks	Bank	33° 34' 38"	85° 53' 55"
8_15_2007	1	Deer	N/A	Tracks	Bank	33° 34' 38"	85° 53' 55"
8_15_2007	1	Deer	6	Sight	Bank	33° 34' 45"	85° 53' 57"
8_15_2007	1	Cows	N/A	Sight	Mid-Channel	33° 34' 44"	33° 34' 3"
8_15_2007	1	Muskrat	N/A	Tracks	Bank	33° 34' 50"	85° 53' 60"
8_15_2007	1	Great Blue Heron	N/A	Tracks	Bank	33° 34' 50"	85° 53' 60"
8 15 2007	1	Raccoon	N/A	Tracks	Deposition	33° 35' 0"	85° 53' 59"
8 15 2007	1	Great Blue Heron	N/A	Tracks	Deposition	33° 35' 0"	85° 53' 59"
8_15_2007	1	Deer	3	Sight	Bank	33° 35' 0"	85° 54' 9"
8 15 2007	1	Great Blue Heron	1	Sight	Bank	33° 35' 0"	85° 54' 9"
8_16_2007	1	Deer	N/A	Tracks	Island	33° 34' 53"	85° 54' 23"
8 16 2007	1	Raccoon	N/A	Tracks	Island	33° 34' 53"	85° 54' 23"
8_16_2007	1	Great Blue Heron	N/A	Tracks	Island	33° 34' 53"	85° 54' 23"
8_16_2007	1	Muskrat	1	Sight	Pool	33° 34' 51"	85° 54' 26"
8 16 2007	:	Deer	N/A	Tracks	Island	33° 34' 47"	85° 54' 32"
8 16 2007	1	Hawk sp.	1	Sight	Stream Canopy	33° 34' 47"	85° 54' 32"
8_16_2007	1	Muskrat	N/A	Tracks	Deposition	33° 34' 45"	85° 54' 40"
8 16 2007	1	Beaver	N/A	Tracks	Deposition	33° 34' 45"	85° 54' 40"
8 16 2007	1	Red-shouldered Hawk	N/A	Sign	Stream Canopy	33° 34' 45"	85° 54' 40"
8_16_2007	1	Great Blue Heron	N/A	Tracks	Riffle	33° 34' 45"	85° 54' 40"
		Green Heron	N/A	Tracks	Riffle	33° 34' 45"	85° 54' 40"
8_16_2007	11		N/A			33° 34' 48"	85° 54' 53"
8_16_2007	<u>1</u> 1	Raccoon	1N/A 1	Tracks	Deposition	33° 34' 48"	85° 54' 53"
8_16_2007	<u> </u>	Kingfisher	<u> </u>	Sight	Deposition	33* 34 48	85° 54 53
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 34' 43"	85° 55' 3"
8_16_2007	2	Raccoon	N/A	Tracks	Bank	33° 34' 42"	85° 55' 6"
8_16_2007	2	Deer	N/A	Tracks	Bank	33° 34' 42"	85° 55' 6"
8_16_2007	2	Common Map Turtle	2	Sight	Riffle	33° 34' 36"	85° 55' 11"
8_16_2007	2	Deer	1	Sight	Riffle	33° 34' 36"	85° 55' 11"
8_16_2007	2	Osprey	1	Sight	Stream Canopy	33° 34' 36"	85° 55' 11"
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 34' 29"	85° 55' 19"
8_16_2007	2	Deer	N/A	Tracks	Deposition	33° 34' 29"	85° 55' 19"
8_16_2007	2	Raccoon	N/A	Tracks	Riffle	33° 34' 27"	85° 55' 21"
8_16_2007	2	Deer	N/A	Tracks	Riffle	33° 34' 24"	85° 55' 26"
8_16_2007	2	Raccoon	N/A	Tracks	Riffle	33° 34' 24"	85° 55' 26"
8_16_2007	2	Beaver	N/A	Tracks	Riffle	33° 34' 24"	85° 55' 26"
8_16_2007	2	Great Blue Heron	2	Sight	Bank	33° 34' 17"	85° 55' 32"
8_16_2007	2	Beaver	N/A	Tracks	Deposition	33° 34' 14"	85° 55' 50"
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 34' 14"	85° 55' 50"
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 34' 15"	85° 55' 58"
8_16_2007	2	Muskrat	N/A	Tracks	Deposition	33° 34' 15"	85° 55' 58"
8_16_2007	2	Kingfisher	1	Sight	Stream Canopy	33° 34′ 3″	85° 56' 3"
8 16 2007	2	Wood Duck	5	Sight	Riffle	33° 33' 53"	85° 56' 3"
8_16_2007	2	Muskrat	N/A	Tracks	Deposition	33° 34' 44"	85° 56' 3"
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 34' 44"	85° 56' 3"
8_16_2007	2	Muskrat	N/A	Tracks	Deposition	33° 33' 41"	85° 56' 20"
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 33' 44"	85° 56' 29"
8_16_2007	2	Beaver	N/A	Tracks	Deposition	33° 33' 44"	85° 56' 29"
8_16_2007	2	Raccoon	N/A	Tracks	Bank	33° 33' 45"	85° 56' 33"
8_16_2007	2	Great Blue Heron	1	Sight	Bank	33° 33' 45"	85° 56' 33"
8_16_2007	2	Mink	N/A	Tracks	Bank	33° 33' 47"	85° 56' 39"
8_16_2007	2	Great Blue Heron	1	Sight	Stream Canopy	33° 33' 47"	85° 56' 39"
8 16 2007	2	Green Heron	1	Sight	Stream Canopy	33° 33' 18"	85° 56' 45"
8_16_2007	2	Beaver	N/A	Tracks	Deposition	33° 33' 55"	85° 56' 50"
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 33' 55"	85° 56' 50"
8_16_2007	2	Great Blue Heron	1	Sight	Riffle	33° 34' 6"	85° 56' 49"
8_16_2007	2	Wood Duck	5	Sight	Bank	33° 34' 4"	85° 56' 37"
8_16_2007	2	Great Blue Heron	1	Sight	Bank	33° 34' 4"	85° 56' 37"
8_16_2007	2	Muskrat	1	Sight	Bank	33° 34' 4"	85° 56' 37"
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 34′ 4 33° 34′ 15″	85° 56' 52"
			N/A N/A			33° 34' 15	85° 57' 13"
8_16_2007	2	Dog Muskrat		Tracks	Deposition	33° 34' 2"	
8_16_2007	2		N/A	Tracks	Deposition		85° 57' 13"
8_16_2007	2	Great Blue Heron	N/A	Tracks	Deposition Mid Channel	33° 34' 2"	85° 57' 13"
8_16_2007	2	Deer	2	Sight	Mid-Channel	33° 33' 57"	85° 57' 19"
8_16_2007	2	Kingfisher	1	Sight	Deposition	33° 33' 53"	85° 57' 24"
8_16_2007	2	Wood Duck	1	Sight	Deposition	33° 33' 53"	85° 57' 24"

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
8_16_2007	2	Muskrat	N/A	Tracks	Deposition	33° 33' 49"	85° 57' 37"
8_16_2007	2	Beaver	N/A	Tracks	Deposition	33° 33' 49"	85° 57' 37"
8_16_2007	2	Kingfisher	1	Sight	Stream Canopy	33° 33' 49"	85° 57' 37"
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 33' 48"	85° 57' 51"
8_16_2007	2	Muskrat	N/A	Tracks	Deposition	33° 33' 48"	85° 57' 51"
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 33' 31"	85° 58' 21"
8_16_2007	2	Muskrat	N/A	Tracks	Deposition	33° 33' 31"	85° 58' 21"
8_16_2007	2	Deer	N/A N/A	Tracks	Deposition	33° 33' 10"	85° 58' 34"
8_16_2007 8_16_2007	2	Beaver Muskrat	N/A	Tracks Tracks	Deposition Deposition	33° 33' 10" 33° 33' 13"	85° 58' 34" 85° 58' 53"
8_16_2007	2	Beaver	N/A	Tracks	Deposition	33° 33' 13"	85° 58' 53"
8 16 2007	2	Muskrat	N/A	Tracks	Deposition	33° 33' 11"	85° 59' 12"
8_16_2007	2	Wood Duck	1	Sight	Stream Canopy	33° 33' 11"	85° 59' 12"
8 16 2007	2	Muskrat	N/A	Tracks	Deposition	33° 33' 10"	85° 59' 14"
8_16_2007	2	Raccoon	N/A	Tracks	Deposition	33° 33' 10"	85° 59' 14"
8_16_2007	2	Red-shouldered Hawk	1	Sight	Stream Canopy	33° 33' 10"	85° 59' 24"
8_16_2007	2	Beaver	N/A	Sign	Bank	33° 32' 34"	85° 59' 19"
8_16_2007	2	Owl sp.	1	Sight	Stream Canopy	33° 32' 34"	85° 59' 19"
8_16_2007	2	Muskrat	N/A	Tracks	Deposition	33° 32′ 30″	85° 59' 44"
8_16_2007	2	Beaver	N/A	Tracks	Deposition	33° 32′ 30"	85° 59' 44"
8_17_2007	3	Beaver	N/A	Tracks	Deposition	33° 33' 15"	86° 0' 30"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 33' 15"	86° 0' 30"
8_17_2007	3	Muskrat	N/A	Tracks	Deposition	33° 33' 15"	86° 0' 30"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 33' 19"	86° 0' 33"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 33' 26"	86° 0' 40"
8_17_2007	3	Green Heron	1	Sight	Stream Canopy	33° 33' 33" 33° 33' 33"	86° 0' 45"
8_17_2007	3	Red-shouldered Hawk Raccoon	1 N/A	Sight Tracks	Stream Canopy	33° 33' 33"	86° 0' 45" 86° 0' 45"
8_17_2007 8_17_2007	3	Great Blue Heron	N/A	Tracks	Deposition Deposition	33° 33' 30"	86° 0' 24"
8_17_2007	3	Beaver	N/A	Tracks	Deposition	33° 33' 30"	86° 0' 24"
8_17_2007	3	Beaver	N/A	Tracks	Deposition	33° 33' 19"	86° 0' 47"
8 17 2007	3	Raccoon	N/A	Tracks	Deposition	33° 33' 19"	86° 0' 47"
8_17_2007	3	Muskrat	N/A	Tracks	Deposition	33° 33' 19"	86° 0' 47"
8_17_2007	3	Mink	N/A	Tracks	Deposition	33° 33' 7"	86° 0' 56"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 33' 7"	86° 0' 56"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 33' 6"	86° 1' 11"
8_17_2007	3	Deer	N/A	Tracks	Deposition	33° 33' 6"	86° 1' 11"
8_17_2007	3	Dog	N/A	Tracks	Deposition	33° 33' 6"	86° 1' 11"
8_17_2007	3	Red-shouldered Hawk	1	Sight	Stream Canopy	33° 33' 17"	86° 1' 26"
8_17_2007	3	Wood Duck	1	Sight	Stream Canopy	33° 33' 17"	86° 1' 26"
8_17_2007 8_17_2007	3	Muskrat Raccoon	N/A N/A	Tracks Tracks	Deposition Deposition	33° 33' 17" 33° 33' 17"	86° 1' 26" 86° 1' 31"
8_17_2007	3	Beaver	N/A	Tracks	Deposition	33° 33' 17"	86° 1' 31"
8 17 2007	3	Great Blue Heron	1	Sight	Deposition	33° 33' 17"	86° 1' 31"
8_17_2007	3	Beaver	N/A	Tracks	Bank	33° 33' 6"	86° 2' 5"
8 17 2007	3	Kingfisher	N/A	Sign	Bank	33° 33' 6"	86° 2' 5"
8_17_2007	3	Cooper's Hawk	1	Sight	Stream Canopy	33° 32' 58"	86° 2' 8"
8_17_2007	3	Muskrat	N/A	Tracks	Deposition	33° 32' 58"	86° 2' 8"
8_17_2007	3	Beaver	N/A	Tracks	Deposition	33° 32' 58"	86° 2' 8"
8_17_2007	3	Muskrat	N/A	Tracks	Deposition	33° 32' 43"	86° 2' 17"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 32' 43"	86° 2' 17"
8_17_2007	3	Cooper's Hawk	1	Sight	Stream Canopy	33° 32' 43"	86° 2' 17"
8_17_2007	3	Muskrat	N/A	Tracks	Deposition	33° 32' 36"	86° 2' 37"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 32' 36"	86° 2' 37"
8_17_2007 8 17 2007	3	Kingfisher	N/A	Sign	Bank Stroom Canony	33° 32' 36" 33° 32' 20"	86° 2' 37" 86° 2' 59"
8_17_2007 8_17_2007	3	Kingfisher Muskrat	1 N/A	Sight Tracks	Stream Canopy Deposition	33° 32′ 20″	86° 2' 59"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 32' 20"	86° 2' 59"
8_17_2007	3	Kingfisher	1	Sight	Stream Canopy	33° 32' 26"	86° 3' 31"
8_17_2007	3	Beaver	N/A	Tracks	Deposition	33° 32' 32"	86° 3' 34"
8_17_2007	3	Muskrat	N/A	Tracks	Deposition	33° 32' 32"	86° 3' 34"
8_17_2007	3	Muskrat	N/A	Tracks	Deposition	33° 32' 44"	86° 3' 42"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 32' 44"	86° 3' 42"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 32' 42"	86° 3' 53"
8_17_2007	3	Beaver	N/A	Tracks	Deposition	33° 32' 21"	86° 3' 56"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 32' 21"	86° 3' 56"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 32' 44"	86° 4' 15"
8_17_2007	3	Kingfisher	1	Sight	Stream Canopy	33° 32' 44"	86° 4' 15"
8_17_2007	3	Green Heron	1	Sight	Stream Canopy	33° 32' 47"	86° 4' 15"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 32' 51"	86° 4' 17"

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)
8_17_2007	3	Beaver	N/A	Tracks	Deposition	33° 32' 51"	86° 4' 17"
8_17_2007	3	Muskrat	N/A	Tracks	Deposition	33° 32' 51"	86° 4' 17"
8_17_2007	3	Deer	1	Sight	Deposition	33° 32' 51"	86° 4' 17"
8_17_2007	3	Great Blue Heron	1	Sight	Deposition	33° 33' 7"	86° 4' 31"
8_17_2007	3	Raccoon	N/A	Tracks	Deposition	33° 33' 7"	86° 4' 43"
8_17_2007	3	Great Blue Heron	1	Sight	Stream Canopy	33° 32' 56"	86° 4' 44"
8_17_2007	3	Great Blue Heron	1	Sight	Stream Canopy	33° 32' 33"	86° 5' 0"
8_17_2007	3	Red-shouldered Hawk	1	Sight	Stream Canopy	33° 32' 33"	86° 5' 0"

Notes: EDR = Ecologically differentiable reach (see Figure 1) N/A = Not available or not applicable

N/R = Not recorded

Location/global positioning system coordinates in NAD 83; latitude and longitude in degrees, minutes, seconds.

TABLE 8A MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - BACKWATER AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	I	Sample Location:	LOWER - 1 BACKW	VATED					
		Sample Date:	28 October 2006	VAIER					
		Gear:	Petite Ponar Dredge	e (area –	0 033 sana	re meters)			
		Ccar.	T citic i onai bicag		0.023 3444	le illeters)			
				Tol.				Density	
Taxon:			Common Name	Index*	LBW-1	LBW-1R	Total	(no./m²)	Percent
Tubificida				III GIOX			10101	,	. 0.00
	Tubificidae								
		Limnodrilus sp.	tube worm	9.4	14	13	27	587	17.2%
		Quistadrilus multisetosus	tube worm	3.8	4	2	6	130	3.8%
Rhynchobd									
	Glossiphoni		laaah	0.5	1	1	2	42	4.20/
Basommato	phora	Gloiobdella elongata	leech	9.5	1	1	2	43	1.3%
Dasoninal	Physidae								
	Tiyolaac	Physa sp.	pouch snail	8.8		2	2	43	1.3%
	Planorbidae		F 311 011011					1	,.
		Helisoma anceps	orb snail	6.2	4		4	87	2.5%
Mesogastro									
	Viviparidae								
V		Campeloma sp.	mystery snail	6.5	1	3	3	65	1.9%
Veneroidea	Corbiculidae	1			1				
	Corbiculidae	Corbicula fluminea	Asiatic clam	6.1	1		1	22	0.6%
	Sphaeriidae		Asiatic ciairi	0.1	'		1	22	0.076
	Орнастиаас	Pisidium sp.	pill clam	6.5	35	21	56	1217	35.7%
Amphipoda			F						2011,70
	Crangonycti	dae							
		Crangonyx sp.	side swimmer	7.9		2	2	43	1.3%
Decapoda									
	Cambaridae		r. I	0.0				40	4.007
Enhamaran	toro	Orconectes sp.	crayfish	2.6	1	1	2	43	1.3%
Ephemerop	Caenide								
	Caeriide	Caenis latipennis	mayfly	7.4		1	1	22	0.6%
Odonata			mayny	7		·			0.070
	Libellulidae								
		Neurocordulia sp.	dragonfly	3.4	1		1	22	0.6%
Megaloptera									
	Sialidae		11.6						2.20/
Calaciata		Sialis sp.	alderfly	7.2	1		1	22	0.6%
Coleoptera	Elmidae								
	Liiiiuae	Dubiraphia vittata	riffle beetle	5.9	4	5	9	196	5.7%
	Hydrophilida		Time beetie	0.0			,	100	0.7 /0
	, sprimac	Berosus sp.	scavenger beetle	8.5	4	1	5	109	3.2%
Diptera		·							
	Ceratopogo								
	<u> </u>	Palpomyia gr.	biting midge	7.0		7	7	152	4.5%
	Chironomida								0.507
		Clinotanypus sp.	midge	8.7	2	2	4	87	2.5%
		Dicrotendipes sp. Polypedilum flavum	midge	8.1	5	1	6	130	3.8%
		Procladius sp.	midge midge	4.7 9.1	1	2	1 2	22 43	0.6% 1.3%
		Tanytarsus sp.	midge	6.7	8	7	15	326	9.6%
		Total Taxa	mago	0.7	15	16	21	020	0.070
		Total Specimens			86	71	157		100.0%
		Total Density (no./m²)						3,413	

*Reference:

TABLE 8B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - BACKWATER AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	LOWER - 1 BACI	KWATER	1				
	Sample Date:	15 May 2007						
	Gear:	Petite Ponar Dred	dge (are	a = 0.023 s	square met	ters)		
			Tol.				Density	
Taxon:		Common Name	Index*	LBW-1	LBW-1R	Total	(no./m2)	Percent
	-	Oommon Nume	macx		LDW III	Total	(110.71112)	1 CI OCIII
Haplota	axida Lumbricidae	earth worm	8.0		1	1	22	0.7%
Tubifici		eartii woiiii	0.0		'		22	0.7 70
	Tubificidae							
	Aulodrilus sp.	tube worm	5.5		1	1	22	0.7%
	Ilydrilus templetoni	tube worm	9.0	1	1	2	43	1.5%
	immature tubificid w/hair chaetae	tube worm	7.1	.		1	22	0.7%
	Limnodrilus sp.	tube worm	9.4	20	16	36	783	26.3%
Rhvnch	nobdellida	10.00					1	
	Glossiphonidae							
	Batrachobdella phalera	leech	7.7		2	2	43	1.5%
	Gloiobdella elongata	leech	9.5		2	2	43	1.5%
	Placobdella papillifera	leech	9.0		1	1	22	0.7%
Basom	matophora							
	Physidae						İ	
	Physa sp.	pouch snail	8.8		10	10	217	7.3%
	Planorbidae							
	Helisoma anceps	orb snail	6.2		12	12	261	8.8%
	astropoda							
	Pleuroceridae							
	Leptoxis sp.	rock snail	1.7	1	1	2	43	1.5%
'	Viviparidae							
	Campeloma sp.	mystery snail	6.5		3	3	65	2.2%
Venero								
,	Sphaeriidae							
	Pisidium sp.	pill clam	6.5		21	21	457	15.3%
Amphir							1	
(Crangonyctidae							
	Crangonyx sp.	side swimmer	7.9		1	1	22	0.7%
Hemipt								
	Corixidae	water boatman	9.0		1	1	22	0.7%
Trichop								
	Dipseudopsidae		0.0				40	4.50/
— .	Phylocentropus sp.	caddisfly	6.2	2		2	43	1.5%
	Leptoceridae		0.0				00	0.70/
Coloon	Mystacides sp.	caddisfly	2.6	11		1	22	0.7%
Coleop	era Elmidae						-	
	Dubiraphia vittata	riffle beetle	5.9	1		1	22	0.7%
Diptera	,	TITLE DEELIE	5.8	ı		<u> </u>		0.770
	Ceratopogonidae						+	
 	Bezzia sp.	biting midge	7.0		1	1	22	0.7%
	Ceratopogon sp.	biting midge	7.7		4	4	87	2.9%
-	Culicoides sp.	biting midge	7.7		2	2	43	1.5%
	Sphaeromias sp.	biting midge	6.0	9	1	10	217	7.3%
1	Chironomidae	billing milage	0.0	3	'	10		7.570
	Chironomini	midge	6.0	2		2	43	1.5%
	Clinotanypus sp.	midge	8.7		1	1	22	0.7%
	Cryptotendipes sp.	midge	6.2		1	1	22	0.7%
	Dicrotendipes sp.	midge	8.1	1	<u> </u>	1	22	0.7%
	Procladius sp.	midge	9.1	2	4	6	130	4.4%
	Tanytarsus sp.	midge	6.7	6	2	8	174	5.8%
-	Tipulidae		<u> </u>		- -		†	3.070
	Ormosia sp.	crane fly	6.3		1	1	22	0.7%
+	Total Taxa	orano ny	0.0	12	23	29		0.770
	Total Specimens			47	90	137	+	100.0%
+	Total Density (no./m²)			71	30	101	0.070	100.070
	Total Density (no./m)						2,978	

^{*}Reference:

TABLE 9A MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - DEPOSITIONAL AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 1 DEPO	SITION	AL				
		Sample Date:	28 October 2006						
		Gear:	Petite Ponar Dredg	e (area	= 0.023 so	uare meters	1		
			- Citto i Citai Dioag		_ 0.020 00)		
				Tol.				Density	
Taxon:			Common Name	Index*	LDEP-1	LDEP-1R	Total	(no./m²)	Percent
Alloeocoela									
	Plagiostomic								
		Hydrolimax grisea	flat worm	5.2	1		1	22	2.6%
Lumbricina									
	Lumbricidae		earth worm	8.0		1	1	22	2.6%
Tubificida									
	Tubificidae								
		Limnodrilus sp.	tube worm	9.4	11	19	30	652	78.9%
Veneroidea									
	Corbiculidae)							
		Corbicula fluminea	Asiatic clam	6.1	2	2	4	87	10.5%
	Sphaeriidae								
		Pisidium sp.	pill clam	6.5	1		1	22	2.6%
Coleoptera									
	Elmidae								
		Dubiraphia vittata	riffle beetle	5.9	•	1	1	22	2.6%
		Total Taxa			4	4	6		
		Total Specimens			15	23	38		100.0%
		Total Density (no./m²)						826	

^{*}Reference:

TABLE 9B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - DEPOSITIONAL AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 1 DEPOS	SITIONIAI					
		Sample Date:	15 May 2007	SITIONAL					
		Gear:	Petite Ponar Dredg	ne (area - 0.023	R square meters)				
		ocar.	r citic r onar breat	Tol.	square meters)			Density	
Taxon:			Common Name	Index*	LDEP-1	LDEP-1R	Total	(no./m²)	Percent
Tubificida			Common reame	Писх	LDLI -1	LDLI - IIX	Total	(1104)111)	1 Clocit
Tabilicida	Tubificidae								
	Tubillolado	Limnodrilus sp.	tube worm	9.4	14	26	40	870	26.8%
		Limnodrilus cervix	tube worm	9.9		8	8	174	5.4%
		Limnodrilus hoffmeiste		9.4		9	9	196	6.0%
		Quistadrilus multiseto	tube worm	3.8	1	-	1	22	0.7%
Arhynchobdellida	3								
,	Erpobdellidae								
		Mooreobdella sp.	leech	9.4	1		1	22	0.7%
Rhynchobdellida									
-	Glossiphonidae								
		Gloiobdella elongata	leech	9.5	8		8	174	5.4%
Mesogastropoda									
	Pleuroceridae			<u> </u>					
		Leptoxis sp.	rock snail	1.7	1	1	2	43	1.3%
	Viviparidae								
		Campeloma sp.	mystery snail	6.5	5	2	7	152	4.7%
Veneroidea								1	ļ
	Corbiculidae								
		Corbicula fluminea	Asiatic clam	6.1	2	3	5	109	3.4%
	Sphaeriidae								
		Pisidium sp.	pill clam	6.5		1	1	22	0.7%
Isopoda	A 11: 1								
	Asellidae								. ==:
		Caecidotea sp.	pill bug	9.1		11	1	22	0.7%
Ephemeroptera	D								
	Baetidae	Controntilum	man as effect	6.6		1	1	22	0.7%
	Ephemeridae	Centroptilum sp.	mayfly	0.0		I	ı	22	0.7%
	Epriemendae	Hexagenia munda	mayfly	4.9		2	2	43	1.3%
Coleoptera		пехауена типиа	Illayliy	4.5				43	1.370
Coleoptera	Elmidae								
	Limidac	Dubiraphia vittata	riffle beetle	5.9		2	2	43	1.3%
Diptera		Вивнарна чили	Time beene	0.0				70	1.570
Diptora	Ceratopogonidae	<u> </u>							
	o o ratopogor il aat	Bezzia sp.	biting midge	7.0	1		1	22	0.7%
		Ceratopogon sp.	biting midge	7.7	1				
		Culicoides sp.	biting midge	7.7	2		2	43	1.3%
		Sphaeromias sp.	biting midge	6.0	5	14	19	413	12.8%
	Chironomidae	,	, ,						
		Chironomus sp.	midge	9.6	1		1	22	0.7%
		Clinotanypus sp.	midge	8.7		1	1	22	0.7%
		Clinotanypus sp.	midge	8.7	1		1	22	0.7%
		Cryptotendipes sp.	midge	6.2		2	2	43	1.3%
		Dicrotendipes sp.	midge	8.1	3	1	4	87	2.7%
		Orthocladius sp.	midge	5.4		1	1	22	0.7%
		Paratendipes albiman		6.0		1	1	22	0.7%
		Polypedilum sp.	midge	5.6	1		1	22	0.7%
		Procladius sp.	midge	9.1	4	3	7	152	4.7%
		Stictochironomus caff	•	6.7		5	5	109	3.4%
		Tanytarsus sp.	midge	6.7	6	9	15	326	10.1%
		Total Taxa			17	20	28	1	
		Total Specimens			57	93	149	1	100.0%
		Total Density (no./m	')					3,239	

*Reference:

TABLE 10A MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 1 EMERG	ER - 1 EMERGENT AQUATIC VEGETATION						
		Sample Date:	29 October 2006							
		Gear:	Sweep Net							
				Tol.						
Taxon:			Common Name	Index*	LEAV-1	LEAV-1R	Total	Percent		
Basommato	phora									
	Physidae									
		Physa sp.	pouch snail	8.8	5		5	3.4%		
Mesogastro										
	Pleurocerid									
		Elimia sp.	horn snail	2.4		4	4	2.7%		
		Leptoxis sp.	rock snail	1.7	27	30	57	38.5%		
Ephemerop										
	Baetidae									
		Cloeon sp.	mayfly	4.0	2		2	1.4%		
		Procloeon sp.	mayfly	6.0		2	2	1.4%		
Odonata										
	Coenagrion	nidae								
		Enallagma sp.	damselfly	8.9	21	28	49	33.1%		
Trichoptera										
	Hydroptilida	ae								
		Oxyethira sp.	caddisfly	3.0	1		1	0.7%		
	Leptocerida									
		Triaenodes sp.	caddisfly	3.8	1		1	0.7%		
	Polycentrop	oodidae								
		Polycentropus sp.	caddisfly	3.5		2	2	1.4%		
Coleoptera										
•	Haliplidae									
	·	Peltodytes sp.	crawling water beetle	8.7	1		1	0.7%		
Diptera		1	_							
<u> </u>	Chironomic	lae								
		Paramerina sp.	midge	4.3		1	1	0.7%		
		Polypedilum illinoense gr.	midge	9.0	9	14	23	15.5%		
		Total Taxa			8	7	12			
		Total Specimens			67	81	148	100.0%		

^{*}Reference:

TABLE 10B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - EMERGENT AQUATIC VEGETATION AREA 1

		Sample Location:	LOWER - 1 EMERGEN	T AOUATIC	VEGETATIO	N		
		Sample Date:	15 May 2007	I AQUATIC	T	IN .		
		•	Sweep Net					
		Gear:	Sweep Net	Tol.				
T			ON	-	15014	LEAV 4D	T-4-1	D
Taxon:			Common Name	Index*	LEAV-1	LEAV-1R	Total	Percent
Tubificid								
		cidae		0.4	40			4.00/
		Limnodrilus sp.	tube worm	9.4	46		46	4.0%
		Limnodrilus hoffmeisteri	tube worm	9.4	5		5	0.4%
<u> </u>		Quistadrilus multisetosus	tube worm	3.8	1		1	0.1%
Rhyncho								
	Gloss	siphonidae						0.40/
		Helobdella triserialis	leech	9.2	1		1	0.1%
	Physi		1 2	0.0		_	45	4.00/
		Physa sp.	pouch snail	8.8	8	7	15	1.3%
		prbidae		0.0		_		0.40/
Mass		Helisoma anceps	orb snail	6.2		1	1	0.1%
Mesoga			h a m 9	0.4				0.407
		Elimia sp.	horn snail	2.4	070	1	1	0.1%
		Leptoxis sp.	rock snail	1.7	276	293	569	49.3%
		Leptoxis occulatata	rock snail	1.7		8	8	0.7%
	Vivipa	aridae		0.5				0.007
		Campeloma sp.	mystery snail	6.5	4		4	0.3%
Veneroid								
		culidae						0.00/
		Corbicula fluminea	Asiatic clam	6.1	20	3	23	2.0%
		eriidae			400			17.00/
		Pisidium sp.	pill clam	6.5	192	11	203	17.6%
Epheme								
	Baeti							0.40/
		Centroptilum sp.	mayfly	6.6		1	1	0.1%
	Tricor	rythidae						
		Tricorythodes sp.	mayfly	5.0		1	1	0.1%
Odonata								
		hnidae						
		Boyeria sp.	dragonfly	5.9	1		1	0.1%
	Coen	agrionidae						
		Enallagma sp.	damselfly	8.9		1	1	0.1%
	Libell	ulidae						
		Didymops transversa	dragonfly	2.3	1		1	0.1%
Plecopte								
	Perlic							
		Perlesta sp.	stonefly	4.7		2	2	0.2%
Hemipte								
	Belos	stomatidae	1					0.007
		Belostoma sp.	giant water bug	9.8		2	2	0.2%
		veliidae						0.007
		Mesovelia mulsanti	water treader	6.0		4	4	0.3%
Trichopt								
		ptilidae	1					0.007
<u> </u>		Hydroptila sp.	caddisfly	6.2		4	4	0.3%
Coleopte								
	Elmid				_			
		Dubiraphia vittata	riffle beetle	5.9	2	1	3	0.3%
		Macronychus glabratus	riffle beetle	4.5		4	4	0.3%
		Microcylloepus pusillus	riffle beetle	2.1	3	1	4	0.3%
	Halipl							
		Haliplus sp.	crawling water beetle	8.7	2		2	0.2%
		henidae						
		Psephenus herricki	water penny	2.3		1	1	0.1%

TABLE 10B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	LOWER - 1 EMERGEN	IT AQUATIC	VEGETATIO	N		
	Sample Date:	15 May 2007					
	Gear:	Sweep Net					
			Tol.				
Taxon:		Common Name	Index*	LEAV-1	LEAV-1R	Total	Percent
Diptera							
	Ceratopogonidae						
	Bezzia sp.	biting midge	7.0		23	23	2.0%
	Mallachohelia sp.	biting midge	6.0	1		1	0.1%
	Sphaeromias sp.	biting midge	6.0	8		8	0.7%
	Chironomidae						
	Ablabesmyia mallochi	midge	7.2	7		7	0.6%
	Chironomus sp.	midge	9.6	4		4	0.3%
	Cricotopus sp.	midge	6.3	1	7	8	0.7%
	Cryptochironomus fulvus gr.	midge	6.4	4		4	0.3%
	Cryptotendipes sp.	midge	6.2	1		1	0.1%
	Dicrotendipes sp.	midge	8.1	29	10	39	3.4%
	Orthocladius sp.	midge	5.4		3	3	0.3%
	Paracladopelma sp.	midge	5.5	3		3	0.3%
	Phaenopsectra obedians gr.	midge	6.5	12	3	15	1.3%
	Phaenopsectra punctipes gr.	midge	6.5		3	3	0.3%
	Polypedilum illinoense gr.	midge	9.0	7	92	99	8.6%
	Procladius sp.	midge	9.1	16		16	1.4%
	Rheotanytarsus sp.	midge	5.9		4	4	0.3%
	Tanytarsus sp.	midge	6.7		7	7	0.6%
	Thienemanniella sp.	midge	5.8		1	1	0.1%
	Total Taxa			26	28	44	
	Total Specimens			655	499	1,154	100.0%

*Reference:

TABLE 11A MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 1 RIFFLE					
		Sample Date:	28 October 2006	-				
		Gear:	Kick Net					
		Ocai.	Mick Net	Tol.				
Taxon:			Common Name	Index*	LRIF-1	LRIF-1R	Total	Percent
Tricladida				ПООХ			10101	1 0100111
	Planariidae							
		Dugesia tigrina	flat worm	7.2	1		1	0.3%
Lumbricina			1.00.00		-		-	0.07,0
	Lumbricidae		earth worm	8.0	5	4	9	2.4%
Basommato	ophora							
	Physidae							
		Physa sp.	pouch snail	8.8		1	1	0.3%
Mesogastro	poda		1					
	Pleurocerida	ae						
		Leptoxis sp.	rock snail	1.7	40	27	67	17.6%
Veneroidea								
	Corbiculidae)						
		Corbicula fluminea	Asiatic clam	6.1		2	2	0.5%
Ephemerop	tera							
	Baetidae							
		Baetis sp.	mayfly	4.5	3		3	0.8%
		Heterocloeon sp.	mayfly	2.0	4		4	1.1%
		Procloeon sp.	mayfly	6.0	1		1	0.3%
	Heptageniid	ae						
		Stenonema sp.	mayfly	3.5	5	2	7	1.8%
		Stenonema mediopunctatum	mayfly	3.7	3	5	8	2.1%
	Isonychiidae)						
		Isonychia sp.	mayfly	3.4	95	65	160	42.1%
Odonata								
	Coenagrioni	dae						
		<i>Argia</i> sp.	damselfly	8.2		1	1	0.3%
	Gomphidae		dragonfly	4.0	1	1	2	0.5%
Megalopter								
	Corydalidae							
		Corydalus cornutus	dobsonfly	5.1		2	2	0.5%
Trichoptera								
	Hydropsych							
		Cheumatopsyche sp.	caddisfly	6.2	35	49	84	22.1%
		Hydropsyche sp.	caddisfly	4.3	2		2	0.5%
		Hydropsyche bronta	caddisfly	5.0		9	9	2.4%
		Hydropsyche frisoni	caddisfly	1.8		1	1	0.3%
	Philopotami		<u> </u>			ļ		
		Chimarra obscura	caddisfly	2.7	3	1	4	1.1%
Coleoptera	<u></u>							
	Elmidae		100					
		Microcylloepus pusillus	riffle beetle	2.1	2		2	0.5%
		Optioservus sp.	riffle beetle	2.3	1		1	0.3%
		Stenelmis crenata gr.	riffle beetle	5.1	1	7	8	2.1%
Diptera	0:							
	Simuliidae	Cinc. I'm an	11. 1.0	4.0				0.007
		Simulium sp.	black fly	4.0		1	1	0.3%
		Total Taxa			16	16	23	
ĺ		Total Specimens			202	178	380	100.0%

^{*}Reference:

TABLE 11B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

			Sample Location:	LOWER - 1 RIFFLE					
Gear: Kick Net Tol.									
Common Name									
Basommatophora					Tol.				
Ancylidae Ferrissia rivularis Impet snall 6.6 1	Taxon:			Common Name	Index*	LRIF-1	LRIF-1R	Total	Percent
Physician Phys	Basommatophora								
Physidae		Ancylidae							
Physa sp. pouch snail 8.8 2 2 0.5			Ferrissia rivularis	limpet snail	6.6	1		1	0.1%
Mesogastropoda Peluroceridae		Physidae	Division		0.0				0.00/
Pleurocendae	Managanada		Physa sp.	pouch snail	8.8	2		2	0.3%
Elimia sp. horn snail	wesogastropoda	Dlaurocari	dae						
Leptoxis pp. rock snail 1.7 67 126 193 26.6 Leptoxis occuletata rock snail 1.7 23 43 66 9.0 Corbiculdae Co		i leuroceri		horn snail	2.4	3	4	7	1.0%
Leptoxis occuletata rock snall 1.7 23 43 66 9.0									26.4%
Veneroides									9.0%
Corbicula fluminea Asiatic clam 6.1 9 22 31 4.2	Veneroidea						-		
Sphaeriidae		Corbiculida	ae						
Pisclium sp. pill clam 6.5 2 2 2 0.3			Corbicula fluminea	Asiatic clam	6.1	9	22	31	4.2%
Ephemeropitera Baetidae		Sphaeriida							
Baetidae Baetidae			Pisidium sp.	pill clam	6.5		2	2	0.3%
Baetis sp. mayfly	Ephemeroptera	5							
Heterochoen sp. mayfly 2.0 1 1 0.1		Baetidae	Destis en		4.5				0.50/
Ephemerellidae									0.5%
Serratella sp. mayfly 1.5 21 7 28 3.5		Enhemero		таупу	∠.U	1		1	0.1%
Heptagenidae		Lpnemere		mayfly	1.5	21	7	28	3.8%
Stenonema sp.		Hentageni		mayny	1.0	21	'	20	3.070
Isonychiidae		r iopiagorii		mavflv	3.5	6	5	11	1.5%
Perlidae		Isonychiida		,,			-		
Perlidae			Isonychia sp.	mayfly	3.4	6	7	13	1.8%
Megaloptera Corydalidae	Plecoptera								
Megaloptera		Perlidae							
Corydalidae Corydalus cornutus Cornutus Cornutus cornutus Cornutus cornutus Cornu			Perlesta sp.	stonefly	4.7		1	1	0.1%
Corydalus cornutus	Megaloptera								
Trichoptera Hydropsychidae Cheumatopsyche sp. Caddisfly 6.2 57 12 69 9.4		Corydalida							0.50/
Hydropsychidae	Triabantana		Corydalus cornutus	dobsonfly	5.1	2	2	4	0.5%
Cheumatopsyche sp. caddisfly 6.2 57 12 69 9.4	Trichoptera	Hydroneyd	hidae						
Hydropsyche sp. caddisfly 4.3 4 4 4 0.5		Пушораус		caddisfly	6.2	57	12	69	9.4%
Hydropsyche nr. better						01			0.5%
Hydropsyche bronta						28			3.8%
Lepidostoma sp. Caddisfly 0.9 1 1 0.1							35		23.2%
Petrophila sp. moth 2.1 2 2 0.3		Lepidostor	natidae						
Pyraulidae Petrophila sp. moth 2.1 2 2 0.3			Lepidostoma sp.	caddisfly	0.9	1		1	0.1%
Petrophila sp. moth 2.1 2 2 0.3	Lepidoptera								
Elmidae Elmidae		Pyraulidae							
Elmidae	0.1		Petrophila sp.	moth	2.1	2		2	0.3%
Microcylloepus pusillus	Coleoptera	Elmidos							
Optioservus sp. riffle beetle 2.3 2 2 0.3 Stenelmis crenata gr. riffle beetle 5.1 9 2 11 1.5 Diptera		Eimidae	Microcylloenus nusillus	riffle heetle	2.1	30		30	5.3%
Stenelmis crenata gr.									0.3%
Diptera Chironomidae Chironomidae Corynoneuria sp. midge 6.0 1 1 0.1							2		1.5%
Chironomidae Corynoneuria sp. midge 6.0 1 1 0.1	Diptera		J. J. J. J. J. J. J. J. J. J. J. J. J. J				_	• •	1.0,0
Eukiefferiella devonica midge 2.5 5 5 0.7		Chironomi	dae						
Eukiefferiella gracei gr. midge 3.4 2 2 0.3 Paratanytarsus sp. (ter midge 8.4 1 1 1 0.1 Polypedilum sp. midge 5.6 2 2 2 0.3 Polypedilum illinoense midge 9.0 6 6 0.8 Rheotanytarsus sp. midge 5.9 13 13 1.8 Tvetenia sp. midge 3.6 7 7 1.0 Simuliidae Simuliidae 5 5 0.7 Total Taxa 27 16 32			Corynoneuria sp.			1			0.1%
Paratanytarsus sp. (ter midge 8.4 1 1 1 0.1									0.7%
Polypedilum sp. midge 5.6 2 2 0.3						2			0.3%
Polypedilum illinoense midge 9.0 6 6 0.8									0.1%
Rheotanytarsus sp. midge 5.9 13 13 1.8 Tvetenia sp. midge 3.6 7 7 1.0 Simuliidae Simuliim sp. black fly 4.0 5 5 5 0.7 Total Taxa 27 16 32 32						_	2		0.3%
Tvetenia sp. midge 3.6 7 7 1.0 Simuliidae Simuliidae 5 5 0.7 Total Taxa 27 16 32				J					0.8%
Simuliidae Jack fly 4.0 5 5 0.7 Total Taxa 27 16 32									1.8%
Simulium sp. black fly 4.0 5 5 0.7 Total Taxa 27 16 32		Simuliidaa		miage	3.6			/	1.0%
		Jimullidae		black fly	4.0	5		5	0.7%
				DIACK HY	4.0		16		0.7 /0
I I I I I I I I I I I I I I I I I I I			Total Specimens			457	275	732	100.0%

*Reference:

TABLE 12A MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 1 RUN					
		Sample Date:	28 October 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	LRUN-1	LRUN-1R	Total	Percent
Tricladida								
	Planariidae							
		Dugesia tigrina	flat worm	7.2		1	1	0.3%
Lumbricina								
	Lumbricidae		earth worm	8.0	2	1	3	1.0%
Basommato	ophora							
	Physidae							
		Physa sp.	pouch snail	8.8	1		1	0.3%
Mesogastro								
	Pleurocerida							
		Elimia sp.	horn snail	2.4	24	27	51	16.3%
		Leptoxis sp.	rock snail	1.7	40	34	74	23.6%
Veneroidea								
	Corbiculidae							
		Corbicula fluminea	Asiatic clam	6.1	16	31	47	15.0%
Ephemerop								
	Baetidae							
		Baetis sp.	mayfly	4.5	1		1	0.3%
	Heptageniid							
		Stenonema sp.	mayfly	3.5		3	3	1.0%
		Stenonema mediopunctatum	mayfly	3.7	16	1	17	5.4%
	Isonychiidae							
		Isonychia sp.	mayfly	3.4	40	25	65	20.8%
Odonata	ļ	1.						
	Coenagrion							0.00/
		Argia sp.	damselfly	8.2	1		1	0.3%
Megalopter								
	Corydalidae							0.00/
Triobantana		Corydalus cornutus	dobsonfly	5.1	1	1	2	0.6%
Trichoptera		ido	+					
	Hydropsych		and diafty	6.0	10	00	20	10.50/
	+	Cheumatopsyche sp. Hydropsyche bronta	caddisfly	6.2	13	26 1	39 1	12.5%
Colooptors	1	пуиторѕусне втопта	caddisfly	5.0			I	0.3%
Coleoptera	Elmidae							
	Lilliuae	Microcylloepus pusillus	riffle beetle	2.1		2	2	0.6%
	+	Optioservus sp.	riffle beetle	2.3	2	1	3	1.0%
		Stenelmis crenata gr.	riffle beetle	5.1		1	1	0.3%
Diptera	+	Giorialia gr.	Time beetie	0.1		<u>'</u>		0.070
Diploid	Chironomida	ae						
	33.1011110	Polypedilum illinoense gr.	midge	9.0	1		1	0.3%
		Total Taxa	1111490	0.0	13	14	18	0.070
	†	Total Specimens	†	1	158	155	313	100.0%

^{*}Reference:

TABLE 12B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - RUN AREA 1

	Sample Location	•	LOWER - 1 RUN					
	Sample Date:	•	15 May 2007					
	Gear:		Kick Net					
	Ocar:		INION NOT	Tol.				
Taxon:			Common Name	Index*	LRUN-1	LRUN-1R	Total	Percent
Hoploneme	rtea				-	-		
•	Tetrastemmatidae							
	Prostoma graecer	ise	proboscis worm	6.1	1		1	0.2%
Haplotaxida								
	Lumbricidae		earth worm	8.0		1	1	0.2%
	Naididae							
	Nais sp.		naid worm	8.7	6	5	11	2.3%
Rhynchobd								
	Glossiphonidae							
	Helobdella sp.		leech	9.0		1	1	0.2%
Basommato								
	Ancylidae				_			
<u> </u>	Ferrissia rivularis		limpet snail	6.6	3	2	5	1.0%
<u> </u>	Laevapex fuscus		limpet snail	7.5	1		1	0.2%
	Physidae			0.0				44.70/
	Physa sp.		pouch snail	8.8	1	56	57	11.7%
	Planorbidae	<u>, </u>	. "	4.0				4.00/
	Gyraulus sp. (tent		orb snail	4.2		6	6	1.2%
Managara	Micromenetus dili	atus	orb snail	8.3	2		2	0.4%
Mesogastro								
	Pleuroceridae		horn anail	2.4		2	2	0.40/
	Elimia sp. Leptoxis sp.		horn snail rock snail	2.4 1.7	73	79	2 152	0.4% 31.1%
	Leptoxis sp. Leptoxis occulata	in.	rock snail	1.7	18	28	46	9.4%
Veneroidea		а	TOCK SHAII	1.7	10	20	40	9.4%
veneroidea	Corbiculidae							
	Corbicula fluminea	9	Asiatic clam	6.1	2	15	17	3.5%
Decapoda	Gorbicala namine	4	Asiatic ciam	0.1		13	17	3.570
Всоароча	Cambaridae							
	Orconectes sp.		crayfish	2.6		1	1	0.2%
Ephemerop								71277
	Ephemerellidae							
	Serratella sp.		mayfly	1.5	1	4	5	1.0%
	Heptageniidae		, ,					
	Stenonema sp.		mayfly	3.5	7	11	18	3.7%
	Isonychiidae							
	Isonychia sp.		mayfly	3.4	1	3	4	0.8%
	Tricorythidae							
	Tricorythodes sp.		mayfly	5.0	1	4	5	1.0%
Odonata								
	Aeschnidae			ļ				
	Boyeria sp.		dragonfly	5.9		1	11	0.2%
	Coenagrionidae							
<u> </u>	Argia sp.		damselfly	8.2		1	1	0.2%
	Gomphidae		dragonfly	5.0		2	2	0.4%
Diagratia	Lanthus sp.		dragonfly	1.5	1		1	0.2%
Plecoptera	Davida			ļ				
	Perlidae		ata :fl	4 7				4.00/
Mogelepter	Perlesta sp.		stonefly	4.7	1	4	5	1.0%
Megaloptera								
	Corydalidae Corydalus cornutu	10	dobconfly	F 1	1		1	0.20/
	Corydaius cornutt	।১	dobsonfly	5.1	1		1	0.2%

TABLE 12B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	LOWER - 1 RUN					
	Sample Date:	15 May 2007					
	Gear:	Kick Net					
	000.1	THOR HOL	Tol.				
Taxon:		Common Name	Index*	LRUN-1	LRUN-1R	Total	Percent
Trichoptera							
	Brachycentridae						
	Brachycentrus sp.	caddisfly	0.8		1	1	0.2%
	Micrasema sp.	caddisfly	0.6	1		1	0.2%
	Glossosomatidae	ĺ					
	Glossosoma sp.	caddisfly	1.5		1	1	0.2%
	Hydropsychidae	ĺ					
	Cheumatopsyche sp.	caddisfly	6.2	10	16	26	5.3%
	Hydropsyche sp.	caddisfly	4.3	1	1	2	0.4%
	Hydropsyche bronta	caddisfly	5.0	8	18	26	5.3%
	Hydropsyche venularis (tent.)	caddisfly	4.9		3	3	0.6%
	Hydroptilidae	,					
	Hydroptila sp.	caddisfly	6.2		1	1	0.2%
	Lepidostomatidae	,					
	Lepidostoma sp.	caddisfly	0.9	15	38	53	10.9%
	Leptoceridae						
	Mystacides sp.	caddisfly	2.6	1		1	0.2%
Coleoptera	,	,					
	Elmidae						
	Macronychus glabratus	riffle beetle	4.5		1	1	0.2%
	Microcylloepus pusillus	riffle beetle	2.1	4	6	10	2.0%
	Optioservus ovalis	riffle beetle	4.0		3	3	0.6%
	Psephenidae						
	Psephenus herricki	water penny	2.3		1	1	0.2%
Diptera							
	Chironomidae						
	Ablabesmyia annulata	midge	3.5		1	1	0.2%
	Cryptochironomus fulvus gr.	midge	6.4		1	1	0.2%
	Nanocladius sp.	midge	7.1		1	1	0.2%
	Polypedilum sp.	midge	5.6	1		1	0.2%
	Polypedilum scalaenum gr.	midge	8.4	1		1	0.2%
	Rheotanytarsus exiguum gr.	midge	5.9		7	7	1.4%
	Total Taxa	Ĭ		25	35	44	
	Total Specimens			162	326	488	100.0%

*Reference:

TABLE 13A MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - BACKWATER AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 2 BACKV	VATER					
		Sample Date:	29 October 2006						
		Gear:	Petite Ponar Dredg	e (area =	0.023 squa	re meters)			
			J						
				Tol.				Density	
Taxon:			Common Name	Index*	LBW-2	LBW-2R	Total	(no./m²)	Percent
Alloeocoela									
	Plagiostomic								
		Hydrolimax grisea	flat worm	5.2	1		1	22	0.6%
Lumbricina									
-	Lumbricidae		earth worm	8.0		2	2	43	1.2%
Tubificida	T. 1. 10 - 1.1.								
	Tubificidae	I increasing a	4	0.4	20	24	F.4	4474	22.50/
		Limnodrilus sp. Quistadrilus multisetosus	tube worm	9.4	20 1	34	54 1	1174 22	33.5% 0.6%
Rhynchobde	llida	Quistaurius muitisetosus	tube worm	3.8	ı		ı	22	0.6%
KTIYTICTIODUE	Glossiphonii	idaa							
	Giossipiioiiii	Gloiobdella elongata	leech	9.5		1	1	22	0.6%
Mesogastro	noda	Giolobaciia ciorigata	ICCOIT	0.0		· '			0.070
ooogaotio	Viviparidae							1	
	paridao	Campeloma sp.	mystery snail	6.5	1		1	22	0.6%
Veneroidea			myotory or an	0.0					0.070
	Sphaeriidae								
		Pisidium sp.	pill clam	6.5	6		6	130	3.7%
Isopoda		·							
•	Asellidae								
		Caecidotea sp.	pill bug	9.1	8	2	10	217	6.2%
Ephemeropt		·							
	Ephemerida								
		Hexagenia limbata	mayfly	4.9	5	6	11	239	6.8%
	Heptageniid								
		Stenonema mediopunctatum	mayfly	3.7	1		1	22	0.6%
Trichoptera									
	Brachycentr								
	Hydropsych		11: 0	0.0				00	0.007
	5	Cheumatopsyche sp.	caddisfly	6.2	1		1	22	0.6%
	Polycentrop			0.0		2	2	C.F.	4.00/
		Phylocentropus sp.	caddisfly caddisfly	6.2	2	3	3	65	1.9%
Coleoptera		Polycentropus sp.	caddistry	3.5	3		3	65	1.9%
Coleoptera	Elmidae								
	Limidae	Dubiraphia vittata	riffle beetle	5.9	5		5	109	3.1%
Diptera		Варнарна чната	Time beene	0.0			<u> </u>	103	3.170
Diptora	Ceratopogo	nidae							
		Sphaeromias sp.	biting midge	6.0	3	5	8	174	5.0%
	Chironomida		Jan G				-		
		Ablabesmyia annulata	midge	3.5		1	1	22	0.6%
		Chironomus sp.	midge	9.6		2	2	43	1.2%
		Corynoneuria sp.	midge	6.0	1		1	22	0.6%
		Cryptochironomus fulvus gr.	midge	6.4	4		4	87	2.5%
		Clinotanypus sp.	midge	8.7	-	1	1	22	0.6%
		Paratanytarsus sp.	midge	8.4	2		2	43	1.2%
		Paralaterborniella nigrohalteralis		4.9		2	2	43	1.2%
		Paratendipes albimanus	midge	6.0	6		6	130	3.7%
		Polypedilum halterale gr.	midge	7.3		13	13	283	8.1%
		Polypedilum scalaenum gr.	midge	8.4	2	13	15	326	9.3%
ļ	<u> </u>	Tanytarsus sp.	midge	6.7	3	2	5	109	3.1%
	Empididae		dance fly	7.6	1		1	22	0.6%
		Total Taxa			19	14	27		400.007
		Total Specimens		ļ	74	87	161		100.0%
		Total Density (no./m²)						3,500	

^{*}Reference:

Lenat, David R. 1993. A Biotic Index for the Southeastern United States: Derivation and List of Tolerance Values, with Criteria for Assigning Water-quality Ratings. Journal of the North American Benthological Society, Volume 12, Number 3, Pages 279 - 290.

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TABLE 13B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - BACKWATER AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 2 BAC	KWATER					
		Sample Date:	15 May 2007						
		Gear:	Petite Ponar Dred	dge (area	= 0.023	square met	erel		
		000.1	· outo i ondi Dio	Tol.	- 0.020		,	Density	
Taxon:			Common Name	Index*	LBW-2	LBW-2R	Total	(no./m2)	Percent
Tubificida			Common Nume	IIIdox	LDW L	LDII LIK	i Otai	(110.31112)	1 Crocne
Tubilicida	Tubific	idae							
	Tabilit	Limnodrilus sp.	tube worm	9.4	33	5	38	826	22.6%
Mesogastro	noda	Emmouride op.	tabo wom	0.1			- 00	020	22.070
Mooogaotto		ceridae							
		Leptoxis sp.	rock snail	1.7	1	6	7	152	4.2%
	Vivipa						-		,
		Campeloma sp.	mystery snail	6.5		6	6	130	3.6%
Veneroidea			, in the second				_		
	Corbic	ulidae							
		Corbicula fluminea	Asiatic clam	6.1	1	4	5	109	3.0%
	Sphae	riidae							
		Pisidium sp.	pill clam	6.5	3		3	65	1.8%
Amphipoda		·							
	Crang	onyctidae							
		Crangonyx sp.	side swimmer	7.9		1	1	22	0.6%
Isopoda									
	Asellic								
		Caecidotea sp.	pill bug	9.1		5	5	109	3.0%
Ephemerop									
	Ephen	neridae							
		Hexagenia limbata	mayfly	4.9	6	16	22	478	13.1%
Megaloptera									
	Sialida								
		Sialis sp.	alderfly	7.2	2	1	3	65	1.8%
Trichoptera	D:	1							
	Dipsei	udopsidae	- - - - - - - -	0.0				40	4.00/
0-1		Phylocentropus sp.	caddisfly	6.2	2		2	43	1.2%
Coleoptera	Classials							1	
	Elmida		riffle beetle	5.9		10	10	217	6.0%
Diptera		Dubiraphia vittata	rille beetle	5.9		10	10	217	6.0%
Dipiera	Corato	l ppogonidae							
	Ceraic	Ceratopogon sp.	biting midge	7.7		1	1	22	0.6%
		Sphaeromias sp.	biting midge	6.0		2	2	43	1.2%
	Chiron	nomidae	Diang inage	0.0				-10	1.2/0
<u> </u>	5.11101	Ablabesmyia sp.	midge	7.2		3	3	65	1.8%
	<u> </u>	Clinotanypus sp.	midge	8.7		1	1	22	0.6%
		Cryptochironomus fulvus gr.	midge	6.4		3	3	65	1.8%
		Cryptotendipes sp.	midge	6.2		2	2	43	1.2%
		Dicrotendipes sp.	midge	8.1		1	1	22	0.6%
		Endochironomus sp. (tent.)		7.8	1		1	22	0.6%
		Epoicocladius sp.	midge	0.0		1	1	22	0.6%
		Natarsia sp.	midge	9.9	1	2	3	65	1.8%
		Paratendipes albimanus	midge	6.0		2	2	43	1.2%
		Phaenopsectra obedians gr.	midge	6.5		1	1	22	0.6%
		Polypedilum scalaenum gr.	midge	8.4	5	16	21	457	12.5%
		Procladius sp.	midge	9.1	3	6	9	196	5.4%
		Tanytarsus sp.	midge	6.7	4	11	15	326	8.9%
		Total Taxa			12	23	26		
		Total Specimens			62	106	168		100.0%
		Total Density (no./m²)						3,652	

^{*}Reference:

TABLE 14A MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - DEPOSITIONAL AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 2 DEPOS	SITIONA	\1				
		Sample Date:	29 October 2006		\ <u></u>				
		Gear:	Petite Ponar Dredg	le (area	a = 0.023 so	luare meters	1		
		Cour.	T cate i chai bicag	Je (area	- 0.020 30		,		
				Tol.				Density	
Taxon:			Common Name	Index*	LDEP-2	LDEP-2R	Total	(no./m²)	Percent
Lumbricina				шсх				,	. 0.00
Zamonoma	Lumbricidae		earth worm	8.0	42	10	52	1130	55.3%
Tubificida								1	
	Tubificidae								
		Quistadrilus multisetosus	tube worm	3.8	4	2	6	130	6.4%
Basommato	phora								
	Physidae								
		Physa sp.	pouch snail	8.8	1		1	22	1.1%
Mesogastro									
	Pleurocerida								
		Leptoxis sp.	rock snail	1.7		1	1	22	1.1%
Veneroidea									
	Corbiculidae								
		Corbicula fluminea	Asiatic clam	6.1		7	7	152	7.4%
	Sphaeriidae							 	
		Pisidium sp.	pill clam	6.5	2		2	43	2.1%
Amphipoda									
	Gammarida		., .	0.0				400	0.40/
1		Gammarus fasciatus	side swimmer	8.8		6	6	130	6.4%
Isopoda	A sallida s							1	
	Asellidae	Caecidotea sp.	pill bug	9.1		1	1	22	1.1%
Coleoptera		Caeciuotea sp.	pili bug	9.1		 ' 	- 1		1.170
Coleoptera	Elmidae					+		+	
	Limidae	Dubiraphia vittata	riffle beetle	5.9		6	6	130	6.4%
		Macronychus glabratus	riffle beetle	4.5		1	1	22	1.1%
Diptera	1	mae. e.ry errae graziatae	11110 500110			† ' †	· ·	† 	11170
p	Ceratopogo	nidae				†		1	
		Sphaeromias sp.	biting midge	6.0	1	1	2	43	2.1%
	Chironomida		3 3						
		Phaenopsectra obedians gr.	midge	6.5		1	1	22	1.1%
		Tanypodinae	midge	6.0		3	3	65	3.2%
	Tipulidae								
		Gonomyia sp.	crane fly	4.0	4		4	87	4.3%
		Tipula sp.	crane fly	7.3	1		1	22	1.1%
		Total Taxa			7	11	15		
		Total Specimens			55	39	94		100.0%
		Total Density (no./m²)						2,043	

*Reference:

TABLE 14B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - DEPOSITIONAL AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	Sample Location: LOWER - 2 DEPOSITIONAL						
	Sample Date:	15 May 2007	<u> </u>					
	Gear:	Petite Ponar Dre	dge (ar	ea = 0.023	square mete	rs)		
	- Court	r otito i oriai bio	Tol.	0.020	l l	,	Density	
Taxon:		Common Name		LDEP-2	LDEP-2R	Total	(no./m2)	Percent
Nematoda		round worm	6.0	1		1	22	0.4%
Tubificida		Todria Woriii	0.0					0.470
Tabiliolaa	Tubificidae							
	Branchiura sowerybi	tube worm	8.3		1	1	22	0.4%
	immature tubificid w/hair chaetae		7.1	7	· ·	7	152	2.8%
	Limnodrilus sp.	tube worm	9.4	48	20	68	1478	27.5%
	Limnodrilus hoffmeisteri	tube worm	9.4	21	30	51	1109	20.6%
	Quistadrilus multisetosus	tube worm	3.8		3	3	65	1.2%
Basommato		tabe weiiii	0.0				- 00	1.270
Basominat	Ancylidae							
	Ferrissia rivularis	limpet snail	6.6		1	1	22	0.4%
	Physidae Physidae	inipot oriali	0.0		'			0.770
	Physa sp.	pouch snail	8.8	2		2	43	0.8%
Mesogastro		podon ondi	0.0		+		10	0.070
Moodgaoare	Pleuroceridae							
	Leptoxis sp.	rock snail	1.7	8	4	12	261	4.9%
	Viviparidae	Took onan		- ŭ	·		20.	1.070
	Campeloma sp.	mystery snail	6.5		1	1	22	0.4%
Veneroidea		myotory orian	0.0		·	•		0.170
VOIIOIOIGO	Corbiculidae							
	Corbicula fluminea	Asiatic clam	6.1	2		2	43	0.8%
	Sphaeriidae	7 tolatio olam	0	_				0.070
	Pisidium sp.	pill clam	6.5	30	8	38	826	15.4%
Coleoptera		piii diairi	0.0	- 00	, i		020	10.170
Colcoptora	Elmidae							
	Dubiraphia vittata	riffle beetle	5.9	1	4	5	109	2.0%
Diptera	Dubinapina vittata	Timo bootio	0.0	•	·		100	2.070
2.pto.a	Ceratopogonidae							
	Sphaeromias sp.	biting midge	6.0	5	5	10	217	4.0%
	Chironomidae	Simily image	0.0					
	Chironomus sp.	midge	9.6	2	1	3	65	1.2%
	Cryptotendipes sp.	midge	6.2	1	1	2	43	0.8%
	Paracladopelma sp.	midge	5.5	1	† †	_	22	0.4%
	Phaenopsectra obedians gr.	midge	6.5	1	1	2	43	0.8%
	Polypedilum sp.	midge	5.6	•	1		22	0.4%
	Polypedilum illinoense gr.	midge	9.0	2	1	2	43	0.8%
	Polypedilum scalaenum gr.	midge	8.4	3		3	65	1.2%
	Procladius sp.	midge	9.1	6	5	11	239	4.5%
	Stictochironomus caffrarius gr.	midge	6.5		1	1	22	0.4%
	Tanytarsus sp.	midge	6.7	8	10	18	391	7.3%
	Thienemannimyia gr.	midge	6.0	1	'	1	22	0.4%
	Total Taxa	mago	0.0	19	17	25		0.170
	Total Specimens			150	97	247		100.0%
	Total Density (no./m²)			130	31	Z#1	5,370	100.076
	Total Delisity (110./111)	1	<u> </u>				5,370	

^{*}Reference:

TABLE 15A MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - EMERGENT AQUATIC VEGETATION AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		1-						
		Sample Location:	LOWER - 2 EMER	GENT A	QUATIC VE	GETATION		
		Sample Date:	29 October 2006					
		Gear:	Sweep Net	I				
_				Tol.		1541/05		
Taxon:			Common Name	Index*	LEAV-2	LEAV-2R	Total	Percent
Alloeocoela								
	Plagiostomic		fl = 1	50			-	0.00/
D		Hydrolimax grisea	flat worm	5.2		2	2	0.9%
Basommato								
	Ancylidae	Lagranavitianus	lime et en eil	7.5		2	2	0.00/
	Physidae	Laevapex fuscus	limpet snail	7.5		2	2	0.9%
	Priysidae	Physa sp.	pouch snail	8.8		4	4	1.8%
	Planorbidae		pouch shall	0.0		4	4	1.0%
	Fiariorbidae	Helisoma anceps	orb snail	6.2		1	1	0.4%
Mesogastro	noda	непѕота апсерѕ	UID SHall	0.2		<u>'</u>		0.4%
Mesogastio	Pleurocerida							
	Fleuroceriua	Elimia sp.	horn snail	2.4		7	7	3.1%
		Leptoxis sp.	rock snail	1.7	22	94	116	51.8%
	Viviparidae	Lopionis sp.	TOOK SHAII	1.7		J+	110	31.070
	viviparidae	Campeloma sp.	mystery snail	6.5		1	1	0.4%
Veneroidea	-	Сатрогота ор.	mystery snall	0.0		<u>'</u>	- 1	0.770
vonciolada	Corbiculidae	<u> </u>		+ +				1
	Corbicalidae	Corbicula fluminea	Asiatic clam	6.1		3	3	1.3%
	Sphaeriidae		, iolatio olalii	5.1				1.070
	орнаонаао	Pisidium sp.	pill clam	6.5		1	1	0.4%
Amphipoda		r ioidiani op.	piii diam	0.0				0.170
типрипрода	Crangonycti	dae						
	e.ageye.	Crangonyx sp.	side swimmer	7.9		3	3	1.3%
Isopoda		erangenyx op.	0.00 0	1.0		- J	-	11070
.copoua	Asellidae							
		Caecidotea sp.	pill bug	9.1		1	1	0.4%
Ephemerop	tera							
	Baetidae							
		Baetis sp.	mayfly	4.5	1		1	0.4%
	Heptageniid	ae						
		Stenacron interpunctatum	mayfly	6.9		3	3	1.3%
	Tricorythida							
		Tricorythodes sp.	mayfly	5.0	1		1	0.4%
Odonata								
	Coenagrioni	dae						
		Argia sp.	damselfly	8.2		5	5	2.2%
		Enallagma sp.	damselfly	8.9	1	38	39	17.4%
	Gomphidae							
		Dromogomphus spinosus	dragonfly	5.9		4	4	1.8%
		Hagenius sp.	dragonfly	3.9		1	1	0.4%
	Libellulidae							
		Dythemis velox	dragonfly	9.0		1	1	0.4%
		Macromia sp.	dragonfly	6.2		1	1	0.4%
		Neurocordulia sp.	dragonfly	3.4		1	1	0.4%
		Perithemis tenera	dragonfly	9.8		2	2	0.9%
Trichoptera		1		1 1				
	Polycentrop							ļ
		Polycentropus sp.	caddisfly	3.5		4	4	1.8%
Coleoptera	<u> </u>			$oxed{oxed}$				ļ
	Elmidae			_				ļ
	1	Dubiraphia vittata	riffle beetle	5.9		8	8	3.6%
	1	Macronychus glabratus	riffle beetle	4.5		2	2	0.9%
	Dryopidae			1				ļ
	1	Helichus sp.	long-toed beetle	4.6	1	1	2	0.9%
Diptera	<u> </u>			1		ļ		<u> </u>
	Chironomida			-			_	
	1	Clinotanypus sp.	midge	8.7		2	2	0.9%
	1	Paratanytarsus sp.	midge	8.4		1	1	0.4%
	1	Polypedilum illinoense gr.	midge	9.0	3	2	5	2.2%
	1	Total Taxa			6	27	29	<u> </u>
		Total Specimens			29	195	224	100.0%

^{*}Reference:

TABLE 15B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - EMERGENT AQUATIC VEGETATION AREA 2

		Sample Location:	LOWER - 2 EMERGI	ΕΝΤ ΔΩΙΙΔ	TIC VEGET	ATION		
		Sample Date:	15 May 2007	141 7407	TIO VEGET	I		
		Gear:	Sweep Net					
		Gear.	Oweep Net	Tol.				
Taxon:			Common Name	Index*	LEAV-2	LEAV-2R	Total	Percent
Haplotaxida			Common Name	IIIuex	LLAV-Z	LLAV-ZR	IOtai	Fercent
Паріотахіца	Naididae	1		+				
	ivaluluae	Stylaria fossularis	naid worm	9.3		1	1	0.2%
Basommato	phora	Stylana roscalano	naid worm	0.0		'	· ·	0.270
Bacominate	Ancylida	le		†				
	7 11.0 3 11.00	Ferrissia rivularis	limpet snail	6.6		3	3	0.6%
	Lymnaei			1				0.070
	_,	Fossaria sp.	pond snail	7.0	2	9	11	2.0%
		Stagnicola sp.	pond snail	8.4		5	5	0.9%
	Physida		·					
	ĺ	Physa sp.	pouch snail	8.8	10	41	51	9.4%
	Planorbi	dae						
		Helisoma anceps	orb snail	6.2		1	1	0.2%
		Micromenetus dilitatus	orb snail	8.3	3	7	10	1.9%
Mesogastro								
	Pleuroce							
		Elimia sp.	horn snail	2.4		4	4	0.7%
		Leptoxis sp.	rock snail	1.7	52	91	143	26.5%
	Vivipario							
		Campeloma sp.	mystery snail	6.5	1		1	0.2%
Veneroidea								
	Corbicul							
		Corbicula fluminea	Asiatic clam	6.1	3		3	0.6%
	Sphaerii							
		Pisidium sp.	pill clam	6.5	1	9	10	1.9%
Amphipoda								
	Gamma		 	0.0				0.00/
I leadan an aire a		Gammarus fasciatus	side swimmer	8.8	3		3	0.6%
Hydracarina			water mite	5.5		1	1	0.2%
Ephemerop								
	Baetidae			4.0		4	4	0.00/
	Cassida	Cloeon sp.	mayfly	4.0		1	1	0.2%
	Caenide			7.4	4			0.20/
	F	Caenis sp.	mayfly	7.4	1		1	0.2%
	Epheme		movetly.	1.5		1	1	0.2%
	Epheme	Serratella sp.	mayfly	1.5		ı	I	0.2%
	Ерпетте	Hexagenia sp.	mayfly	4.3		1	1	0.2%
	Heptage	nexageriia sp.	mayfly	4.3		<u>'</u>		0.2%
	періаде	Stenonema sp.	mayfly	3.5	1	 	1	0.2%
	Tricoryth	idae	mayny	5.5	ı		ı	0.270
	711001 y ti	Tricorythodes sp.	mayfly	5.0	31	13	44	8.1%
Odonata	 	rnoory arouses sp.	mayny	5.0	J1	13	77	0.170
Jaonata	Aeschni	l dae	+	+				
	, 100011111	Boyeria vinosa	dragonfly	5.9	1	3		
	Coenagi		dragoring	5.5	ı			
	Journage	Enallagma sp.	damselfly	8.9		32	32	5.9%
Plecoptera	†	= nanagina op.	damoonly	0.0		02	02	3.070
· .ccsp.c.u	Perlidae							
	. 5.11440	Perlesta sp.	stonefly	4.7	9		9	1.7%
Hemiptera		. с.тоска ор.	Contony	***	,			/0
ptora	Belostor	natidae						
	20.00001	Belostoma sp.	giant water bug	9.8	2	1	3	0.6%
	Corixida		water boatman	9.0	1	1	2	0.4%
	Mesovel		mater beatman	0.0	'	 		5.476
		Mesovelia mulsanti	water treader	6.0	5	1	6	1.1%
L		Jo. J. J. J. J. J. J. J. J. J. J. J. J. J.		5.0				/0

TABLE 15B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - EMERGENT AQUATIC VEGETATION AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 2 EMERGE	NT AQUA	TIC VEGET	TATION		
		Sample Date:	15 May 2007					
		Gear:	Sweep Net					
			Circop Not	Tol.				
Taxon:			Common Name	Index*	LEAV-2	LEAV-2R	Total	Percent
Trichoptera			Common Hame	IIIUCX	LLA V-Z	LLAV-ZIX	Total	1 Crociit
тиспориега		v abida a						
	Hydrops	Cheumatopsyche sp.	caddisfly	6.2	15		15	2.8%
			, , , , , , , , , , , , , , , , , , , ,		3		3	
Talabaataaa	(ti	Hydropsyche sp.	caddisfly	4.3	3		3	0.6%
Trichoptera								
	Hydropti		11: 0	0.0		0		0.00/
		Hydroptila sp.	caddisfly	6.2	1	2	3	0.6%
	Leptoce							
		Mystacides sp.	caddisfly	2.6	2		2	0.4%
		Triaenodes sp.	caddisfly	3.8		1	1	0.2%
	Polycen	tropodidae	,					
		Polycentropus sp.	caddisfly	3.5		2	2	0.4%
Coleoptera	<u> </u>					ļ .		
	Elmidae							
		Ancyronyx variegatus	riffle beetle	6.5	2	1	3	0.6%
		Dubiraphia vittata	riffle beetle	5.9	1		11	0.2%
		Macronychus glabratus	riffle beetle	4.5	36	8	44	8.1%
		Microcylloepus pusillus	riffle beetle	2.1	6	4	10	1.9%
	Gyrinida							
		Dineutus sp.	whirligig beetle	5.5	1		1	0.2%
	Haliplida							
		Haliplus sp.	crawling water beetle	8.7	1	1	2	0.4%
	Hydroph	ilidae						
		Tropisternus sp.	scavenger beetle	9.6		1	1	0.2%
Diptera								
	Ceratop	ogonidae						
		Bezzia sp.	biting midge	7.0		1	1	0.2%
	Chirono							
		Ablabesmyia mallochi	midge	7.2	4		4	0.7%
		Corynoneuria sp.	midge	6.0	4		4	0.7%
		Cryptotendipes sp.	midge	6.2		1	1	0.2%
		Dicrotendipes sp.	midge	8.1		19	19	3.5%
		Orthocladius sp.	midge	5.4		6	6	1.1%
		Polypedilum sp.	midge	5.6	8		8	1.5%
		Polypedilum illinoense gr.	midge	9.0	24	18	42	7.8%
		Procladius sp.	midge	9.1	4	1	5	0.9%
	1	Tanytarsus sp.	midge	6.7	4	7	11	2.0%
	Culicida		mosquito	8.0	-	2	2	0.4%
	Empidid							55
	p.aia	Hemerodromia sp.	dance fly	7.6	1	†	1	0.2%
		Total Taxa	dance ny		33	36	50	0.270
	 	Total Specimens			243	301	540	100.0%
		Total Specimens			240	JU I	340	100.0%

^{*}Reference:

TABLE 16A MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - RIFFLE AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 2 RIFFL	F				
		Sample Date:	29 October 2006	1				
		Gear:	Kick Net					
		Ocai.	MICK NCL	Tol.				
Taxon:			Common Name	Index*	LRIF-2	LRIF-2R	Total	Percent
Lumbricina			Common Name	IIIUCA	LIVII -Z	LIXII -ZIX	I Glai	Felcent
Lumbricina	Lumbricidae		oorth worm	8.0	1	2	3	1.7%
Managan		; 	earth worm	0.0	1		<u> </u>	1.770
Mesogastro								
	Pleurocerida		h	0.4	4		4	0.00/
		Elimia sp.	horn snail	2.4	1	4.4	1	0.6%
· · · · · · · · · · · · · · · · · · ·		Leptoxis sp.	rock snail	1.7	11	14	25	14.5%
Veneroidea								
	Corbiculidae					_		
<u> </u>		Corbicula fluminea	Asiatic clam	6.1	10	7	17	9.8%
Ephemerop								
	Baetidae							
		Baetis sp.	mayfly	4.5	2		2	1.2%
		Heterocloeon sp.	mayfly	2.0		1	1	0.6%
	Heptageniid							
		Stenonema sp.	mayfly	3.5		3	3	1.7%
		Stenonema mediopunctatum	mayfly	3.7	10	6	16	9.2%
	Isonychiidae							
		Isonychia sp.	mayfly	3.4	27	21	48	27.7%
Odonata								
	Coenagrioni	idae						
		<i>Argia</i> sp.	damselfly	8.2	2	2	4	2.3%
	Gomphidae		dragonfly	4.0		1	1	0.6%
Trichoptera								
•	Hydropsych	idae						
		Cheumatopsyche sp.	caddisfly	6.2	8	26	34	19.7%
		Hydropsyche sp.	caddisfly	4.3		3	3	1.7%
		Hydropsyche bronta	caddisfly	5.0	3	2	5	2.9%
	Philopotami	dae						
		Chimarra obscura	caddisfly	2.7		2	2	1.2%
	Polycentrop							
	1	Neureclipsis sp.	caddisfly	4.1		1	1	0.6%
Coleoptera		, , , , , , , , , , , , , , , , , , , ,						
	Elmidae			1				
		Ancyronyx variegatus	riffle beetle	6.5		1	1	0.6%
		Macronychus glabratus	riffle beetle	4.5		2	2	1.2%
		Optioservus sp.	riffle beetle	2.3	1	 -	<u>-</u>	0.6%
		Stenelmis crenata gr.	riffle beetle	5.1	2	1	3	1.7%
		Total Taxa	THIC DECILE	0.1	12	17	20	1.770
 	1	Total Specimens	1	+ +	78	95	173	100.0%

^{*}Reference:

TABLE 16B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - RIFFLE AREA 2

		Sample Location:	LOWER - 2 RIFFLE					
		Sample Date:	15 May 2007	_				
		Gear:	Kick Net					
		Journ Land	THOR ITEL	Tol.				
Taxon:			Common Name	Index*	LRIF-2	LRIF-2R	Total	Percent
Hoplonemert	tea							
	Tetrastemmatidae							
		Prostoma graecense	proboscis worm	6.1		2	2	0.3%
Tubificida								
	Tubificidae	Linear adultura an	tb	0.4				0.40/
Basommator	phora	Limnodrilus sp.	tube worm	9.4	1		11	0.1%
Dasominator	Ancylidae							
	riioyiidao	Ferrissia rivularis	limpet snail	6.6		1	1	0.1%
	Physidae							
		Physa sp.	pouch snail	8.8		7	7	0.9%
	Planorbidae							
	<u> </u>	Micromenetus dilitatus	orb snail	8.3		1	1	0.1%
Mesogastrop	oda Pleuroceridae		1	+				
	rieuroceridae	Elimia sp.	horn snail	2.4	2	5	7	0.9%
		Leptoxis sp.	rock snail	1.7	19	153	172	22.3%
		Leptoxis occulatata	rock snail	1.7	6	56	62	8.1%
Veneroidea		•						
	Corbiculidae							
		Corbicula fluminea	Asiatic clam	6.1	23	47	70	9.1%
Ephemeropte								
	Baetidae	Raotic en	mayfly	4.5	10		10	1.3%
	Ephemerellidae	Baetis sp.	Illayliy	4.5	10		10	1.3%
	<u> Ернотногошаао</u>	Serratella sp.	mayfly	1.5		2	2	0.3%
	Heptageniidae	o on anomal open		1.0		_		
		Stenonema sp.	mayfly	3.5	22	14	36	4.7%
	Isonychiidae							
	T' 0'1	Isonychia sp.	mayfly	3.4	6		6	0.8%
	Tricorythidae	Tricon thodos on	movefly.	5.0	3	9	12	1.60/
Odonata		Tricorythodes sp.	mayfly	5.0	3	9	12	1.6%
Odonata	Gomphidae							
	G ompinado	Ophiogomphus sp.	dragonfly	5.5		2	2	0.3%
Plecoptera								
	Perlidae							
		Perlesta sp.	stonefly	4.7	2	2	4	0.5%
Megaloptera	Corydalidae							
	Coryualidae	Corydalus cornutus	dobsonfly	5.1		1	1	0.1%
Trichoptera		55. yaaras sorriatas	GODOGITHY	5.1		'		0.170
	Brachycentridae			† †				
		Brachycentrus sp.	caddisfly	0.8	2		2	0.3%
		Micrasema sp.	caddisfly	0.6		1	1	0.1%
	Glossosomatidae	Culentile on		1 1 2			4	0.50/
	Hydropsychidae	Culoptila sp.	caddisfly	1.0		4	4	0.5%
	пуиторъуспіцае	Cheumatopsyche sp.	caddisfly	6.2	78	51	129	16.8%
		Hydropsyche sp.	caddisfly	4.3	7.0	3	3	0.4%
		Hydropsyche nr. betteni	caddisfly	7.8	20	4	24	3.1%
		Hydropsyche bronta	caddisfly	5.0	59	69	128	16.6%
		Hydropsyche venularis	caddisfly	4.9	3		3	0.4%
	Lepidostomatidae		10.6			00		0.004
		Lepidostoma sp.	caddisfly	0.9	6	23	29	3.8%

TABLE 16B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - RIFFLE AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 2 RIFFLE					
		Sample Date:	15 May 2007					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	LRIF-2	LRIF-2R	Total	Percent
Coleoptera								
-	Elmidae							
		Macronychus glabratus	riffle beetle	4.5	1		1	0.1%
		Microcylloepus pusillus	riffle beetle	2.1	11	4	15	1.9%
		Optioservus sp.	riffle beetle	2.3	3		3	0.4%
		Stenelmis crenata gr.	riffle beetle	5.1	1		1	0.1%
	Gyrinidae							
		Dineutus sp.	whirligig beetle	5.5		1	1	0.1%
	Psephenidae							
		Psephenus herricki	water penny	2.3	1	6	7	0.9%
Diptera								
	Ceratopogonidae							
		Bezzia sp.	biting midge	7.0		1	1	0.1%
	Chironomidae							
		Cricotopus sp.	midge	6.3	1		1	0.1%
		Orthocladiinae	midge	6.0		1	1	0.1%
		Parametriocnemus sp.	midge	3.6		2	2	0.3%
		Polypedilum illinoense gr.	midge	9.0		3	3	0.4%
		Rheotanytarsus exiguum gr	midge	5.9	2		2	0.3%
		Rheotanytarsus sp.	midge	5.9		5	5	0.6%
		Tanytarsus sp.	midge	6.7		5	5	0.6%
		Thienemannimyia gr.	midge	6.0		1	1	0.1%
		Tvetenia bavarica	midge	3.6	2		2	0.3%
		Total Taxa			24	31	42	
		Total Specimens			284	486	770	100.0%

*Reference:

TABLE 17A MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - RUN AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 2 RUN					
		Sample Date:	29 October 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	LRUN-2	LRUN-2R	Total	Percent
Lumbricina								
	Lumbricidae		earth worm	8.0	4	3	7	4.6%
Mesogastro								
	Pleurocerida							
		Elimia sp.	horn snail	2.4	7	6	13	8.6%
		Leptoxis sp.	rock snail	1.7	23	24	47	30.9%
Veneroidea								
	Corbiculidae)						
		Corbicula fluminea	Asiatic clam	6.1	40	9	49	32.2%
Ephemeror								
	Baetidae							
		Baetis sp.	mayfly	4.5	1		1	0.7%
	Heptageniid							
		Stenonema sp.	mayfly	3.5	2		2	1.3%
		Stenonema mediopunctatum	mayfly	3.7	1		1	0.7%
	Isonychiidae							
		Isonychia sp.	mayfly	3.4	5		5	3.3%
Trichoptera								
	Hydropsych							
		Cheumatopsyche sp.	caddisfly	6.2	8	10	18	11.8%
		Hydropsyche bronta	caddisfly	5.0	3	3	6	3.9%
	Philopotami							
		Chimarra obscura	caddisfly	2.7		1	1	0.7%
Coleoptera								
	Elmidae							
		Microcylloepus pusillus	riffle beetle	2.1	1		1	0.7%
		Stenelmis crenata gr.	riffle beetle	5.1	1		1	0.7%
		Total Taxa			12	7	13	
		Total Specimens			96	56	152	100.0%

*Reference:

TABLE 17B MACROINVERTEBRATE TAXONOMIC RESULTS: LOWER EDR - RUN AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	LOWER - 2 RUN					
		Sample Date:	15 May 2007					
		Gear:	Kick Net					
		Gear:	NICK NET	Tol.				
Tayon			Common Nama	Index*	I DUN 2	I DUN 2D	Total	Doroont
Taxon:			Common Name	index	LRUN-2	LRUN-2R	Total	Percent
Tricladida	DI " I							
	Planariidae	Decreasis tismins	f) = t	7.0	4			0.00/
l la a la tacciala		Dugesia tigrina	flat worm	7.2	1		1	0.6%
Haplotaxida			a a with a second	0.0				0.00/
	Lumbricidae Naididae		earth worm	8.0	1		11	0.6%
	Naididae	Slavina appendiculata	naid worm	7.0		2	2	1.1%
Basommato	nhoro	Siaviria appendiculata	naid worm	7.0				1.176
Dasominato								
	Ancylidae	Farriagia rivularia	limpet anail	6.6		1	1	0.69/
	Dhyoidaa	Ferrissia rivularis	limpet snail	6.6		ı	<u> </u>	0.6%
	Physidae	Dhyoo on	nough angil	8.8	17	11	28	16.1%
Mesogastro	l noda	Physa sp.	pouch snail	0.0	17	11	20	10.176
iviesogastro	Pleurocerida							
-	i leurocerius	Elimia sp.	horn snail	2.4	1	3	4	2.3%
-	+	Leptoxis sp.	rock snail	1.7	15	16	31	17.8%
		Leptoxis occulatata	rock snail	1.7	7	5	12	6.9%
Veneroidea		Lepioxis occulatata	TOOK SHAII	1.7	,	5	12	0.376
veneroidea	Corbiculidae							
	Corbiculdae	Corbicula fluminea	Asiatic clam	6.1	7	14	21	12.1%
	Sphaeriidae		Asiatic ciam	0.1	,	17	<u> </u>	12.170
	Opriacilidad	Pisidium sp.	pill clam	6.5	1		1	0.6%
Ephemeropt	era	т юшит ор.	piii diam	0.0	•		<u> </u>	0.070
Ерпотогор	Ephemerelli	l dae						
	Ephomorom	Serratella sp.	mayfly	1.5	1		1	0.6%
	Tricorythida		Illayily	1.0			· · · · · · · · · · · · · · · · · · ·	0.070
	Thouganda	Tricorythodes sp.	mayfly	5.0	9	1	10	5.7%
Plecoptera		сс.уштешее орг		0.0				0 / 0
	Perlidae							
	romado	Perlesta sp.	stonefly	4.7	1		1	0.6%
Trichoptera			Sterrony		•		•	0.070
	Hydropsych	idae						
	,	Cheumatopsyche sp.	caddisfly	6.2	2	9	11	6.3%
		Hydropsyche sp.	caddisfly	4.3	1	_	1	0.6%
		Hydropsyche bronta	caddisfly	5.0	4	9	13	7.5%
	Lepidostoma		1 ,					
	,	Lepidostoma sp.	caddisfly	0.9	8	6	14	8.0%
	Leptocerida		<u> </u>					
		Mystacides sp.	caddisfly	2.6	4		4	2.3%
Coleoptera		,	<u> </u>					
•	Elmidae							
		Macronychus glabratus	riffle beetle	4.5	3		3	1.7%
		Microcylloepus pusillus	riffle beetle	2.1	9	3	12	6.9%
Diptera								
	Chironomida	ae						
		Dicrotendipes fumidus	midge	5.8	1			
		Orthocladius sp.	midge	5.4	1		1	0.6%
		Polypedilum halterale gr.	midge	7.3	1		1	0.6%
		Total Taxa			21	12	22	
		Total Specimens			95	80	174	100.0%
	1			1				

*Reference:

TABLE 18A MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - BACKWATER AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 1 BACK	WATER					
		Sample Date:	26 October 2006						
		Gear:	Petite Ponar Dredg	e (area =	= 0.023 squ	are meters)			
				Tol.				Density	
Taxon:			Common Name	Index*	MBW-1	MBW-1R	Total	(no./m²)	Percent
Tubificida									
	Tubificidae								
		Ilydrilus templetoni	tube worm	9.0	20	12	32	696	21.2%
Rhynchobde									
	Glossiphonii								
		Gloiobdella elongata	leech	9.5	3	1	4	87	2.6%
Mesogastro									
	Pleurocerida	ae							
		Leptoxis sp.	rock snail	1.7	3	5	8	174	5.3%
Veneroidea									
	Corbiculidae								
		Corbicula fluminea	Asiatic clam	6.1	1	1	2	43	1.3%
	Sphaeriidae								
		Pisidium sp.	pill clam	6.5	1	1	2	43	1.3%
Hemiptera									
	Corixidae								
		Sigara sp.	water boatman	9.1	1		1	22	0.7%
Coleoptera									
	Elmidae								
		Dubiraphia vittata	riffle beetle	5.9		2	2	43	1.3%
Diptera									
	Ceratopogo								
		Culicoides sp.	biting midge	7.7	22		22	478	14.6%
		Sphaeromias sp.	biting midge	6.0	39		39	848	25.8%
	Chironomida		<u> </u>						
		Ablabesmyia mallochi	midge	7.2	1	ļ	1	22	0.7%
		Clinotanypus sp.	midge	8.7	_	1	11	22	0.7%
		Dicrotendipes sp.	midge	8.1	5		5	109	3.3%
		Orthocladius sp.	midge	5.4	3		3	65	2.0%
		Procladius sp.	midge	9.1	13	1	14	304	9.3%
		Rheotanytarsus exiguus gr.	midge	5.9	4		4	87	2.6%
		Tanytarsus sp.	midge	6.7	9	2	11	239	7.3%
		Total Taxa			14	9	16		
		Total Specimens			125	26	151		100.0%
		Total Density (no./m²)						3,283	

*Reference:

TABLE 18B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - BACKWATER AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	MIDDLE - 1 BAC	KWATE	R				
	Sample Date:	16 May 2007						
	Gear:	Petite Ponar Dre	dge (are	a = 0.023 s	square mete	ers)		
			Tol.			,	Density	
Taxon:		Common Name	Index*	MBW-1	MBW-1R	Total	(no./m2)	Percent
Tubificida		Common reame	macx	IIIDII I	IIIBW IIX	Total	(110.31112)	1 Crociii
Tubilicida	Tubificidae							
	Branchiura sowerybi	tube worm	8.3	3		3	65	1.5%
	Ilydrilus templetoni	tube worm	9.0	1	44	45	978	22.4%
	Limnodrilus sp.	tube worm	9.4	41	60	101	2196	50.2%
	Littitioutilus sp.	tube worm	3.4	41	00	101	2190	30.2 /6
Mesogastro	noda							
Mesogastio	Pleuroceridae							
	<u> </u>	rock snail	1.7	1	-	1	22	0.5%
	Leptoxis sp.	TOUR STIAIL	1.7	ı		ı		0.5%
Veneroidea								
veneroidea	Corbiculidae						-	
	Corbicula fluminea	Asiatic clam	6.1	4		4	87	2.0%
	Sphaeriidae	ASIAIIC CIAITI	0.1	4		4	07	2.0%
	Pisidium sp.	pill clam	6.5	3	2	5	109	2.5%
	Різіціції ѕр.	pili ciam	0.5	3		5	109	2.5%
Enhamaran	toro						-	
Ephemerop	Heptageniidae							
	Stenonema mediopunct	oture mouth.	3.7	- 1		1	22	0.5%
	Sterioriema mediopunct	atum mayfly	3.1	1		<u> </u>	22	0.5%
Coleoptera								
Coleoptera							-	
	Dubiraphia vittata	riffle beetle	5.9	3	1	4	87	2.0%
		Tille beelle	5.9	3	'	4	07	2.0%
Diptera								
Dipiera	Ceratopogonidae						-	
	Sphaeromias sp.	biting midge	6.0	3		3	65	1.5%
	Chironomidae	biting mage	0.0	3		3	00	1.5%
		midao	9.6	4		4	87	2.0%
	Chironomus sp. Clinotanypus sp.	midge midge	8.7	1		4 1	22	0.5%
	Dicrotendipes sp.	midge	8.1	3	1	4	87	2.0%
	Polypedilum illinoense g		9.0	ა		<u>4</u> 1	22	0.5%
	Procladius sp.		9.0	14	1 5	19	413	9.5%
		midge					87	
	Tanytarsus sp.	midge	6.7 3.6	3	1	<u>4</u> 1	22	2.0% 0.5%
	Tvetenia vitracies	midge	3.0	4.4		•		0.5%
	Total Taxa			14	9	16	-	400
	Total Specimens			85	116	201		100.0%
	Total Density (no./m²)						4,370	

*Reference:

TABLE 19A MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - DEPOSITIONAL AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 1 DEP	OSITION	AL				
		Sample Date:	26 November 200						
		Gear:	Petite Ponar Dred	ge (area	a = 0.023 sq	uare meters			
				Tol.				Density	
Taxon:			Common Name	Index*	MDEP-1	MDEP-1R	Total	(no./m²)	Percent
Tubificida									
	Naididae		naid worm	8.0		1	1	22	1.4%
	Tubificidae								
		Branchiura sowerybi	tube worm	8.3	1	8	9	196	12.7%
		Limnodrilus sp.	tube worm	9.4	2	6	8	174	11.3%
Rhynchobd									
	Glossiphoni							-	
		Gloiobdella elongata	leech	9.5		1	1	22	1.4%
Mesogastro								-	
	Pleurocerida	ae							
		Leptoxis sp.	rock snail	1.7	6	15	21	457	29.6%
Veneroidea									
	Corbiculidae	Э							
		Corbicula fluminea	Asiatic clam	6.1	3	7	10	217	14.1%
	Sphaeriidae								
		Pisidium sp.	pill clam	6.5	1	6	7	152	9.9%
Odonata									
	Gomphidae								
		Lanthus sp.	dragonfly	1.5		1	1	22	1.4%
Coleoptera									
	Elmidae								
		Dubiraphia vittata	riffle beetle	5.9		1	1	22	1.4%
Diptera									
	Ceratopogo	nidae							
		Sphaeromias sp.	biting midge	6.0		1	1	22	1.4%
	Chironomid								
		Alotanypus aris	midge	6.0	1		1	22	1.4%
		Dicrotendipes sp.	midge	8.1		3	3	65	4.2%
		Procladius sp.	midge	9.1		5	5	109	7.0%
		Tanytarsus sp.	midge	6.7	1	1	2	43	2.8%
		Total Taxa			7	13	14		
		Total Specimens			15	56	71		100.0%
		Total Density (no./m²)						1,543	

*Reference:

TABLE 19B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - DEPOSITIONAL AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 1 DEP	OSITIONAL					
		Sample Date:	16 May 2007	00111011712					
		Gear:	Petite Ponar Dred	lge (area =	0.023 squa	re meters)			
				Tol.				Density	
Taxon:			Common Name	Index*	MDEP-1	MDEP-1R	Total	(no./m2)	Percent
Haplotaxida							10.000	(,	
	Lumbr	icidae	earth worm	8.0	2		2	43	1.0%
								_	
Tubificida									
	Tubific	idae							
		Aulodrilus pluriseta	tube worm	2.9	1		1	22	0.5%
		Branchiura sowerybi	tube worm	8.3		7	7	152	3.6%
		Limnodrilus sp.	tube worm	9.4	1	36	37	804	19.2%
Veneroidea									
	Corbic	ulidae							
		Corbicula fluminea	Asiatic clam	6.1	3	9	12	261	6.2%
	Sphae								
		Pisidium sp.	pill clam	6.5	5	3	8	174	4.1%
Diptera									
	Chiron	omidae							
		Chironomus sp.	midge	9.6	9	25	34	739	17.6%
		Cryptochironomus fulvus gr.	midge	6.4	1	3	4	87	2.1%
		Cryptotendipes sp.	midge	6.2		1	1	22	0.5%
		Dicrotendipes sp.	midge	8.1	3	7	10	217	5.2%
		Phaenopsectra obedians gr.	midge	6.5	17	37	54	1174	28.0%
		Polypedilum scalaenum gr.	midge	8.4		7	7	152	3.6%
		Procladius sp.	midge	9.1	5	4	9	196	4.7%
		Tanytarsus sp.	midge	6.7	3	2	5	109	2.6%
		Thienemannimyia gr.	midge	6.0		2	2	43	1.0%
		Total Taxa			11	13	15		
		Total Specimens			50	143	193		100.0%
		Total Density (no./m²)						4,196	

^{*}Reference:

TABLE 20A MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 1 EMER	RGENT A	QUATIC VE	GETATION		
		Sample Date:	26 October 2006					
		Gear:	Sweep Net					
				Tol.				
Taxon:			Common Name	Index*	MEAV-1	MEAV-1R	Total	Percent
Mesogastro	poda							
	Pleurocerio	dae						
		Leptoxis sp.	rock snail	1.7	20	28	48	53.3%
Veneroidea								
	Corbiculida	ie						
		Corbicula fluminea	Asiatic clam	6.1	1		1	1.1%
Ephemerop	tera							
	Baetidae							
		Baetis sp.	mayfly	4.5	2	10	12	13.3%
		Heterocloeon sp.	mayfly	2.0	1	7	8	8.9%
	Heptagenii	dae						
		Stenonema sp.	mayfly	3.5	1	4	5	5.6%
		Stenonema mediopunctatum	mayfly	3.7		1	1	1.1%
	Isonychiida	ie						
		Isonychia sp.	mayfly	3.4	3		3	3.3%
Trichoptera								
	Hydropsycl	hidae						
		Cheumatopsyche sp.	caddisfly	6.2	2	1	3	3.3%
Coleoptera								
	Gyrinidae							
		Dineutus discolor	whirligig beetle	5.5		4	4	4.4%
Diptera								
	Chironomic	dae						
		Polypedilum illinoense gr.	midge	9.0	2	3	5	5.6%
		Total Taxa			8	8	10	
		Total Specimens			32	58	90	100.0%

^{*}Reference:

TABLE 20B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 1 EMERG	GENT AQ	UATIC VEG	ETATION		
		Sample Date:	16 May 2007					
		Gear:	Sweep Net					
			Chicop not	Tol.				
Taxon:			Common Name	Index*	MEAV-1	MEAV-1R	Total	Percent
Nematoda			round worm	6.0	1		1	0.2%
Basommatophor	ra		Todrid World	0.0			•	0.270
	nysidae							
	.,	Physa sp.	pouch snail	8.8	3	4	7	1.3%
Mesogastropoda	a	,	,					
	euroceri	idae						
		Elimia sp.	horn snail	2.4	10		10	1.9%
		Leptoxis sp.	rock snail	1.7	64	32	96	18.0%
Veneroidea								
Co	orbiculid	lae						
		Corbicula fluminea	Asiatic clam	6.1	4		4	0.8%
Ephemeroptera								
Ва	aetidae							
		Heterocloeon sp.	mayfly	2.0	3		3	0.6%
Ep	hemere		,					0.624
-		Serratella sp.	mayfly	1.5		1	1	0.2%
Iri	icorythic	dae		.	4			0.00/
Odenete		Tricorythodes sp.	mayfly	5.0	1		1	0.2%
Odonata	eschnida	<u> </u>						
Ae	SCHILICA	Boveria vinosa	dragonfly	5.9		4	4	0.8%
Plecoptera		Boyeria viriosa	uragorilly	5.9		4	4	0.6%
	erlidae							
1 6	illuae	Perlesta sp.	stonefly	4.7	4	9	13	2.4%
Hemiptera		r chesta sp.	Storicity	7.1	7	-	10	2.470
	eliidae		broad shouldered-					
	maao	Rhagovelia obesa	water strider	6.0		2	2	0.4%
Trichoptera		- magazana ana an				_		0.110
	/dropsy	chidae						
		Cheumatopsyche sp.	caddisfly	6.2	1	13	14	2.6%
		Hydropsyche sp.	caddisfly	4.3	2	55	57	10.7%
		Hydropsyche nr. betteni	caddisfly	7.8		5	5	0.9%
		Hydropsyche bronta	caddisfly	5.0	4	6	10	1.9%
		Hydropsyche frisoni	caddisfly	1.8	4		4	0.8%
Ну	/droptilio							
		Hydroptila sp.	caddisfly	6.2	3	13	16	3.0%
Coleoptera								
Elr	midae		700 1 2	4 -				0.10/
		Macronychus glabratus	riffle beetle	4.5		2	2	0.4%
Dinters		Microcylloepus pusillus	riffle beetle	2.1	1		11	0.2%
Diptera	oironom	l idao				 		-
Cr	nironom	Dicrotendipes sp.	midge	8.1		8	8	1.5%
 		Microtendipes sp. Microtendipes pedellus gr.	midge	5.5		8	o 8	1.5%
 		Orthocladius sp. (tent.)	midge	5.4		4	4	0.8%
 		Polypedilum flavum	midge	4.7		17	17	3.2%
		Polypedilum illinoense gr.	midge	9.0	39	75	114	21.4%
		Polypedilum scalaenum gr.	midge	8.4	19		19	3.6%
		Tvetenia vitracies	midge	3.6	9	100	109	20.5%
Sir			490	5.0		. 50	. 50	_0.070
	muliidae							
	muliidae	ė	black flv	4.0	1	1	2	0.4%
	muliidae		black fly	4.0	1 18	1 19	2 27	0.4%

^{*}Reference:

TABLE 21A MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 1 RIFFL	E				
		Sample Date:	26 October 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	MRIF-1	MRIF-1R	Total	Percent
Lumbricina								
	Lumbricidae		earth worm	8.0	1		1	0.2%
Mesogastro	poda							
	Pleurocerida	ae						
		Elimia sp.	horn snail	2.4		1	1	0.2%
		Leptoxis sp.	rock snail	1.7	34		34	8.4%
Veneroidea								
	Corbiculidae	9						
		Corbicula fluminea	Asiatic clam	6.1	10	8	18	4.4%
Ephemerop	tera							
	Baetidae							
		Baetis sp.	mayfly	4.5	9	18	27	6.6%
		Procloeon sp.	mayfly	6.0	1		1	0.2%
	Ephemerelli		1					
		Serratella sp.	mayfly	1.5	3		3	0.7%
	Heptageniid		1					
		Stenonema sp.	mayfly	3.5	18	12	30	7.4%
		Stenonema mediopunctatum	mayfly	3.7	2	14	16	3.9%
	Isonychiidae							
		Isonychia sp.	mayfly	3.4	69	70	139	34.2%
Odonata		, , , , , , , , , , , , , , , , , , ,						
	Coenagrioni	dae						
		Argia sp.	damselfly	8.2	1		1	0.2%
		<i>Enallagma</i> sp.	damselfly	8.9	1		1	0.2%
	Gomphidae			1			-	0.270
		Gomphus sp.	dragonfly	5.8		1	1	0.2%
Plecoptera		Compilación.	a.agay	0.0				0.270
	Perlidae							
	Tomado	Acroneuria abnormis	stonefly	2.0		2	2	0.5%
Megaloptera	<u>.</u> a	riorerioania diorienine	3.0			_		0.070
Mogaroptore	Corydalidae							
	o o i y a a ii a a o	Corydalus cornutus	dobsonfly	5.1	5	3	8	2.0%
Trichoptera	1	20. y dando dominido	GOODDINIY	Ü.,			3	2.070
···onoptora	Hydropsychi	idae						
—	. iyaiopayan	Cheumatopsyche sp.	caddisfly	6.2	69	26	95	23.3%
		Hydropsyche sp.	caddisfly	4.3	1	20	1	0.2%
—		Hydropsyche bronta	caddisfly	5.0	8	6	14	3.4%
—		Hydropsyche venularis	caddisfly	4.9	2	7	9	2.2%
Coleoptera	 	riyaropsyono vendians	Gaddisity	7.0		<u>'</u>	9	2.2 /0
Colcoptera	Elmidae							
 	Lillidae	Macronychus glabratus	riffle beetle	4.5		1	1	0.2%
 		Optioservus sp.	riffle beetle	2.3	2	<u>'</u>	2	0.2%
<u> </u>		Stenelmis crenata gr.	riffle beetle	5.1	1		1	0.5%
	Psephenida		Time Deelle	J. I	ı		ı	U.Z 7/0
	rseprienida	e Psephenus herricki	water penny	22	1		1	0.2%
			water penny	2.3		10		U.Z ⁷ /0
		Total Taxa Total Specimens			19	13	23	100.00/
		i otai Specimens			238	169	407	100.0%

^{*}Reference:

TABLE 21B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 1 RIFFLE					
		Sample Date:	16 May 2007	_				
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	MRIF-1	MRIF-1R	Total	Percent
Nematoda			round worm	6.0	1		1	0.2%
Hoploneme	ertea		Todila Wollin	0.0			•	0.270
		emmatidae						
		Prostoma graecense	proboscis worm	6.1	5		5	1.1%
Haplotaxida	a							
	Lumbric		earth worm	8.0	2	1	3	0.7%
	Naidida							
		Nais sp.	naid worm	8.7	13		13	2.9%
		Stylaria fossularis	naid worm	9.3	1		11	0.2%
Tubificida								
	Tubificio							
		Limnodrilus sp.	tube worm	9.4	3	2	5	1.1%
Rhynchobo		<u> </u>						ļ
	Glossiph							
	1	Gloiobdella elongata	leech	9.5	1	1	2	0.4%
	1	Helobdella stagnalis	leech	8.8		1	1	0.2%
	<u>↓</u>	Helobdella papillata	leech	9.1		1	1	0.2%
Basommate								ļ
	Ancylida							4.00/
		Ferrissia rivularis	limpet snail	6.6	2	4	6	1.3%
	Lymnae		1 2	7.0				0.40/
	D	Fossaria sp.	pond snail	7.0	2		2	0.4%
	Physida		1 2	0.0	47	45		10.00/
	D	Physa sp.	pouch snail	8.8	47	15	62	13.8%
	Planorbi		. ,	0.0				0.70/
Managen		Micromenetus dilitatus	orb snail	8.3	2	1	3	0.7%
Mesogastro								
	Pleuroce			4 7	47	40	07	0.00/
Vanaraidas		Leptoxis sp.	rock snail	1.7	17	10	27	6.0%
Veneroidea	Corbicul	lidaa						
	Corbicul	Corbicula fluminea	Asiatic clam	6.1	13	11	24	5.3%
	Sphaerii		Asiatic ciam	6.1	13	11	24	5.3%
	Spriaerii		nill alam	6.5	2		2	0.4%
Amphipoda		Pisidium sp.	pill clam	6.5				0.4%
Ampilipoda	Crangor	L vyctidae						
1	Grangor	Crangonyx sp.	side swimmer	7.9	1		1	0.2%
Ephemerop	ntera	Grangonyx sp.	SIGO SWIITIITICI	1.5				0.2 /0
_priorition	Baetidae	<u> </u>						
<u> </u>	Dagiluat	Baetis sp.	mayfly	4.5	2		2	0.4%
	 	Plauditus sp.	mayfly	4.5	1		1	0.4%
	Epheme	erellidae	mayny					0.270
		Serratella sp.	mayfly	1.5	1		1	0.2%
	Heptage		,				· · ·	5.275
	p.tage	Stenonema sp.	mayfly	3.5	4	8	12	2.7%
	†	Stenonema mediopunctatum	mayfly	3.7	1		1	0.2%
	†	Stenonema exiguum	mayfly	3.8	1		<u> </u>	0.2%
	Tricoryth		, ,					
	1	Tricorythodes sp.	mayfly	5.0	25	5	30	6.7%
Odonata	†	- , 	,,					1
	Coenad	rionidae						
		Argia sp.	damselfly	8.2	2	4	6	1.3%
	Gomphi		,				-	
		Ophiogomphus sp.	dragonfly	5.5	1		1	0.2%

TABLE 21B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 1 RIFFLE					
		Sample Date:	16 May 2007					
		Gear:	Kick Net					
		000.1	THIS IT THE	Tol.				
Taxon:			Common Name	Index*	MRIF-1	MRIF-1R	Total	Percent
Plecoptera								. 0.00
	Perlidae							
		Perlesta sp.	stonefly	4.7	6	3	9	2.0%
Hemiptera		,	·					
	Corixida	e						
		Trichocorixa sp.	water boatman	8.0		2	2	0.4%
Trichoptera								
	Glossos	omatidae						
		Culoptila sp.	caddisfly	1.0	4	1	5	1.1%
	Hydrops							
		Cheumatopsyche sp.	caddisfly	6.2	31	10	41	9.1%
		Hydropsyche sp.	caddisfly	4.3	1		1	0.2%
		Hydropsyche bronta	caddisfly	5.0	5	2	7	1.6%
		Hydropsyche frisoni	caddisfly	1.8		2	2	0.4%
	Hydropti		1					4.00/
		Hydroptila sp.	caddisfly	6.2	6		6	1.3%
	Lepidost	omatidae	- - - - - - - -	0.0	04		00	4.00/
	Lantasa	Lepidostoma sp.	caddisfly	0.9	21	1	22	4.9%
	Leptocer		a a dalia fili	2.0				0.20/
Coleoptera		Ceraclea sp.	caddisfly	2.0		1	1	0.2%
Coleoptera	Elmidae							
	Ellillae	Macronychus glabratus	riffle beetle	4.5		29	29	6.5%
		Microcylloepus pusillus	riffle beetle	2.1	2	4	6	1.3%
		Optioservus sp.	riffle beetle	2.3	1	4	1	0.2%
		Stenelmis crenata gr.	riffle beetle	5.1	8		8	1.8%
	Gyrinida		Time beene	3.1	0		0	1.070
	Cymnaa	Dineutus sp.	whirligig beetle	5.5	1		1	0.2%
Diptera		Diriodide op.	Willingig beetle	0.0	'			0.270
Diptora	Ceratono	ogonidae						
	Coratope	Bezzia sp.	biting midge	7.0		1	1	0.2%
	Chironor							0.2,0
		Chironomus sp.	midge	9.6		1	1	0.2%
		Cricotopus sp.	midge	6.3	4		4	0.9%
		Dicrotendipes sp.	midge	8.1	2	1	3	0.7%
		Dicrotendipes fumidus	midge	5.8	1		1	0.2%
		Eukiefferiella sp.	midge	2.7		3	3	0.7%
		Microtendipes pedellus gr.	midge	5.5	1		1	0.2%
		Orthocladius sp. (tent.)	midge	5.4	15		15	3.3%
		Phaenopsectra obedians gr.	midge	6.5	11	2	13	2.9%
		Polypedilum illinoense gr.	midge	9.0	3	13	16	3.6%
		Psectrocladius sp.	midge	3.6	1	1	2	0.4%
		Rheotanytarsus sp.	midge	5.9	5	1	6	1.3%
		Tanytarsus sp.	midge	6.7	1		1	0.2%
		Thienemanniella sp.	midge	5.8	6	1	7	1.6%
		Tribelos sp.	midge	6.3	4-	2	2	0.4%
		Tvetenia vitracies	midge	3.6	17		17	3.8%
	Empidida							
		Hemerodromia sp.	dance fly	7.6	1		1	0.2%
		Total Taxa			48	33	58	
		Total Specimens	1		304	145	449	100.0%

*Reference:

TABLE 22A MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 1 RUN					
		Sample Date:	26 October 2006					
		Gear:	Kick Net					
		Ocar:	INION NOT	Tol.				
Taxon:			Common Name	Index*	MRUN-1	MRUN-1R	Total	Percent
Tubificida			Common Humo	mack	mitort i	imitori iit	Total	1 Groom
Tubilicida	Tubificidae							
	Tubilicidae	Limnodrilus sp.	tube worm	9.4	1	1	2	1.5%
Mesogastro	noda Toda	Liiiiiodiiids sp.	tube worm	3.7	<u>'</u>	'		1.070
Mesogastro	Pleurocerida							
	riculocende	Leptoxis sp.	rock snail	1.7	21	25	46	34.6%
Veneroidea		Leptoxis sp.	TOOK SHAII	1.7	<u> </u>	20	+0	34.070
veneroidea	Corbiculidae	<u> </u>						
	Corbiculdae	Corbicula fluminea	Asiatic clam	6.1	6	2	8	6.0%
Ephemeropt	<u>L</u>	Corbicala Harriirica	Asiatic ciam	0.1	0		- 0	0.070
Ерпетісторі	Baetidae							
	Bactidae	Baetis sp.	mayfly	4.5	9	4	13	9.8%
	Heptageniid		illayily	7.0	3		10	3.070
	rieptageriila	Stenacron interpunctatum	mayfly	6.9		1	1	0.8%
		Stenonema mediopunctatum	mayfly	3.7	13	7	20	15.0%
	Isonychiidae		illayily	5.1	10	,	20	13.070
	Isorrycrinaac	Isonychia sp.	mayfly	3.4	5		5	3.8%
Odonata		ізопустіа эр.	inayny	0.4				0.070
Odonata	Coenagrioni	idae						
	Coonagnon	Argia sp.	damselfly	8.2	20	1	21	15.8%
	Gomphidae	7 ii gia 0p.	damoomy	0.2				10.070
	Compilidad	Dromogomphus sp.	dragonfly	5.9	2	1	3	2.3%
		Hagenius sp.	dragonfly	3.9		1	1	0.8%
Trichoptera		riageriiae ep.	aragormy	0.0		•	•	0.070
	Hydropsych	idae						
	,	Cheumatopsyche sp.	caddisfly	6.2	8	1	9	6.8%
Coleoptera					-			1
	Elmidae							
		Macronychus glabratus	riffle beetle	4.5	1		1	0.8%
		Optioservus sp.	riffle beetle	2.3	1		1	0.8%
	Dryopidae	,			•		-	1
	7 : 1 : 1 : 1	Helichus sp.	long-toed beetle	4.6	1		1	0.8%
Diptera								
	Chironomida	ae						
		Polypedilum illinoense gr.	midge	9.0	1		1	0.8%
		1	- 3-					
		Total Taxa			13	10	15	
		Total Specimens			89	44	133	100.0%

*Reference:

TABLE 22B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		In	I					
		Sample Location:	MIDDLE - 1 RUN	-				
		Sample Date:	16 May 2007					
		Gear:	Kick Net					
_				Tol.				_
Taxon:			Common Name	Index*	MRUN-1	MRUN-1R	Total	Percent
Hoplonemert								
	Tetrastemma			0.4		4		0.00/
Hamlatavida		Prostoma graecense	proboscis worm	6.1		1	1	0.2%
Haplotaxida	Naididae			+				
	ivaluluae	Nais sp.	naid worm	8.7		2	2	0.4%
		Slavina appendiculata	naid worm	7.0	4	2	6	1.1%
Tubificida		Зіачіна аррениісціата	Tiald WOTTI	7.0	4		0	1.170
Tabillolaa	Tubificidae							
		Aulodrilus sp.	tube worm	5.5		2	2	0.4%
		Branchiura sowerybi	tube worm	8.3	1			0.2%
		Limnodrilus sp.	tube worm	9.4		1	1	0.2%
Basommatop	hora	,						
	Ancylidae							
		Ferrissia rivularis	limpet snail	6.6	5	2	7	1.2%
	Lymnaeidae							
		Fossaria sp.	pond snail	7.0	1	1	2	0.4%
	Physidae					_		
		Physa sp.	pouch snail	8.8	19	9	28	5.0%
	Planorbidae	A.P. C. P.C.	1 7	0.0				4.40/
N 4		Micromenetus dilitatus	orb snail	8.3	6		6	1.1%
Mesogastrop	oda Pleurocerida							
	Pieurocerida	Elimia sp.	horn snail	2.4	2		2	0.4%
		Leptoxis sp.	rock snail	1.7	21	4	25	4.4%
Veneroidea		Leptoxis sp.	TOCK SHAII	1.7	21	4	23	4.470
VCHCIOIGCA	Corbiculidae							
	Corbicalidae	Corbicula fluminea	Asiatic clam	6.1	5	5	10	1.8%
Decapoda			7 totallo olalli					
	Cambaridae							
		Orconectes rusticus	crayfish	2.6	1		1	0.2%
Ephemeropte	era							
	Tricorythidae							
		Tricorythodes sp.	mayfly	5.0	76	37	113	20.0%
Odonata								
	Coenagrionic					_		
		Argia sp.	damselfly	8.2	4	3	7	1.2%
	Gomphidae		dragonfly	5.0	1		1	0.2%
	Libellulidae	Ma ayayay ia ya ayaifia a	dua maneflui	0.0	4			0.2%
	Dorlidoo	Macromyia magnifica	dragonfly	6.2	1		11	0.2%
	Perlidae	Perlesta sp.	stonefly	4.7	10		10	1.8%
Trichoptera		r eriesia sp.	Storietty	4.7	10		10	1.076
Thoroptora	Glossosomat	l idae		+				
	Ciossosomai	Culoptila sp.	caddisfly	1.0		1	1	0.2%
	Hydropsychic		Gadalony	1.0		·	•	0.270
	,	Cheumatopsyche sp.	caddisfly	6.2	3	1	4	0.7%
		Hydropsyche sp.	caddisfly	4.3	3	-	3	0.5%
		Hydropsyche nr. betteni	caddisfly	7.8	4		4	0.7%
		Hydropsyche bronta	caddisfly	5.0	2	2	4	0.7%
	Hydroptilidae							
		Hydroptila sp.	caddisfly	6.2	15	6	21	3.7%
	Lepidostoma							
		Lepidostoma sp.	caddisfly	0.9	21	6	27	4.8%
	Leptoceridae							
		Mystacides sp.	caddisfly	2.6	1		1	0.2%
	<u> </u>	Oecetis sp.	caddisfly	3.6	1	1	2	0.4%
	Polycentropo		10.0	ļ <u></u>				0.637
		Polycentropus sp.	caddisfly	3.5	1		1	0.2%

TABLE 22B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 1 RUN					
		Sample Date:	16 May 2007					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	MRUN-1	MRUN-1R	Total	Percent
Coleoptera								
	Elmidae							
		Macronychus glabratus	riffle beetle	4.5	1		1	0.2%
		Optioservus sp.	riffle beetle	2.3		1	1	0.2%
		Stenelmis crenata gr.	riffle beetle	5.1		3	3	0.5%
Diptera								
	Ceratopogo							
		Bezzia sp.	biting midge	7.0	1		1	0.2%
		Palpomyia gr.	biting midge	7.0		1	1	0.2%
	Chironomid							
		Ablabesmyia sp.	midge	7.2	1		1	0.2%
		Chironomus sp.	midge	9.6	1		1	0.2%
		Cryptochironomus fulvus gr.	midge	6.4		12	12	2.1%
		Cryptotendipes sp.	midge	6.2		12	12	2.1%
		Dicrotendipes sp.	midge	8.1		20	20	3.5%
		Dicrotendipes modestus	midge	8.7	7		7	1.2%
		Eukiefferiella sp. (tent.)	midge	2.7	7		7	1.2%
		Harnischia sp.	midge	9.1		8	8	1.4%
		Nanocladius sp.	midge	7.1		4	4	0.7%
		Orthocladius sp.	midge	5.4	5		5	0.9%
		Phaenopsectra obedians gr.	midge	6.5	7	68	75	13.3%
		Polypedilum flavum	midge	4.7	2	4	6	1.1%
		Polypedilum scalaenum gr.	midge	8.4		32	32	5.7%
		Rheotanytarsus sp.	midge	5.9	3		3	0.5%
		Tanytarsus sp.	midge	6.7	11	48	59	10.4%
		Tvetenia sp.	midge	3.6		8	8	1.4%
	Tipulidae							
		Antocha sp.	crane fly	4.2	4		4	0.7%
		Total Taxa			36	31	51	
		Total Specimens			258	307	565	100.0%

*Reference:

TABLE 23 MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - BACKWATER AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	MIDDLE - 2 BAC	KWATE	ER .				
	Sample Date:	16 May 2007						
	Gear:	Petite Ponar Dre	dge (ar	ea = 0.023	square met	ters)		
			Tol.			,	Density	
Taxon:		Common Name	Index*	MBW-2	MBW-2R	Total	(no./m2)	Percent
Haplotaxio	a					101011	(,	
	Naididae							
	Arcteonais Iomondi	naid worm		2		2	43	0.9%
Tubificida								
	Tubificidae							
	Branchiura sowerybi	tube worm	8.3	2	8	10	217	4.5%
	llydrilus templetoni	tube worm	9.0	6	21	27	587	12.2%
	Limnodrilus sp.	tube worm	9.4	25	39	64	1391	28.8%
	Quistadrilus multisetosus	tube worm	3.8	2	5	7	152	3.2%
Mesogastr	opoda							
	Pleuroceridae							
	Leptoxis sp.	rock snail	1.7	6	8	14	304	6.3%
Veneroide	a							
	Corbiculidae							
	Corbicula fluminea	Asiatic clam	6.1	2	7	9	196	4.1%
	Sphaeriidae							
	Pisidium sp.	pill clam	6.5	2	5	7	152	3.2%
Odonata								
	Gomphidae							
	Stylurus sp.	dragonfly	5.8		1	1	22	0.5%
Trichopter								
	Dipseudopsidae							
	Phylocentropus sp.	caddisfly	6.2		2	2	43	0.9%
Coleoptera								
	Elmidae							
	Dubiraphia vittata	riffle beetle	5.9		2	2	43	0.9%
Diptera								
	Ceratopogonidae							
	Sphaeromias sp.	biting midge	6.0	1	2	3	65	1.4%
	Chironomidae							
	Chironomus sp.	midge	9.6	1	3	4	87	1.8%
	Cladotanytarsus sp.	midge	4.0		1	1	22	0.5%
	Cryptochironomus fulvus gr.	midge	6.4		1	1	22	0.5%
	Cryptotendipes sp.	midge	6.2		1	1	22	0.5%
	Dicrotendipes sp.	midge	8.1	1	3	4	87	1.8%
	Phaenopsectra obedians gr.	midge	6.5	3	10	3	65	1.4%
	Procladius sp.	midge	9.1	12	16	28	609	12.6%
	Stictochironomus caffrarius gr.	midge	6.5	-	2	2	43	0.9%
	Tanytarsus sp.	midge	6.7	7	23	30	652	13.5%
	Total Taxa			14	19	21		
	Total Specimens			72	150	222		100.0%
	Total Density (no./m ²)						4,826	

^{*}Reference:

TABLE 24A MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - DEPOSITIONAL AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 2 DEP	OSITION	ΔΙ				
		Sample Date:	27 October 2006		,				
		Gear:	Petite Ponar Dred	ge (area	a = 0.023 sc	uare meters	1		
			- Conto i Critari Di Con	Tol.	- 010_0			Density	
Taxon:			Common Name	Index*	MDEP-2	MDEP-2R	Total	(no./m²)	Percent
Nematoda			round worm	6.0		1	1	22	2.6%
Tubificida									
	Tubificidae								
		Branchiura sowerybi	tube worm	8.3	3	2	5	109	13.2%
		Limnodrilus sp.	tube worm	9.4	2	7	9	196	23.7%
		Quistadrilus multisetosus	tube worm	3.8	2		2	43	5.3%
Rhynchobde	ellida								
	Glossiphoni	dae							
		Gloiobdella elongata	leech	9.5	1		1	22	2.6%
Basommato	phora								
	Ancylidae								
		Laevapex fuscus	limpet snail	7.5		2	2	43	5.3%
Mesogastro									
	Pleurocerida								
		Leptoxis sp.	rock snail	1.7	1		1	22	2.6%
Veneroidea									
	Sphaeriidae								
_		Pisidium sp.	pill clam	6.5	3	1	4	87	10.5%
Odonata									
	Coenagrioni								
		Argia sp.	damselfly	8.2	1		1	22	2.6%
	Gomphidae								
		Dromogomphus armatus	dragonfly	5.9		1	1	22	2.6%
Coleoptera	E1 11								
	Elmidae	D 1: 1: "	'm 0	5.0				400	40.00/
	Dustin ni da n	Dubiraphia vittata	riffle beetle	5.9	3	2	5	109	13.2%
	Dytiscidae	I badaa a a maa	alli din ar la a atta	0.0	4			00	0.00/
Dinters		Hydroporus sp.	diving beetle	8.6	1		11	22	2.6%
Diptera	Corotanasia	nidaa							
	Ceratopogo		hiting mides	7.0		1	1	22	2.69/
	Chironomida	Palpomyia gr.	biting midge	7.0		I	ı		2.6%
	Cillionorilla	Ablabesmyia mallochi	midge	7.2	2		2	43	5.3%
	1	Clinotanypus sp.	midge	8.7	2		2	43	5.3%
	1	Total Taxa	muye	0.7	∠ 11	8	∠ 15	43	0.0%
	1	Total Specimens			21	17	38	+	100.0%
	1	Total Density (no./m²)			۷1	17	30	926	100.076
		Total Density (no./m)						826	

*Reference:

TABLE 24B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - DEPOSITIONAL AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	MIDDLE - 2 DEP	OSITION	AL				
	Sample Date:	16 May 2007						
	Gear:	Petite Ponar Dre	dge (area	a = 0.023 so	uare meters)		
			Tol.				Density	
Taxon:		Common Name	Index*	MDEP-2	MDEP-2R	Total	(no./m2)	Percent
Coleoptera								
	Elmidae							
	Macronychus glabratus	riffle beetle	4.5	1		1	22	2.0%
Diptera								
	Ceratopogonidae							
	Sphaeromias sp.	biting midge	6.0		1	1	22	2.0%
	Chironomidae							
	Chironomus sp.	midge	9.6	1	2	3	65	5.9%
	Cryptotendipes sp.	midge	6.2	2	2	4	87	7.8%
	Dicrotendipes sp.	midge	8.1	2		2	43	3.9%
	Dicrotendipes neomodestus	midge	8.1		2	2	43	3.9%
	Paracladopelma sp.	midge	5.5		2	2	43	3.9%
	Phaenopsectra obedians gr.	midge	6.5	8	20	28	609	54.9%
	Polypedilum scalaenum gr.	midge	8.4		2	2	43	3.9%
	Tanytarsus sp.	midge	6.7	4	2	6	130	11.8%
	Total Taxa			6	8	10		
	Total Specimens			18	33	51		100.0%
	Total Density (no./m ²)						1,109	

^{*}Reference:

TABLE 25A MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - EMERGENT AQUATIC VEGETATION AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 2 EMER	GENT A	QUATIC VE	SETATION		
		Sample Date:	26 October 2006					
		Gear:	Sweep Net					
				Tol.				
Taxon:			Common Name	Index*	MEAV-2	MEAV-2R	Total	Percent
Tricladida								
	Planariidae							
		Dugesia tigrina	flat worm	7.2	2		2	1.3%
Basommato								
	Planorbidae							
		Helisoma anceps	orb snail	6.2	1		1	0.6%
Mesogastro	poda							
	Pleurocerida							
		Elimia sp.	horn snail	2.4	6	3	9	5.8%
		Leptoxis sp.	rock snail	1.7	29	22	51	32.7%
Ephemerop								
	Baetidae							
		Baetis sp.	mayfly	4.5	3	1	4	2.6%
		Procloeon sp.	mayfly	6.0	1		1	0.6%
	Tricorythida							
		Tricorythodes sp.	mayfly	5.0	1	1	2	1.3%
Odonata								
	Aeschnidae							
		Basiaeschna janata	dragonfly	7.3	5		5	3.2%
	Calopterygic							
		Calopteryx maculata	damselfly	7.8		1	1	0.6%
	Coenagrioni							
		Argia sp.	damselfly	8.2	4		4	2.6%
		Enallagma sp.	damselfly	8.9	42	10	52	33.3%
Hemiptera								
	Gerridae							
		Rheumatobates palosi	water strider	9.0		2	2	1.3%
	Veliidae							
		Microvelia sp.	short-legged strider	9.0	1		1	0.6%
Coleoptera								
	Elmidae							
	<u> </u>	Macronychus glabratus	riffle beetle	4.5	1		1	0.6%
Diptera	<u> </u>							
	Chironomida							
		Chironomini	midge	6.0		1	1	0.6%
	<u> </u>	Polypedilum illinoense gr.	midge	9.0	4	12	16	10.3%
	<u> </u>	Tanytarsus sp.	midge	6.7		1	1	0.6%
	Sciomyzidae							
	<u> </u>	Sepedon sp.	marsh fly	10.0	1	1	2	1.3%
	<u> </u>	Total Taxa			14	11	18	
ĺ		Total Specimens	ĺ		101	55	156	100.0%

*Reference:

TABLE 25B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - EMERGENT AQUATIC VEGETATION AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location: MIDDLE - 2 EMERGENT AQUATIC VEGETATION						
		Sample Date:	16 May 2007		QUATIC VE	SETATION		
		Gear:	Sweep Net					
		Ocai.	Sweep Net	Tol.				
Taxon:			Common Name	Index*	MEAV -2	MEAV-2R	Total	Percent
Tricladida			Common Name	IIIuex	WILAV -Z	WILA V-ZIX	I Otal	1 ercent
TTICIAUIUA	Planariida							
	Fiariarilua	Dugesia tigrina	flat worm	7.2	1	8	9	0.6%
Tubificida	-	Dugesia ligitila	nat wonin	1.2	'	0	3	0.076
Tubilicida	Tubificida	<u> </u>						
	Tubilicida	Bothrioneurum vejdovskyanum	tube worm	4.0		4	4	0.3%
		Branchiura sowerybi	tube worm	8.3	2	2	4	0.3%
		Limnodrilus sp.	tube worm	9.4	5	7	12	0.8%
Rhynchobd	lellida	Ziriniedinae op.	tabo troim	0.1	- ŭ	,		0.070
,	Glossipho	nidae						
		Gloiobdella elongata	leech	9.5	39	23	62	4.4%
		Helobdella stagnalis	leech	8.8	12	13	25	1.8%
		Helobdella triserialis	leech	9.2		1	1	0.1%
Basommato	ophora							
	Ancylidae							
	, , , , ,	Ferrissia rivularis	limpet snail	6.6	1	2	3	0.2%
		Laevapex fuscus	limpet snail	7.5	2	2	4	0.3%
	Lymnaeid	ae						
		Fossaria sp.	pond snail	7.0		4	4	0.3%
	Physidae							
		Physa sp.	pouch snail	8.8	156	124	280	19.8%
	Planorbid							
		Gyraulus parvus	orb snail	4.2	4		4	0.3%
		Helisoma anceps	orb snail	6.2	16	8	24	1.7%
		Micromenetus dilitatus	orb snail	8.3	40	8	48	3.4%
Mesogastro								
	Pleurocer							
		Elimia sp.	horn snail	2.4	24	44	68	4.8%
		Leptoxis sp.	rock snail	1.7	24	12	36	2.5%
Veneroidea								
	Corbiculio							
		Corbicula fluminea	Asiatic clam	6.1	100	19	119	8.4%
	Sphaeriid		- 91 - I	0.5	00	00	404	7.40/
		Pisidium sp.	pill clam	6.5	68	36	104	7.4%
Amphipada		Sphaerium sp.	fingernail clam	7.6	4	3	7	0.5%
Amphipoda	Crangony	letidae						
	Crangony		side swimmer	7.9		2	2	0.1%
Odonata	+	Crangonyx sp.	Side Swiffiller	7.9				0.176
Outriala	Aeschnida	1						+
		Boyeria sp.	dragonfly	5.9	1	1	2	0.1%
	Coenagrio		uragoriny	3.3	l l	'		0.176
	Journayin	Argia sp.	damselfly	8.2		2	2	0.1%
		Enallagma sp.	damselfly	8.9	2	14	16	1.1%
	Gomphida		damodily	0.0		17	10	1.170
	Jonnphila	Gomphus sp.	dragonfly	5.8	1	1	2	0.1%
	Libellulida			0.0	· · ·			0.170
		Macromyia sp.	dragonfly	6.2		1	1	0.1%
Hemiptera				J				5.170
121111111111111111111111111111111111111	Corixidae							
		Trichocorixa sp.	water boatman	8.0	68	5	73	5.2%
	Gerridae							,-
		Trepobates sp.	water strider	6.0	2		2	0.1%
		· · · · · · · · · · · · · · · · · · ·						

TABLE 25B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - EMERGENT AQUATIC VEGETATION AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 2 EMER	RGENT A	QUATIC VE	GETATION		
		Sample Date:	16 May 2007					
		Gear:	Sweep Net					
				Tol.				
Taxon:			Common Name	Index*	MEAV -2	MEAV-2R	Total	Percent
Trichoptera								
	Hydropsy	rchidae						
		Cheumatopsyche sp.	caddisfly	6.2	2	4	6	0.4%
	Hydroptili	dae						
		Hydroptila sp.	caddisfly	6.2		13	13	0.9%
Coleoptera								
	Elmidae							
		Dubiraphia vittata	riffle beetle	5.9	1	7	8	0.6%
		Macronychus glabratus	riffle beetle	4.5		3	3	0.2%
Diptera								
	Ceratopo							
		Bezzia sp.	biting midge	7.0		2	2	0.1%
		Sphaeromias sp.	biting midge	6.0		1	1	0.1%
		Probezzia sp.	biting midge	6.0		1	1	0.1%
	Chironom							
		Chironomus sp.	midge	9.6	76		76	5.4%
		Cricotopus sp.	midge	6.3		4	4	0.3%
		Cryptotendipes sp.	midge	6.2		4	4	0.3%
		Dicrotendipes sp.	midge	8.1		96	96	6.8%
		Dicrotendipes fumidus	midge	5.8	92		92	6.5%
		Polypedilum illinoense gr.	midge	9.0	28	16	44	3.1%
		Procladius sp.	midge	9.1	20	44	64	4.5%
		Tanypus sp.	midge	9.2		4	4	0.3%
		Tanytarsus sp.	midge	6.7	28	12	40	2.8%
		Tribelos sp.	midge	6.3	20	16	36	2.5%
		Total Taxa			29	40	44	
		Total Specimens			839	573	1,412	100.0%

^{*}Reference:

TABLE 26A MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RIFFLE AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 2 RIFFL	E I				
		Sample Date:	27 October 2006	ī				
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	MRIF-2	MRIF-2R	Total	Percent
Mesogastro	poda							
	Pleurocerida	ae						
		Leptoxis sp.	rock snail	1.7	31	42	73	11.0%
Veneroidea								
	Corbiculidae	9						
		Corbicula fluminea	Asiatic clam	6.1	55	44	99	14.9%
Ephemerop	tera							
	Baetidae							
		Baetis sp.	mayfly	4.5	36	17	53	8.0%
	Ephemerelli	dae						
		Serratella sp.	mayfly	1.5	1	2	3	0.5%
	Heptageniid	ae						
		Stenonema sp.	mayfly	3.5	64	28	92	13.9%
		Stenonema mediopunctatum	mayfly	3.7	30	10	40	6.0%
	Isonychiidae	9						
		Isonychia sp.	mayfly	3.4	132	66	198	29.9%
Odonata								
	Coenagrioni	idae						
		Argia sp.	damselfly	8.2	6	14	20	3.0%
		Enallagma sp.	damselfly	8.9	1		1	0.2%
	Gomphidae							
		Dromogomphus sp.	dragonfly	5.9		3	3	0.5%
		Ophiogomphus sp.	dragonfly	5.5	1	1	2	0.3%
Megaloptera	a							
	Corydalidae							
		Corydalus cornutus	dobsonfly	5.1		1	1	0.2%
Trichoptera								
	Hydropsych							
		Cheumatopsyche sp.	caddisfly	6.2	19	45	64	9.7%
	_	Hydropsyche sp.	caddisfly	4.3	1		1	0.2%
		Hydropsyche bronta	caddisfly	5.0		1	1	0.2%
Coleoptera			•					
	Elmidae							
		Macronychus glabratus	riffle beetle	4.5		1	1	0.2%
		Optioservus ovalis	riffle beetle	4.0	4	4	8	1.2%
		Stenelmis crenata gr.	riffle beetle	5.1	1	2	3	0.5%
		Total Taxa			14	16	18	
		Total Specimens			382	281	663	100.0%

^{*}Reference:

TABLE 26B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RIFFLE AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 2 RIFFLE	= 1				
		Sample Date:	16 May 2007					
		•						
		Gear:	Kick Net	Tol.				
T			O No		DIE 0	DIE OD	T-1-1	D
Taxon:			Common Name	Index*	RIF-2	RIF-2R	Total	Percent
Tricladida	Diamanii da							
	Planariida		0.4	7.0				0.40/
		Dugesia tigrina	flat worm	7.2		1	1	0.1%
Hoplonemer	Tetrastem	matidaa						
	retrasten	Prostoma graecense	proboscis worm	6.1	3	13	16	0.8%
Haplotaxida		Frostoria graecerise	proboscis worm	0.1	<u> </u>	13	10	0.0%
Παρισιαλίσα	Lumbricid	36	earth worm	8.0	1		1	0.1%
	Naididae	ac 	naid worm	6.1	5		5	0.1%
	Ivaldidac	Bratislavia sp. (tent.)	naid worm	6.0	3		<u> </u>	0.570
		Dero sp.	naid worm	10.0	3		3	0.2%
		Nais sp.	naid worm	8.7		5	5	0.3%
Tubificida		raio op.	naid Worm	0.1				0.070
	Tubificida	e						
		Aulodrilus pluriseta	tube worm	2.9	1	1	1	0.1%
		Limnodrilus sp.	tube worm	9.4	•	1	1	0.1%
Rhynchobde	ellida					 	•	511,70
,	Glossipho	nidae						
		Batrachobdella phalera	leech	7.7	1		1	0.1%
		Gloiobdella elongata	leech	9.5	1		1	0.1%
Basommato	phora	<u> </u>						
	Ancylidae							
		Ferrissia rivularis	limpet snail	6.6	1		1	0.1%
	Lymnaeid	ae	·					
		Fossaria sp.	pond snail	7.0	4		4	0.2%
	Physidae							
		Physa sp.	pouch snail	8.8	12	4	16	0.8%
	Planorbid	ae						
		Micromenetus dilitatus	orb snail	8.3		1	1	0.1%
Mesogastro	poda							
	Pleurocer							
		Leptoxis sp.	rock snail	1.7	288	146	434	22.5%
Veneroidea	ļ							
	Corbiculio							
		Corbicula fluminea	Asiatic clam	6.1	192	419	611	31.7%
Decapoda	0 1 1							
	Cambarid			0.0				0.407
		Orconectes sp.	crayfish	2.6	1		1	0.1%
Ephemeropt						 		
<u> </u>	Baetidae	Acontrollo on	mouth	2.6		6	e	0.20/
<u> </u>	1	Acentrella sp.	mayfly	3.6	7	6	6 17	0.3%
<u> </u>	1	Baetis sp.	mayfly	4.5		10		0.9%
	Enhamara	Plauditus sp.	mayfly	4.5		1	1	0.1%
	Ephemere	Serratella sp.	mayfly	1.5	1	10	11	0.6%
	Heptagen		Illaylly	1.5	ı	10	- 11	0.076
	ricplayell	Stenonema sp.	mayfly	3.5		27	27	1.4%
	1	Stenonema mediopunctatum	mayfly	3.7	7		7	0.4%
	Isonychiid		паупу	0.1	<u>'</u>	 	'	J.7/0
	TOOTTYOTHIC	Isonychia sp.	mayfly	3.4	1	3	4	0.2%
	Tricorythic			0.7		_ <u> </u>		J.2.70
	7.11001 y (1110	Tricorythodes sp.	mayfly	5.0	37	24	61	3.2%
Odonata					ν.		7.	0.2,0
	Coenagrio	onidae				1		
	Journaging	Argia sp.	damselfly	8.2	2	2	4	0.2%
	Gomphida			-: <u>-</u>		 	·	2.270
		Gomphus sp.	dragonfly	5.8	1	1	2	0.1%
		Lanthus sp.	dragonfly	1.5	1	1	1	0.1%
	1	1 · · · · · · · · · · · · · · · · · · ·			•	1	•	

TABLE 26B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RIFFLE AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 2 RIFFLI					
		Sample Date:	16 May 2007					
		Gear:	Kick Net					
		Geal.	KICK NEL	Tol.				
Taxon:			Common Name	Index*	RIF-2	RIF-2R	Total	Percent
			Common Name	illuex	KIF-Z	KIF-ZK	TOtal	reiceili
Plecoptera	B !!!							
	Perlidae	A	-4	4.5		4	4	0.40/
	1	Anacroneuria sp.	stonefly	1.5		1	7	0.1%
Taile beautions	1	Perlesta sp.	stonefly	4.7	5	2	/	0.4%
Trichoptera	01							
	Glossosor		an delinfly	2.5			2	0.20/
	Lludropou	Protoptila sp.	caddisfly	2.5	3		3	0.2%
	Hydropsy		an delinfly	0.0		047	074	44.00/
	1	Cheumatopsyche sp.	caddisfly	6.2	57	217	274	14.2%
	+	Hydropsyche sp.	caddisfly	4.3		12	4 12	0.2%
	+	Hydropsyche nr. betteni	caddisfly	7.8				0.6%
	Hydroptilia	Hydropsyche bronta	caddisfly	5.0	3	20	23	1.2%
	Hydroptilio	Hydroptila sp.	caddisfly	6.2	14	 	14	0.7%
	Lepidosto	motidos	Caudisity	0.2	14		14	0.7%
	Lepidosto	Lepidostoma sp.	caddisfly	0.9	3	4	7	0.4%
Coleoptera	-	серійовіотта вр.	Caudisity	0.9	3	4		0.4%
Coleoptera	Elmidae							
	Lillidae	Dubiraphia vittata	riffle beetle	5.9	1	1	2	0.1%
	-	Macronychus glabratus	riffle beetle	4.5	<u>'</u> 1	2	3	0.1%
		Microcylloepus pusillus	riffle beetle	2.1	<u>'</u>	8	8	0.2%
		Optioservus sp.	riffle beetle	2.1		1	1	0.4%
		Stenelmis crenata gr.	riffle beetle	5.1	3	6	9	0.1%
	Gyrinidae		Time beene	3.1		0	9	0.576
	Gymnuae	Dineutus sp.	whirligig beetle	5.5		1	1	0.1%
	Psephenic		writingly beetle	5.5		1		0.176
	rsephenic	Psephenus herricki	water penny	2.3		1	1	0.1%
Diptera	+	r septienus tierricki	water periffy	2.3		'		0.176
Diptora	Ceratopoo	ronidae						
	Ceratopo	Dasyhelia sp.	biting midge	4.0	1		1	0.1%
	Chironom		biting mage	4.0	<u> </u>			0.170
	310110111	Ablabesmyia sp.	midge	7.2	4	 	4	0.2%
		Dicrotendipes sp.	midge	8.1	16	1	17	0.276
	1	Dicrotendipes fumidus	midge	5.8		1	1	0.1%
		Eukiefferiella sp.	midge	2.7		19	19	1.0%
		Orthocladius sp.	midge	5.4	27		27	1.4%
		Paratanytarsus sp.	midge	8.4	7	1	7	0.4%
		Polypedilum flavum	midge	4.7	8		8	0.4%
		Polypedilum scalaenum gr.	midge	8.4	8		8	0.4%
		Rheotanytarsus sp.	midge	5.9	21	1	21	1.1%
		Synorthocladius sp.	midge	4.3	14	1	14	0.7%
		Tvetenia vitracies	midge	3.6	188		188	9.7%
	Tipulidae							/-
	1	Antocha sp.	crane fly	4.2		1	1	0.1%
		Total Taxa	,		41	35	57	
		Total Specimens	†		957	976	1,930	100.0%

*Reference:

TABLE 27A MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RUN AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 2 RUN					
		Sample Date:	27 October 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	MRUN-2	MRUN-2R	Total	Percent
Tricladida								
	Planariidae							
		Dugesia tigrina	flat worm	7.2	1		1	1.1%
Lumbricina								
	Lumbricidae		earth worm	8.0	1		1	1.1%
Mesogastro								
	Pleurocerida							
		Leptoxis sp.	rock snail	1.7	41	8	49	55.1%
Veneroidea								
	Corbiculidae							
		Corbicula fluminea	Asiatic clam	6.1	2		2	2.2%
Ephemeropt								
	Baetidae							
		Baetis sp.	mayfly	4.5	14	3	17	19.1%
	Heptageniida							
		Stenonema mediopunctatum	mayfly	3.7	2	4	6	6.7%
	Isonychiidae							
		Isonychia sp.	mayfly	3.4	2		2	2.2%
Trichoptera								
	Hydropsychi							
		Cheumatopsyche sp.	caddisfly	6.2	2	3	5	5.6%
		Hydropsyche bronta	caddisfly	5.0		2	2	2.2%
	Leptoceridae							
		Oecetis sp.	caddisfly	3.6		1	1	1.1%
Diptera								
	Chironomida	-					_	
		Cricotopus bicinctus	midge	8.5		2	2	2.2%
	Simuliidae							
		Simulium sp.	black fly	4.0		1	1	1.1%
		Total Taxa			8	8	12	100.00
		Total Specimens			65	24	89	100.0%

*Reference:

TABLE 27B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RUN AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	MIDDLE - 2 RUN					
		Sample Date:	16 May 2007					
		Gear:	Kick Net					
		Gear.	KICK INCL	Tol.				
Taxon:			Common Name	Index*	MRUN-2	MRUN-2R	Total	Percent
Haplotaxida			Common Name	IIIuex	WINOIN-2	WINON-ZIX	I Olai	1 ercent
паріотахіца	Lumbricida	1	earth worm	8.0	1		1	0.1%
Basommatop			earth worth	0.0	'	+		0.170
Базопппаюр	Ancylidae							
	Aricylluae	Ferrissia rivularis	limpet snail	6.6	2		2	0.2%
	Lymnaeida		iiiipet siiaii	0.0				0.270
	Lymnaciae	Fossaria sp.	pond snail	7.0	1	1	2	0.2%
	Physidae	r occurra op.	porta oriali	7.0		•		0.270
	Titysidae	Physa sp.	pouch snail	8.8	3		3	0.3%
	Planorbida		podon snan	0.0				0.070
	1 Idilolbida	Gyraulus sp.	orb snail	4.2	1		1	0.1%
Veneroidea	1	Cy. adiao op.	OID OIIGII		<u>'</u>			0.170
1 0	Corbiculida	1 1e						1
	Corbiodilac	Corbicula fluminea	Asiatic clam	6.1	5	4	9	0.8%
Hydracarina	1	Co. S. Said Hallimod	water mite	5.5	1	 	1	0.1%
Ephemeropte	era		Water fille	0.0		1	· ·	0.170
	Baetidae					1		
		Baetis sp.	mayfly	4.5	3	1	3	0.3%
	Ephemere							0.070
		Ephemerella sp.	mayfly	2.0		1	1	0.1%
		Serratella sp.	mayfly	1.5	1	1	2	0.2%
	Heptagenii							0.2,0
	1 1	Stenonema sp.	mayfly	3.5	2		2	0.2%
	Tricorythid	ae						
		Tricorythodes sp.	mayfly	5.0	54	56	110	9.8%
Odonata		,	1					
	Coenagrio	nidae						
		Argia sp.	damselfly	8.2	3		3	0.3%
	Gomphida	e	dragonfly	5.0		1	1	0.1%
		Hagenius brevistylus	dragonfly	3.9		1	1	0.1%
	Libellulidae	9						
		Macromyia illinoiensis	dragonfly	6.2		16	16	1.4%
Plecoptera								
	Perlidae							
		Perlesta sp.	stonefly	4.7	1		1	0.1%
Trichoptera								
	Glossosom							
		Glossosoma sp.	caddisfly	1.5	3		3	0.3%
	Hydropsyc							
		Cheumatopsyche sp.	caddisfly	6.2	6		6	0.5%
		Hydropsyche bronta	caddisfly	5.0	3	1	4	0.4%
	Hydroptilid							
		Hydroptila sp.	caddisfly	6.2	3	3	6	0.5%
	Lepidoston							
		Lepidostoma sp.	caddisfly	0.9	5	39	44	3.9%
Coleoptera								
	Elmidae							
		Macronychus glabratus	riffle beetle	4.5		3	3	0.3%

TABLE 27B MACROINVERTEBRATE TAXONOMIC RESULTS: MIDDLE EDR - RUN AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	MIDDLE - 2 RUN					
	Sample Date:	16 May 2007					
	Gear:	Kick Net					
			Tol.				0.1% 0.7% 0.4% 0.7% 2.5% 11.7% 0.4% 0.7% 0.11.3% 9.2% 35.3%
Taxon:		Common Name	Index*	MRUN-2	MRUN-2R	Total	Percent
Diptera							
	Ceratopogonidae						
	Palpomyia gr.	biting midge	7.0		1	1	0.1%
	Chironomidae						
	Ablabesmyia mallochi	midge	7.2	8		8	0.7%
	Chironomus sp.	midge	9.6	4		4	0.4%
	Cricotopus sp.	midge	6.3	8		8	
	Cryptochironomus fulvus gr	r. midge	6.4	12	16	28	2.5%
	Dicrotendipes sp.	midge	8.1	36	96	132	11.7%
	Harnischia sp.	midge	9.1	4		4	0.4%
	Microtendipes pedellus gr.	midge	5.5		8	8	0.7%
Diptera							
	Chironomidae (continued)						
	Orthocladius sp.	midge	5.4	8	16	24	2.1%
	Phaenopsectra obedians gi		6.5	24	104	128	11.3%
	Polypedilum scalaenum gr.	midge	8.4	56	48	104	9.2%
	Tanytarsus sp.	midge	6.7	104	294	398	35.3%
	Thienemannimyia gr.	midge	6.0	4		4	0.4%
	Tvetenia vitracies	midge	3.6	36	16	52	4.6%
	Total Taxa			30	21	37	
	Total Specimens			402	726	1,128	100.0%

*Reference:

TABLE 28A MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - BACKWATER AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 1 BACKW	VΔTFR					
		Sample Date:	24 October 2006	AILK					
		Gear:	Petite Ponar Dredge	a (area –	0 033 sana	re meters)			
		Ocur.	r citic i onai bicage	Tol.	0.023 3qua	le meters,		Density	
Taxon:			Common Name	Index*	UBW-1	UBW-1R	Total	(no./m ²)	Percent
Tubificida			Common Name	IIIUCX	OBW-1	OBW-IK	Total	(110.3111)	1 ercent
Tubilicida	Tubificidae								
	Tubilicidae	Branchiura sowerybi	tube worm	8.3	7		7	152	3.9%
		Limnodrilus sp.		9.4	59			1283	32.6%
		Quistadrilus multisetosus	tube worm	3.8	5		5	109	2.8%
Dagammata	nhoro	Quistaurilus muitisetosus	tube worm	3.0	5		<u> </u>	109	2.0%
Basommato									
	Physidae	Dhuasa	navele eneil	0.0		3	3	C.F.	4.70/
N4		Physa sp.	pouch snail	8.8		3	<u> </u>	65	1.7%
Mesogastro		<u></u>						 	
	Pleurocerida		rook anail	17	1		1	22	0.69/
Veneroidea		Leptoxis sp.	rock snail	1.7	1		1	22	0.6%
veneroidea	Corbiculidae								
	Corbiculidae		A sistis alone	C 4	4		4	0.7	0.00/
Odonoto		Corbicula fluminea	Asiatic clam	6.1	4		4	87	2.2%
Odonata	A a a a b mi d a a								
	Aeschnidae	Designation is not	dragonfly	7.3		1	1	22	0.6%
	Coenagrioni	Basiaeschna janata	uragonily	1.3		l l	<u> </u>	22	0.6%
	Coenagnoni	Enallagma sp.	down a lift.	0.0		70	70	4507	40.00/
	Comphidee	Епапаўтна sp.	damselfly	8.9		73	73	1587	40.3%
	Gomphidae	I amthur an	dua manelli i	4.5	4		4	20	0.00/
	Libellulidae	Lanthus sp.	dragonfly	1.5	1		1	22	0.6%
	Libellullaae	Enthomic on	draganfly	9.7		1	1	22	0.6%
Calaantara		Erythemis sp.	dragonfly	9.7		l l	<u> </u>	22	0.6%
Coleoptera	Elmidae								
	Ellillae	Dubirophio vittoto	riffle beetle	5.9	1		1	22	0.6%
	Haliplidae	Dubiraphia vittata	Time beene	5.8	ı		ı		0.0%
	i ialipliuae	Peltodytes sp.	crawling water beetle	8.7		2	2	43	1.1%
Diptora	+	r enougies sp.	Grawing water beetle	0.1				43	1.170
Diptera	Chironomida								
	Cilliononida	Chironomus sp.	midge	9.6	3		3	65	1.7%
	1	Cryptotendipes sp.	midge	6.2	6	+	<u> </u>	130	3.3%
-	+	Polypedilum illinoense gr.	midge	9.0	U	4	4	87	2.2%
-	+	Polypedilum scalaenum gr.	midge	8.4	9	4	9	196	5.0%
		Tanytarsus sp.		6.7	1		<u>9</u> 1	22	0.6%
	-	Total Taxa	midge	0.7	11	6	17		0.0%
	-	Total Specimens			97	84	181	-	100.0%
	+				31	04	101	2.025	100.070
		Total Density (no./m²)						3,935	

*Reference:

TABLE 28B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - BACKWATER AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	UPPER - 1 BACK	WATER					
	Sample Date:	14 May 2007						
	Gear:	Petite Ponar Dred	ge (area	= 0.023 s	guare mete	rs)		
			Tol.			-,	Density	
Taxon:		Common Name	Index*	UBW-1	UBW-1R	Total	(no./m²)	Percent
Tubificida								
	Tubificidae							
	Branchiura sowerybi	tube worm	8.3		3	3	65	0.5%
	Limnodrilus sp.	tube worm	9.4	52	16	68	1,478	10.8%
	Limnodrilus hoffmeisteri	tube worm	9.4	1	23	24	522	3.8%
Veneroidea								
	Corbiculidae							
	Corbicula fluminea	Asiatic clam	6.1	2		2	43	0.3%
Coleoptera								
	Elmidae							
	Dubiraphia vittata	riffle beetle	5.9	1	1	2	43	0.3%
Diptera								
	Chironomidae							
	Chironomus sp.	midge	9.6	72	32	104	2,261	16.6%
	Cryptotendipes sp.	midge	6.2	8		8	174	1.3%
	Dicrotendipes sp.	midge	8.1	8	8	16	348	2.6%
	Paratendipes albimanus	midge	6.0	16	8	24	522	3.8%
	Phaenopsectra obedians gr.	midge	6.5	88	160	248	5,391	39.6%
	Polypedilum halterale gr.	midge	7.3	8		8	174	1.3%
	Polypedilum scalaenum gr.	midge	8.4	8		8	174	1.3%
	Procladius sp.	midge	9.1		16	16	348	2.6%
	Tanytarsus sp.	midge	6.7	8	8	16	348	2.6%
	Tribelos sp.	midge	6.3	80		80	1,739	12.8%
	Total Taxa			13	10	15		
	Total Specimens			352	275	627		100.0%
	Total Density (no./m²)						13,630	

*Reference:

TABLE 29A MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - DEPOSITIONAL AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 1 DEP	OSITION	NAL				
		Sample Date:	24 October 2006						
		Gear:	Petite Ponar Dre	dge (ar	ea = 0.023 s	square meters	s)		
				Tol.				Density	
Taxon:			Common Name	Index*	UDEP-1	UDEP-1R	Total	(no./m²)	Percent
Nematoda			round worm	6.0		2	2	43	7.1%
Tubificida									
	Tubificidae								
		Aulodrilus sp.	tube worm	5.5		1	1	22	3.6%
		Branchiura sowerybi	tube worm	8.3	4		4	87	14.3%
		Limnodrilus sp.	tube worm	9.4	4	2	6	130	21.4%
	Physidae								
		Physa sp.	pouch snail	8.8	1		1	22	3.6%
Mesogastro									
	Pleurocerio								
		Leptoxis sp.	rock snail	1.7	8	1	9	196	32.1%
Veneroidea									
	Corbiculida	• •							
		Corbicula fluminea	Asiatic clam	6.1		2	2	43	7.1%
Ephemerop									
	Baetidae								
		Baetis sp.	mayfly	4.5	1		1	22	3.6%
Coleoptera								<u> </u>	
	Elmidae	I Marian and a salah and a	200 - 1 0 -	4.5	4			00	0.00/
Dinton		Macronychus glabratus	riffle beetle	4.5	1		1	22	3.6%
Diptera	Chironomic	100							
	Chironomic		mai dana	C 4	1		1	22	2.00/
		Cryptochironomus fulvus gr. Total Taxa	midge	6.4	7		10	22	3.6%
					20	5 8	28		100.0%
		Total Specimens			20	0	20	500	100.0%
		Total Density (no./m²)						609	

*Reference:

TABLE 29B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - DEPOSITIONAL AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	UPPER - 1 DEPO	SITIONAL	_				
	Sample Date:	14 May 2007						
	Gear:	Petite Ponar Dred	ge (area	= 0.023 squ	uare meters)			
			Tol.				Density	
Taxon:		Common Name	Index*	UDEP-1	UDEP-1R	Total	(no./m²)	Percent
Tubificida								
	Tubificidae							
	Limnodrilus sp.	tube worm	9.4	17	9	26	565	17.4%
	Limnodrilus hoffmeisteri	tube worm	9.4	1		1	22	0.7%
Veneroidea								
	Corbiculidae							
	Corbicula fluminea	Asiatic clam	6.1	1	1	2	43	1.3%
Diptera								
	Chironomidae							
	Chironomus sp.	midge	9.6	40	8	48	1,043	32.2%
	Cladotanytarsus sp.	midge	4.0	2	1	3	65	2.0%
	Cladotanytarsus nr. daviesi	midge	4.0	1		1	22	0.7%
	Cryptochironomus fulvus gr.	midge	6.4	5		5	109	3.4%
	Cryptotendipes sp.	midge	6.2	2		2	43	1.3%
	Dicrotendipes neomodestus	midge	8.1	6		6	130	4.0%
	Paracladopelma sp.	midge	5.5		1	1	22	0.7%
	Phaenopsectra obedians gr.	midge	6.5	1	1	2	43	1.3%
	Polypedilum scalaenum gr.	midge	8.4	31	6	37	804	24.8%
	Rheotanytarsus sp.	midge	5.9		1	1	22	0.7%
<u> </u>	Stempellina montivega gr.	midge	0.0	6		6	130	4.0%
	Tanytarsus sp.	midge	6.7	6	2	8	174	5.4%
	Total Taxa			13	9	15		
	Total Specimens			119	30	149		100.0%
	Total Density (no./m²)						3,239	

^{*}Reference:

TABLE 30A MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 1 EMERG	GENT A	QUATIC VE	GETATION		
		Sample Date:	25 October 2006					
		Gear:	Sweep Net					
				Tol.				
Taxon:			Common Name	Index*	UEAV-1	UEAV-1R	Total	Percent
Tubificida								
	Tubificidae							
		Branchiura sowerybi	tube worm	8.3	12		12	9.8%
		Limnodrilus sp.	tube worm	9.4	15		15	12.3%
Basommato	phora	·						
	Lymnaeidae							
		Fossaria sp.	pond snail	7.0		1	1	0.8%
Mesogastro	poda	•						
	Pleurocerida	ne						
		Leptoxis sp.	rock snail	1.7	6		6	4.9%
Veneroidea		·						
	Corbiculidae							
		Corbicula fluminea	Asiatic clam	6.1	2		2	1.6%
Odonata								
	Aeschnidae							
		Basiaeschna janata	dragonfly	7.3		2	2	1.6%
	Coenagrioni							
	J	Enallagma sp.	damselfly	8.9		61	61	50.0%
Diptera		<u> </u>	·					
•	Chironomida	ae						
		Chironomus sp.	midge	9.6	7		7	5.7%
		Cricotopus sp.	midge	6.3	2		2	1.6%
		Cryptochironomus fulvus gr.	midge	6.4	1		1	0.8%
		Dicrotendipes sp.	midge	8.1		1	1	0.8%
		Nanocladius sp.	midge	7.1		1	1	0.8%
		Polypedilum illinoense gr.	midge	9.0		6	6	4.9%
		Polypedilum scalaenum gr.	midge	8.4	4		4	3.3%
		Procladius sp.	midge	9.1	1		1	0.8%
		Total Taxa	ĺ		9	6	15	
		Total Specimens			50	72	122	100.0%

^{*}Reference:

TABLE 30B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 1 EMERGE	ENT AQU	ATIC VEGE	TATION		
		Sample Date:	17 May 2007		1110 1202			
		Gear:	Sweep Net					
		Cour.	Owecp Het	Tol.				
Taxon:			Common Name	Index*	UEAV-1	UEAV-1R	Total	Percent
Basommatophora	2		Common Hame	шасх	02/11	02/10 111	. ota.	1 0.00.11
Dasominatophore	Ancylida	L e						
	ruioyiida	Ferrissia rivularis	limpet snail	6.6		1	1	0.2%
	Physidae	I .	inipot onan	0.0		·	•	0.270
	i iiyolaat	Physa sp.	pouch snail	8.8	2	6	8	1.8%
Ephemeroptera			F = 0.0					
	Baetidae							
		Acentrella sp.	mayfly	3.6	1		1	0.2%
		Centroptilum sp.	mayfly	6.6		2	2	0.5%
	Heptage							01070
	-,, 3-	Stenonema sp.	mayfly	3.5	1		1	0.2%
	Tricoryth		1					
		Tricorythodes sp.	mayfly	5.0	12	6	18	4.1%
Odonata		,	1 1					
	Aeschnic	dae						
		Boyeria sp.	dragonfly	5.9	1		1	0.2%
	Coenagr	ionidae						
		Argia sp.	damselfly	8.2	1	1	2	0.5%
		Enallagma sp.	damselfly	8.9	1	6	7	1.6%
Hemiptera								
	Gerridae							
		Rheumatobates palosi	water strider	9.0		1	1	0.2%
	Veliidae							
		Microvelia sp.	short-legged strider	9.0	3		3	0.7%
Trichoptera								
	Hydrops							
		Cheumatopsyche sp.	caddisfly	6.2	2		2	0.5%
		Hydropsyche simulans	caddisfly	4.7	6		6	1.4%
	Polycent	ropodidae						
		Neureclipsis sp.	caddisfly	4.1	1		1	0.2%
Coleoptera								
	Elmidae							
		Macronychus glabratus	riffle beetle	4.5	3		3	0.7%
Diptera								
	Ceratopo	ogonidae						
		Sphaeromias sp.	biting midge	6.0		1	1	0.2%
	Chironor							
		Ablabesmyia mallochi	midge	7.2	4	4	8	1.8%
		Cricotopus sp.	midge	6.3		4	4	0.9%
		Cryptotendipes sp.	midge	6.2		4	4	0.9%
		Dicrotendipes neomodestus	midge	8.1		12	12	2.7%
		Paracladopelma sp.	midge	5.5		4	4	0.9%
		Polypedilum illinoense gr.	midge	9.0	124	112	236	53.4%
		Rheotanytarsus sp.	midge	5.9	48	12	60	13.6%
		Rheotanytarsus exiguum gr.	midge	5.9	32		32	7.2%
		Tanytarsus sp.	midge	6.7		24	24	5.4%
		Total Taxa			16	16	25	
		Total Specimens			242	200	442	100.0%

*Reference:

TABLE 31A MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 1 RIFFLI	E				
		Sample Date:	24 October 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	URIF-1	URIF-1R	Total	Percent
Tubificida								
	Tubificidae							
		Limnodrilus sp.	tube worm	9.4		2	2	0.5%
Arhynchobo								
	Erpobdellida							
		Mooreobdella sp.	leech	9.4		1	1	0.3%
Mesogastro								
	Pleurocerida							
		Leptoxis sp.	rock snail	1.7	77	72	149	40.2%
Veneroidea								
	Corbiculidae							
		Corbicula fluminea	Asiatic clam	6.1	14	16	30	8.1%
Ephemerop								
	Baetidae							
		Acentrella sp.	mayfly	3.6		1	11	0.3%
		Baetis sp.	mayfly	4.5	3	2	5	1.3%
Odonata								
	Gomphidae							
		Dromogomphus sp.	dragonfly	5.9	1		1	0.3%
Megaloptera								
	Corydalidae							
		Corydalus cornutus	dobsonfly	5.1	1	1	2	0.5%
Trichoptera		<u> </u>						
	Hydropsych							22.22/
		Cheumatopsyche sp.	caddisfly	6.2	43	101	144	38.8%
0.1		Hydropsyche sp.	caddisfly	4.3	11	26	27	7.3%
Coleoptera	E							
	Elmidae	0-6	.:					0.007
		Optioservus sp.	riffle beetle	2.3	3	1	3	0.8%
Dintoro	1	Stenelmis crenata gr.	riffle beetle	5.1	2	1	3	0.8%
Diptera	Chinanarrid							
	Chironomid	-		6.2		4	4	0.20/
	Cimuliida s	Cricotopus sp.	midge	6.3		1	11	0.3%
	Simuliidae	Cimulium or	blask fly	4.0				0.50/
		Simulium sp.	black fly	4.0	0	2 12	2 14	0.5%
		Total Taxa			9			100.00/
		Total Specimens			145	226	371	100.0%

^{*}Reference:

TABLE 31B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 1 RIFFLE					
		Sample Date:	14 May 2007					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	URIF-1	URIF-1R	Total	Percent
Tricladida								
	Planariidae							
		Dugesia tigrina	flat worm	7.2	1	1	2	0.1%
Haplotaxida								
·	Lumbricidae		earth worm	8.0	2		2	0.1%
	Naididae							
		Nais sp.	naid worm	8.7		1	1	0.1%
Arhynchobde	ellida							
-	Erpobdellidae							
		Mooreobdella sp.	leech	9.4	1		1	0.1%
Basommatop								
	Physidae							
		Physa sp.	pouch snail	8.8	2	2	4	0.3%
	Planorbidae							
		Micromenetus dilitatus	orb snail	8.3	2		2	0.1%
Mesogastrop								
	Pleurocerida	e						
		Leptoxis sp.	rock snail	1.7	30	160	190	12.5%
Neotaenioglo	ossa							
	Hydrobiidae							
		Amnicola sp.	dusky snail	5.3		1	1	0.1%
Veneroidea								
	Corbiculidae							
		Corbicula fluminea	Asiatic clam	6.1	25	12	37	2.4%
Ephemeropte								
	Baetidae							
		Acentrella sp.	mayfly	3.6		101	101	6.7%
		Baetis sp.	mayfly	4.5	1	2	3	0.2%
	Heptageniida							
		Stenonema sp.	mayfly	3.5		1	1	0.1%
	Isonychiidae							
		Isonychia sp.	mayfly	3.4	1	1	2	0.1%
	Tricorythidae							
		Tricorythodes sp.	mayfly	5.0		4	4	0.3%
Trichoptera								
	Brachycentric							
		Brachycentrus sp.	caddisfly	0.8		3	3	0.2%
	Hydropsychic							
	1	Cheumatopsyche sp.	caddisfly	6.2	105	184	289	19.1%
	1	Hydropsyche simulans	caddisfly	4.7		32	32	2.1%
Coleoptera								
	Elmidae							
	1	Macronychus glabratus	riffle beetle	4.5		1	1	0.1%
	Hydrophilidae							
		Berosus sp.	scavenger beetle	8.5	1		1	0.1%

TABLE 31B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 1 RIFFLE					
		Sample Date:	14 May 2007					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	URIF-1	URIF-1R	Total	Percent
Diptera								
-	Chironomida	ae						
		Cardiocladius obscurus	midge	5.8	8		8	0.5%
		Cryptochironomus fulvus gr.	midge	6.4		4	4	0.3%
		Eukiefferiella devonica gr.	midge	2.5		32	32	2.1%
		Nanocladius spiniplenus	midge	7.1		8	8	0.5%
		Phaenopsectra obedians gr.	midge	6.5		4	4	0.3%
		Polypedilum flavum	midge	4.7		12	12	0.8%
		Polypedilum illinoense gr.	midge	9.0	16	16	32	2.1%
		Rheocricotopus robacki	midge	7.3	8	36	44	2.9%
		Rheotanytarsus exiguum gr.	midge	5.9	160	228	388	25.6%
		Rheotanytarsus sp.	midge	5.9	48	76	124	8.2%
		Tanytarsus sp.	midge	6.7		4	4	0.3%
		Tvetenia bavarica	midge	3.6	4	24	28	1.8%
		Tvetenia vitracies	midge	3.6		36	36	2.4%
	Simuliidae		Ĭ					
		Simulium sp.	black fly	4.0	1	113	114	7.5%
		Total Taxa	j		18	28	33	
		Total Specimens			416	1,099	1,515	100.0%

*Reference:

TABLE 32A MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 1 RUN					
		Sample Date:	24 October 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	URUN-1	URUN-1R	Total	Percent
Tubificida								
	Tubificidae		tube worm	10.0	1		1	1.8%
Rhynchobde								
	Glossiphoni							
		Helobdella sp.	leech	9.0	2	1	3	5.5%
Mesogastro								
	Pleurocerida							
		Leptoxis sp.	rock snail	1.7	20	16	36	65.5%
Veneroidea								
	Corbiculidae							
		Corbicula fluminea	Asiatic clam	6.1		4	4	7.3%
Ephemeropt								
	Baetidae							
		Baetis sp.	mayfly	4.5	1	1	2	3.6%
	Baetiscidae							
		Baetisca sp.	mayfly	1.4	1		1	1.8%
Odonata								
	Libellulidae							
		Macromia illinoiensis	dragonfly	6.2		1	1	1.8%
Trichoptera		1						
	Brachycentr							
		Brachycentrus sp.	caddisfly	8.0	1		1	1.8%
	Hydropsych		10.0	0.0				4.007
		Cheumatopsyche sp.	caddisfly	6.2		1	1	1.8%
Lepidoptera								1
	Pyraulidae	De tre mbile an		0.4			4	4.00/
Calaanta		Petrophila sp.	moth	2.1	1		1	1.8%
Coleoptera	Llolinlida a							<u> </u>
	Haliplidae	Doltodutoo or	oroudingstanba-tl-	0.7			•	E 50/
Dinton		Peltodytes sp.	crawling water beetle	8.7		3	3	5.5%
Diptera	Chinanan id	<u> </u>						
	Chironomida		ma i al ar a	7.0	4		4	4.00/
		Ablabesmyia mallochi	midge	7.2	1	7	1	1.8%
		Total Taxa			8	7	12	400.007
		Total Specimens			28	27	55	100.0%

^{*}Reference:

TABLE 32B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 1 RUN					
		Sample Date:	14 May 2007					
		Gear:	Kick Net					
		ocar:	Mick Not	Tol.				
Taxon:			Common Name	Index*	URUN-1	URUN-1R	Total	Percent
Tricladida			Common Nume	macx	OROR I	OROR III	Total	1 Crociii
Triciadida	Planariidae							
	1 Idilalidae	Dugesia tigrina	flat worm	7.2		1	1	0.2%
Hoplonemei	tea	Dagoola ugiina	nat wom			· ·		0.270
	Tetrastemm	natidae						
		Prostoma graecense	proboscis worm	6.1		1	1	0.2%
Tubificida			'					
	Tubificidae							
		Branchiura sowerybi	tube worm	8.3		3	3	0.6%
		Limnodrilus sp.	tube worm	9.4	9	7	16	3.2%
		Limnodrilus hoffmeisteri	tube worm	9.4	1	1	2	0.4%
Basommato	phora							
	Physidae							
		Physa sp.	pouch snail	8.8		1	11	0.2%
Mesogastro								
	Pleurocerid							
		Leptoxis sp.	rock snail	1.7		4	4	0.8%
Veneroidea								
	Corbiculida							
-		Corbicula fluminea	Asiatic clam	6.1	1	7	8	1.6%
Ephemerop								
	Baetidae			0.0		00		0.40/
		Acentrella sp.	mayfly	3.6		32	32	6.4%
	114	Baetis sp.	mayfly	4.5		42	42	8.3%
	Heptageniio		mouth	3.5		1	1	0.2%
	Tricoruthida	Stenonema sp.	mayfly	3.5		1	1	0.2%
	Tricorythida		mouth	5.0		3	3	0.6%
Trichoptera		Tricorythodes sp.	mayfly	5.0		3	აა	0.6%
Піспорієта	Hydropsych	l nidae						
	riyuropsyci	Cheumatopsyche sp.	caddisfly	6.2	1	9	10	2.0%
		Hydropsyche simulans	caddisfly	4.7		1	1	0.2%
Diptera		Try ar opey one ennalarie	odddiony	7.7			<u>'</u>	0.270
Diptora	Chironomid	ae						
		Ablabesmyia mallochi	midge	7.2	2	4	6	1.2%
		Chironomus sp.	midge	9.6	1		1	0.2%
		Cladotanytarsus sp.	midge	4.0	2		2	0.4%
		Corynoneuria sp.	midge	6.0		4	4	0.8%
		Cricotopus sp.	midge	6.3	2		2	0.4%
		Cryptochironomus fulvus gr.	midge	6.4		16	16	3.2%
		Cryptotendipes sp.	midge	6.2	1		1	0.2%
		Eukiefferiella sp.	midge	2.7		4	4	0.8%
		Paracladopelma sp.	midge	5.5	1		1	0.2%
		Parametriocnemus sp.	midge	3.6		4	4	0.8%
		Phaenopsectra obedians gr.	midge	6.5	18		18	3.6%
		Polypedilum scalaenum gr.	midge	8.4	18	16	34	6.8%
		Rheotanytarsus exiguum gr.	midge	5.9	14	52	66	13.1%
		Rheotanytarsus sp.	midge	5.9	7	156	163	32.4%
		Tanytarsus sp.	midge	6.7	7	40	47	9.3%
		Thienemanniella sp.	midge	5.8		4	4	0.8%
		Thienemannimyia gr.	midge	6.0	1		1	0.2%
	Simuliidae							
		Simulium sp.	black fly	4.0		4	4	0.8%
		Total Taxa			16	25	32	
		Total Specimens			86	417	503	100.0%

*Reference:

TABLE 33A MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - BACKWATER AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 2 BACKV	VATER					
		Sample Date:	25 October 2006						
		Gear:	Petite Ponar Dredg	e (area =	= 0.023 squ	are meters)			
				Tol.	•			Density	
Taxon:			Common Name	Index*	UBW-2	UBW-2R	Total	(no./m²)	Percent
Tubificida									
	Tubificidae								
		Branchiura sowerybi	tube worm	8.3	1	5	6	130	14.3%
		Limnodrilus sp.	tube worm	9.4	10		10	217	23.8%
		Limnodrilus hoffmeisteri	tube worm	9.4		13	13	283	31.0%
Ephemerop	tera								
	Isonychiidae	e							
		Isonychia sp.	mayfly	3.4		1	1	22	2.4%
Diptera									
	Ceratopogo	nidae							
		Culicoides sp.	biting midge	7.7		1	1	22	2.4%
		Mallachohelia sp.	biting midge	6.0	1		1	22	2.4%
	Chironomid	ae							
		Chironomus sp.	midge	9.6		1	1	22	2.4%
		Cryptochironomus fulvus gr.	midge	6.4		1	1	22	2.4%
		Dicrotendipes sp.	midge	8.1		1	1	22	2.4%
		Procladius sp.	midge	9.1	1	3	4	87	9.5%
		Tanypus sp.	midge	9.2		1	1	22	2.4%
		Tanytarsus sp.	midge	6.7	1	1	2	43	4.8%
		Total Taxa			5	10	12		
		Total Specimens			14	28	42		100.0%
		Total Density (no./m²)						913	

*Reference:

TABLE 33B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - BACKWATER AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	UPPER - 2 BACK	WATER					
	Sample Date:	17 May 2007						
	Gear:	Petite Ponar Dred	ge (area	= 0.023 squ	uare meters)			
			Tol.				Density	
Taxon:		Common Name	Index*	UBW-2	UBW-2R	Total	(no./m²)	Percent
Haplotaxida								
	Naididae							
	Nais sp.	naid worm	8.7		1	1	22	0.2%
Tubificida								
	Tubificidae							
	Branchiura sowerybi	tube worm	8.3	1		1	22	0.2%
	Limnodrilus sp.	tube worm	9.4	32	17	49	1,065	10.3%
	Limnodrilus hoffmeiste	eri tube worm	9.4	29	68	97	2,109	20.5%
	Quistadrilus multiseto	sus tube worm	3.8		1	1	22	0.2%
Veneroidea								
	Corbiculidae							
	Corbicula fluminea	Asiatic clam	6.1	1		1	22	0.2%
Diptera								
	Chironomidae							
	Chironomus sp.	midge	9.6	196	96	292	6,348	61.6%
	Dicrotendipes sp.	midge	8.1		1	1	22	0.2%
	Procladius sp.	midge	9.1	12	4	16	348	3.4%
	Tanytarsus sp.	midge	6.7	4	11	15	326	3.2%
	Total Taxa			7	8	10		
_	Total Specimens			275	199	474		100.0%
	Total Density (no./m²	2)					10,304	ĺ

*Reference:

TABLE 34A MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - DEPOSITIONAL AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 2 DEP	UPPER - 2 DEPOSITIONAL					
		Sample Date:	25 October 2006						
		Gear:	Petite Ponar Dre	dge (are	ea = 0.023 s	quare meters	5)		
				Tol.				Density	
Taxon:			Common Name	Index*	UDEP-2	UDEP-2R	Total	(no./m²)	Percent
Tubificida									
	Tubificidae								
		Branchiura sowerybi	tube worm	8.3	1		1	22	4.2%
		Limnodrilus sp.	tube worm	9.4		2	2	43	8.3%
Coleoptera									
	Elmidae								
		Dubiraphia vittata	riffle beetle	5.9		1	1	22	4.2%
Diptera									
	Chironomida	ae							
		Chironomus sp.	midge	9.6		2	2	43	8.3%
		Cricotopus sp.	midge	6.3		1	1	22	4.2%
		Cryptochironomus fulvus gr.	midge	6.4	1		1	22	4.2%
		Cryptotendipes sp.	midge	6.2	4	7	11	239	45.8%
		Dicrotendipes sp.	midge	8.1	3		3	65	12.5%
		Procladius sp.	midge	9.1	1	1	2	43	8.3%
		Total Taxa			5	6	9		
		Total Specimens			10	14	24		100.0%
		Total Density (no./m²)						522	

*Reference:

TABLE 34B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - DEPOSITIONAL AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	UPPER - 2 DEPOS	SITIONA	L				
	Sample Date:	17 May 2007						
		Petite Ponar Dred	ge (area	= 0.023 sq	uare meters)			
			Tol.				Density	
Taxon:		Common Name	Index*	UDEP-2	UDEP-2R	Total	(no./m2)	Percent
Tubificida								
	Tubificidae							
	immature tubificid w/o hair chaetae	tube worm	9.4	1		1	22	0.3%
	Limnodrilus sp.	tube worm	9.4	19	44	63	1370	20.1%
	Limnodrilus hoffmeisteri	tube worm	9.4	2	1	3	65	1.0%
	Quistadrilus multisetosus	tube worm	3.8		1	1	22	0.3%
Veneroidea								
	Corbiculidae							
	Corbicula fluminea	Asiatic clam	6.1	1		1	22	0.3%
Diptera								
	Chironomidae							
	Ablabesmyia mallochi	midge	7.2	1	12	13	283	4.1%
	Chironomus sp.	midge	9.6	28	68	96	2087	30.6%
	Cryptochironomus fulvus gr.	midge	6.4	1	12	13	283	4.1%
	Cryptotendipes sp.	midge	6.2	1	28	29	630	9.2%
	Natarsia sp.	midge	9.9	1		1	22	0.3%
	Polypedilum scalaenum gr.	midge	8.4	5	32	37	804	11.8%
	Procladius sp.	midge	9.1		4	4	87	1.3%
	Tanytarsus sp.	midge	6.7	4	48	52	1130	16.6%
	Total Taxa			11	10	13		
	Total Specimens			64	250	314		100.0%
	Total Density (no./m²)						6,826	

*Reference:

TABLE 35A MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - EMERGENT AQUATIC VEGETATION AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 2 EMERG	SENT AQ	UATIC VEG	ETATION		
		Sample Date:	25 October 2006					
		Gear:	Sweep Net					
				Tol.				
Taxon:			Common Name	Index*	UEAV-2	UEAV-2R	Total	Percent
Basommato								
	Planorbidae							
		Gyraulus sp.	orb snail	4.2		1	1	0.7%
Veneroidea								
	Corbiculidae							
		Corbicula fluminea	Asiatic clam	6.1		1	1	0.7%
Decapoda								
	Cambaridae							
		Orconectes sp.	crayfish	2.6		1	1	0.7%
Ephemerop [*]								
	Baetidae							
		Baetis sp.	mayfly	4.5		1	1	0.7%
	Isonychiidae							
		Isonychia sp.	mayfly	3.4		1	1	0.7%
Odonata								
	Aeschnidae							
		Basiaeschna janata	dragonfly	7.3		2	2	1.4%
		Boyeria vinosa	dragonfly	5.9	1		1	0.7%
	Calopterygic							
		Hetaerina sp.	damselfly	5.6		1	1	0.7%
	Coenagrioni							
		Enallagma sp.	damselfly	8.9	55	73	128	88.3%
	Libellulidae							
		Macromia illinoiensis	dragonfly	6.2		1	1	0.7%
Hemiptera								
	Corixidae							
		Trichocorixa sp.	water boatman	8.0	1	1	2	1.4%
Diptera								
	Chironomida							
		Polypedilum illinoense gr.	midge	9.0	2	3	5	3.4%
		Total Taxa			4	11	12	
		Total Specimens			59	86	145	100.0%

*Reference:

TABLE 35B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - EMERGENT AQUATIC VEGETATION AREA 2

		Sample Location:	UPPER - 2 EMERG	ENT AC	UATIC VE	GETATION		
		Sample Date:	17 May 2007					
		Gear:	Sweep Net					
			- Circop rior	Tol.				
Taxon:			Common Name	Index*	UEAV-2	UEAV-2R	Total	Percent
Tricladida								
	Planariida	e						
		Dugesia tigrina	flat worm	7.2	3		3	0.4%
Tubificida								
	Tubificida	e						
		Limnodrilus sp.	tube worm	9.4		1	1	0.1%
Basommato								
	Lymnaeid							
		Fossaria sp.	pond snail	7.0	1		1	0.1%
		Stagnicola sp.	pond snail	8.4	1		1	0.1%
	Dhusidaa	Pseudosuccinea columella	pond snail	7.6	1		1	0.1%
	Physidae	Physics en	nouch enail	8.8	11	2	14	1.7%
	Planorbida	Physa sp.	pouch snail	0.8	11	3	14	1.7%
	ı-ıarıurulu	Micromenetus dilitatus	orb snail	8.3	13	2	15	1.8%
Veneroidea		พาดางกาษกษณ์ นากเสเนง	טוט אומוו	0.0	13		13	1.0/0
Venerolaca	Corbiculid	ae.						
	Corbicalia	Corbicula fluminea	Asiatic clam	6.1	1		1	0.1%
Amphipoda	1	Corpicala nariiroa	7 tolatio olam	0.1	•		•	0.170
	Talitridae							
		Hyalella azteca	side swimmer	7.8	1		1	0.1%
Ephemeropt	era							
	Baetidae							
		Callibaetis sp.	mayfly	9.8	4	1	5	0.6%
	Tricorythic	dae						
		Tricorythodes sp.	mayfly	5.0	3	25	28	3.4%
Odonata								
	Aeschnida							
		Boyeria sp.	dragonfly	5.9	3		3	0.4%
	Coenagric		1 10	0.0				4.00/
		Argia sp.	damselfly	8.2	4	4	8	1.0%
	l iballulida	Enallagma sp.	damselfly	8.9	42	15	57	6.9%
	Libellulida		drogonfly	6.2	1		1	0.1%
Hemiptera		Macromyia sp.	dragonfly	0.2	!		<u>'</u>	0.176
Tiempleid	Belostoma	ı atidae						+
	20.00001110	Belostoma sp.	giant water bug	9.8	1		1	0.1%
Trichoptera			g.a water bag	5.0		†		5.170
	Hydropsyd	chidae						1
	, , ,,	Cheumatopsyche sp.	caddisfly	6.2	2	3	5	0.6%
		Hydropsyche simulans	caddisfly	4.7		2	2	0.2%
	Hydroptilio		Í					
		Hydroptila sp.	caddisfly	6.2	1		1	0.1%
Coleoptera								
	Elmidae							
		Dubiraphia vittata	riffle beetle	5.9	1	2	3	0.4%
	<u> </u>	Macronychus glabratus	riffle beetle	4.5	1		1	0.1%
	Dytiscidae							
	111 11 11 11 11	Hydroporus sp.	diving beetle	8.6	2		2	0.2%
	Haliplidae		annually at 1 12	0.7				0.70/
	I brain 5 '''	Peltodytes sp.	crawling water beetle	8.7	6		6	0.7%
	Hydrophili			7.				0.40/
	1	Helophorus sp.	scavenger beetle	7.5	1		1	0.1%

TABLE 35B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - EMERGENT AQUATIC VEGETATION AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	UPPER - 2 EMERG	SENT AC	UATIC VE	GETATION		
	Sample Date:	17 May 2007					
	Gear:	Sweep Net					
			Tol.				
Taxon:		Common Name	Index*	UEAV-2	UEAV-2R	Total	Percent
Diptera							
	Ceratopogonidae						
	Bezzia sp.	biting midge	7.0	1		1	0.1%
	Chironomidae						
	Ablabesmyia mallochi	midge	7.2	32	4	36	4.4%
	Chironomus sp.	midge	9.6	8	2	10	1.2%
Diptera							
	Chironomidae (cont.)						
	Cricotopus sp.	midge	6.3	8	4	12	1.5%
	Cricotopus bicinctus	midge	8.5		4	4	0.5%
	Cryptotendipes sp.	midge	6.2	20	4	24	2.9%
	Dicrotendipes sp.	midge	8.1	36	8	44	5.4%
	Orthocladius sp.	midge	5.4		8	8	1.0%
	Paracladopelma sp.	midge	5.5	4		4	0.5%
	Polypedilum illinoense gr.	midge	9.0	208	72	280	34.1%
	Procladius sp.	midge	9.1	4		4	0.5%
	Rheotanytarsus exiguum gr.	midge	5.9		88	88	10.7%
	Rheotanytarsus sp.	midge	5.9	32	88	120	14.6%
	Tanytarsus sp.	midge	6.7	24		24	2.9%
	Total Taxa			33	20	38	
	Total Specimens			481	340	821	100.0%

*Reference:

TABLE 36A MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - RIFFLE AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 2 RIFFLE					
		Sample Date:	25 October 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	URIF-2	URIF-2R	Total	Percent
Tubificida								
	Tubificidae							
		Branchiura sowerybi	tube worm	8.3		1	1	0.5%
Basommato	phora							
	Lymnaeidae	е						
		Fossaria sp.	pond snail	7.0		1	1	0.5%
Mesogastro	poda							
	Pleurocerida	ae						
		Leptoxis sp.	rock snail	1.7		12	12	6.5%
Veneroidea								
	Corbiculidae	e						
		Corbicula fluminea	Asiatic clam	6.1	12	12	24	12.9%
Ephemeropt	tera							
	Baetidae							
		Baetis sp.	mayfly	4.5	24	36	60	32.3%
	Heptageniid	lae						
		Stenonema sp.	mayfly	3.5	1		1	0.5%
	Tricorythida	e						
		Tricorythodes sp.	mayfly	5.0	8	12	20	10.8%
Odonata								
	Gomphidae							
		Lanthus sp.	dragonfly	1.5	5	1	6	3.2%
Trichoptera								
	Hydropsych							
		Cheumatopsyche sp.	caddisfly	6.2	26	25	51	27.4%
		Hydropsyche sp.	caddisfly	4.3	1	3	4	2.2%
Lepidoptera								
	Pyraulidae					<u> </u>		
		Petrophila sp.	moth	2.1		1	11	0.5%
Coleoptera								
	Elmidae							
		Macronychus glabratus	riffle beetle	4.5	1	1	2	1.1%
		Optioservus sp.	riffle beetle	2.3	1		1	0.5%
Diptera	<u> </u>							
	Chironomid							
		Cricotopus sp.	midge	6.3		1	1	0.5%
		Tanytarsus sp.	midge	6.7		1	1	0.5%
		Total Taxa			9	13	15	
l		Total Specimens			79	107	186	100.0%

^{*}Reference:

TABLE 36B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - RIFFLE AREA 2

		Sample Location:	UPPER - 2 RIFFLE					
		Sample Date:	17 May 2007					
		Gear:	Kick Net					
			THOR HOL	Tol.				
Taxon:			Common Name	Index*	URIF-2	URIF-2R	Total	Percent
Hoplonemer	tea		- Common Hamo	maox	O. C	01tii 2it	. Otta	. Groom
riopionemei		l nmatidae						
	Tellasiei	Prostoma graecense	proboscis worm	6.1	1		1	0.1%
Basommato	nhora	Frostoria graecerise	proboscis worm	0.1	'		ļ.	0.176
Dasominato	Ancylidae	1						
	Aricylluae	Ferrissia rivularis	limpet snail	6.6		3	3	0.3%
	Lymnaeid		iiiipet siiaii	0.0		3		0.576
	Lymnaei	Fossaria sp.	pond snail	7.0		1	1	0.1%
	Physidae		porid Sriaii	7.0		'		0.176
	Trysidae	Physa sp.	pouch snail	8.8		7	7	0.7%
	Planorbio		podon snall	0.0		,	<u>'</u>	0.770
 	. idilololo	Micromenetus dilitatus	orb snail	8.3		1	1	0.1%
Veneroidea	+	mio. omonotas amatas	OID SHAII	0.0		'	<u>'</u>	0.170
Veneroidea	Corbiculi	l dae						
	COIDICAII	Corbicula fluminea	Asiatic clam	6.1	28	41	69	6.8%
	Sphaeriid		7 tolatio olarri	0.1				0.070
	Оргіаотії	Pisidium sp.	pill clam	6.5	1		1	0.1%
Decapoda		i ioraram op.	piii olaiti	0.0	•		•	0.170
Восарода	Cambario	dae						
	- Cumbani	Orconectes sp.	crayfish	2.6		1	1	0.1%
Ephemeropt	era	0.0000.00 5p.	oray non					51175
	Baetidae							
		Acentrella sp.	mayfly	3.6	3		3	0.3%
		Baetis sp.	mayfly	4.5	72	20	92	9.1%
		Centroptilum sp.	mayfly	6.6	1		1	0.1%
	Heptager	niidae	,,					
	1 1 1 3	Stenonema sp.	mayfly	3.5	1		1	0.1%
		Stenonema mediopunctatum	mayfly	3.7		4	4	0.4%
	Isonychii		,	_				
	1	Isonychia sp.	mayfly	3.4		2	2	0.2%
	Tricoryth	idae	1					
	1	Tricorythodes sp.	mayfly	5.0	22	28	50	4.9%
Plecoptera	1	,	1					
	Perlidae							
		Perlesta sp.	stonefly	4.7		1	1	0.1%
Trichoptera	1	,	,					
	Hydropsy	rchidae						
	<u> </u>	Cheumatopsyche sp.	caddisfly	6.2	119	176	295	29.2%
		Hydropsyche bronta	caddisfly	5.0	1		1	0.1%
		Hydropsyche simulans	caddisfly	4.7		44	44	4.4%
Coleoptera								
	Elmidae							
		Stenelmis crenata gr.	riffle beetle	5.1	1		1	0.1%

TABLE 36B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - RIFFLE AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	UPPER - 2 RIFFLE					
	Sample Date:	17 May 2007					
	Gear:	Kick Net					
			Tol.				
Taxon:		Common Name	Index*	URIF-2	URIF-2R	Total	Percent
Diptera							
	Chironomidae						
	Cardiocladius obscurus	midge	5.8	4		4	0.4%
	Chironomus sp.	midge	9.6		4	4	0.4%
	Cricotopus bicinctus	midge	8.5		8	8	0.8%
	Cryptochironomus fulvus gr.	midge	6.4	8		8	0.8%
	Dicrotendipes sp.	midge	8.1		4	4	0.4%
	Orthocladius sp.	midge	5.4		4	4	0.4%
	Orthocladius annectens	midge	6.0		16	16	1.6%
	Parametriocnemus sp.	midge	3.6		8	8	0.8%
	Polypedilum flavum	midge	4.7	36	12	48	4.7%
	Polypedilum illinoense gr.	midge	9.0	16	12	28	2.8%
	Rheocricotopus robacki	midge	7.3		8	8	0.8%
	Rheotanytarsus exiguum gr.	midge	5.9		44	44	4.4%
	Rheotanytarsus sp.	midge	5.9	20	36	56	5.5%
	Synorthocladius sp.	midge	4.3		8	8	0.8%
	Tanytarsus sp.	midge	6.7	84	32	116	11.5%
	Thienemanniella sp.	midge	5.8	4		4	0.4%
	Thienemannimyia gr.	midge	6.0	36	28	64	6.3%
	Total Taxa			19	27	37	
	Total Specimens			458	553	1,011	100.0%

^{*}Reference:

TABLE 37A MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - RUN AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 2 RUN					
		Sample Date:	25 October 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	URUN-2	URIN-2R	Total	Percent
Tubificida								
	Tubificidae							
		Branchiura sowerybi	tube worm	8.3	2		2	6.3%
Rhynchobde	ellida							
	Glossiphonii	idae						
		Helobdella sp.	leech	9.0	1		1	3.1%
Veneroidea								
	Corbiculidae)						
		Corbicula fluminea	Asiatic clam	6.1		1	1	3.1%
Ephemeropt								
	Baetidae							
		Baetis sp.	mayfly	4.5		1	1	3.1%
	Baetiscidae							
		Baetisca sp.	mayfly	1.4		2	2	6.3%
	Tricorythida							
		Tricorythodes sp.	mayfly	5.0	4	9	13	40.6%
Odonata								
	Coenagrioni	dae						
		Argia sp.	damselfly	8.2	1	2	3	9.4%
	Libellulidae							
		Macromia sp.	dragonfly	6.2		1	1	3.1%
Trichoptera								
	Hydropsych							
		Cheumatopsyche sp.	caddisfly	6.2	5		5	15.6%
Diptera								
	Chironomida							
		Cryptochironomus fulvus gr.	midge	6.4		2	2	6.3%
		Orthocladiinae	midge	6.0	1		1	3.1%
		Total Taxa			6	7	11	
		Total Specimens			14	18	32	100.0%

^{*}Reference:

TABLE 37B MACROINVERTEBRATE TAXONOMIC RESULTS: UPPER EDR - RUN AREA 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	UPPER - 2 RUN					
		Sample Date:	17 May 2007					
		Gear:	Kick Net					
		Gear.	KICK NEL	Tol.				
Taxon:			Common Name	Index*	URUN-2	URUN-2R	Total	Percent
Tubificida			Common Name	IIIuex	OKON-2	OKON-2K	I Olai	Fercent
Tubilicida		Branchiura sowerybi	tube worm	8.3		1	1	0.2%
		Limnodrilus sp.	tube worm	9.4	1	2	3	0.2%
Arhynchobo	dollida	Littilodillas sp.	tube worm	3.4			<u> </u>	0.576
ATTIVITCHOOL	Erpobdelli	idaa						
	Erpobaeiii		loooh	9.4	4			0.2%
Veneroidea		Mooreobdella sp.	leech	9.4	1		1	0.2%
veneroidea	Corbiculid							
	Corbiculia	Corbicula fluminea	Asiatic clam	6.1	10	12	22	3.9%
laanada		Corbicula nurninea	Asiatic ciam	0.1	10	12		3.9%
Isopoda	Apollides							
	Asellidae	Cassidatas an	pill bus	0.4		1	4	0.20/
Enhamarar	toro	Caecidotea sp.	pill bug	9.1		1	1	0.2%
Ephemerop								
	Baetidae	Operations till over a ve		0.0		4	4	0.70/
	Taile a medicin	Centroptilum sp.	mayfly	6.6		4	4	0.7%
	Tricorythic			5 0	4	7		4 40/
Talabaataaa		Tricorythodes sp.	mayfly	5.0	1	7	8	1.4%
Trichoptera		-1-1						
	Hydropsy					•		2 22/
	11 1 22	Cheumatopsyche sp.	caddisfly	6.2	5	8	13	2.3%
	Hydroptilio		11.0	0.0		4		0.00/
		Hydroptila sp.	caddisfly	6.2		1	1	0.2%
Coleoptera		1						
	Hydrophili							
D		Berosus sp.	scavenger beetle	8.5	1	1	2	0.4%
Diptera	01.	1						
	Chironom							4 407
		Ablabesmyia mallochi	midge	7.2	10	8	8	1.4%
		Chironomus sp.	midge	9.6	12	16	28	5.0%
		Cricotopus sp.	midge	6.3	4		4	0.7%
	1	Cryptochironomus fulvus gr.	midge	6.4	16	8	24	4.3%
		Cryptotendipes sp.	midge	6.2	16	40	56	9.9%
		Dicrotendipes sp.	midge	8.1	36	12	48	8.5%
		Orthocladius sp.	midge	5.4		4	4	0.7%
	1	Paracladopelma sp.	midge	5.5	4.0	4	4	0.7%
	1	Phaenopsectra obedians gr.	midge	6.5	16	4.5	16	2.8%
	1	Polypedilum illinoense gr.	midge	9.0		12	12	2.1%
	1	Polypedilum scalaenum gr.	midge	8.4	64	128	192	34.0%
		Rheocricotopus robacki	midge	7.3		8	8	1.4%
		Rheotanytarsus sp.	midge	5.9		8	8	1.4%
		Rheotanytarsus exiguum gr.	midge	5.9	4	4	8	1.4%
		Tanytarsus sp.	midge	6.7	44	32	76	13.5%
		Thienemanniella sp.	midge	5.8		4	4	0.7%
		Thienemannimyia gr.	midge	6.0	4	4	8	1.4%
		Total Taxa			16	24	27	
		Total Specimens			235	329	564	100.0%

^{*}Reference:

TABLE 38 FISH COMMUNITY SURVEY RESULTS - RIFFLE HABITAT

	Habitat Type:					Riffle				
	Location:	REF - 1	REF - 2	REF - 3	EDF	₹ - 1	EDF	₹ - 2	EDI	₹ - 3
		KEF - I	KEF-2		1	2	1	2	1	2
Species	Scientific Name				Number	of Indivi	iduals			
Fall 2006										
Alabama Hog Sucker	Hypentelium etowanum	22	12		20	3		1	2	2
Alabama Shiner	Cyprinella callistia		20		4					
Banded Sculpin	Cottus carolinae	7	27		9	3	2	3	2	10
Black Redhorse	Moxostoma duquesnei									
Blackbanded Darter	Percina nigrofasciata	3			1	3	1	1		1
Blackspotted Topminnow	Fundulus olivaceus									
Blacktail Redhorse	Moxostoma poecilurum	1					4			
Blacktail Shiner	Cyprinella venusta									
Bluegill	Lepomis macrochirus									
Bronze Darter	Percina palmaris		5					1		
Channel Catfish	Ictalurus punctatus									
Coldwater Darter	Etheostoma ditrema		2		2					
Common Carp	Cyprinus carpio									
Coosa Darter	Etheostoma coosae				1	1		1		
Coosa Shiner	Notropis xaenocephalus		2							
Creek Chub	Semotilus atromaculatus									
Freshwater Drum	Aplodinotus grunniens									
Golden Redhorse	Moxostoma erythrurum									
Green Sunfish	Lepomis cyanellus									
Greenbreast Darter	Etheostoma jordani		3		1		1	6		2
Largemouth Bass	Micropterus salmoides									
Largescale Stoneroller	Campostoma oligolepis	5	12		1	3	2	10	3	25
Longear Sunfish	Lepomis megalotis									
Mobile Log Perch	Percina kathae						2	1	1	
Orangespotted Sunfish	Lepomis humilis									
Redbreast Sunfish	Leopmis auritus									
Redear Sunfish	Lepomis microlophus									
Redeye Bass	Micropterus coosae									
Redspotted Sunfish	Lepomis miniatus				40		_			
Riffle Minnow	Phenacobius catostomus	14	1		10		6	3	4	4
Rock Bass	Ambloplites rupestris									
Shadow Bass	Ambloplites ariommus	47					_			
Silverstripe Shiner	Notropis stilbius	17					1	2		1
Southern Studfish	Fundulus stellifer									
Speckled Darter	Etheostoma stigmaeum				5					
Spotted Bass	Micropterus punctulatus					3	1	2		
Spotted Sucker	Minytrema melanops									
Striped Shiner	Luxilus chrysocephalus									
Tri Color Shiner	Cyprinella trichroistia		12			16	11	5	6	15
Unknown	N/A		9		61					1
Warmouth	Lepomis gulosus									
Western Mosquitofish	Gambusia affinis									
'	Total Number of Species	7	11		11	7	10	12	6	9
	Total Number of Fish	69	105		115	32	31	36	18	61
	Number of Darter Species	2	4		5	4	5	7	2	3
	Number of Sunfish Species	2	1		1	0	2	2	1	2
	Number of Sucker Species	2	1		1	1	1	1	1	1
	Total number of fish (EDRs)	293	•				•			
	Total number of fish (Ref.)	174								

TABLE 38 FISH COMMUNITY SURVEY RESULTS - RIFFLE HABITAT

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Habitat Type:					Riffle				
	Location:	REF - 1	REF - 2	REF - 3	EDF	₹ - 1		₹ - 2		₹ - 3
		IXEI - I	IXLI - Z		1	2	1	2	1	2
Species	Scientific Name				Number	of Indiv	iduals			
Summer 2007										
Alabama Hog Sucker	Hypentelium etowanum	49	15		5	37	8	2		5
Alabama Shiner	Cyprinella callistia	1	13		6	17	40	5	37	25
Banded Sculpin	Cottus carolinae	8	58		21	12	7	11	7	6
Black Crappie	Pomoxis nigromaculatus	00				4.5				
Black Redhorse	Moxostoma duquesnei	28				15	0		_	_
Blackbanded Darter	Percina nigrofasciata	11	4		4	1	2	6	5	1
Blackspotted Topminnow Blacktail Redhorse	Fundulus olivaceus		1			4	1	5	1	
Blacktail Shiner	Moxostoma poecilurum	1			1	6	'	5	1	
Bluegill	Cyprinella venusta Lepomis macrochirus	!			'	2		2	'	
Bluegill x Green Sunfish	Lepomis sp.					1		_		
Bronze Darter	Percina palmaris		7			1	6		3	
Bullhead Minnow	Pimephales vigilax	1	'			'	0		3	
Channel Catfish	Ictalurus punctatus	'								1
Coldwater Darter	Etheostoma ditrema		3							'
Common Carp	Cyprinus carpio									
Coosa Darter	Etheostoma coosae									
Coosa Shiner	Notropis xaenocephalus	5	6			5				
Emerald Shiner	Notropis atherinoides	11			1	13	26	125	19	77
Flathead Catfish	Pylodictis olivaris					1	1	1.20		
Freshwater Drum	Aplodinotus grunniens					2				
Golden Redhorse	Moxostoma erythrurum	13				10				
Green Sunfish	Lepomis cyanellus	1	2		1	5		3		1
Greenbreast Darter	Etheostoma jordani		_		1	1	3	1	10	1
Largemouth Bass	Micropterus salmoides						1			
Largescale stoneroller	Campostoma oligolepis	66	103		65	35	24	27	49	17
Longear Sunfish	Lepomis megalotis	4	1			2		3		
Longnose Gar	Lepisosteus osseus									
Mimic Shiner	Notropis volucellus				8	10	2	73	12	13
Mobile Log Perch	Percina kathae		3				3	1	1	2
Orangespotted Sunfish	Lepomis humilis									
Redbreast Sunfish	Leopmis auritus					3		1		
Redear Sunfish	Lepomis microlophus									
Redeye Bass	Micropterus coosae	1	3							
Redspotted Sunfish	Lepomis miniatus								1	
Riffle Minnow	Phenacobius catostomus	7	3			5	34	2	1	22
Shadow Bass	Ambloplites ariommus	1								
Silverstripe Shiner	Notropis stilbius	9				4	1			
Southern Studfish	Fundulus stellifer	11	2							
Speckled Darter	Etheostoma stigmaeum					1				
Spotted Bass	Micropterus punctulatus	6			1	4	1	1	2	
Spotted Sucker	Minytrema melanops									
Striped Shiner	Luxilus chrysocephalus		15					38		
Tri Color Shiner	Cyprinella trichroistia	1								
Warmouth	Lepomis gulosus									
Western Mosquitofish	Gambusia affinis	1								
	Total Number of Species	21	16	0	11	25	16	17	14	12
	Total Number of Fish	236	239	0	114	197	160	306	149	171
	Number of Darter Species	1	4	0	2	4	4	3	4	3
	Number of Sunfish Species	2	2	0	1	5	0	4	1	1
	Number of Sucker Species	3	1	0	1	4	2	2	0	1
	Total number of fish (EDRs)	1097								
	Total number of fish (Ref.)	475	l							

Notes: N/A = Not available EDR = Ecologically diferentiable reach REF = Reference Location

TABLE 39 FISH COMMUNITY SURVEY RESULTS - EMERGENT AQUATIC VEGETATION HABITAT

	Habitat Type:				Vegeta	ation				
	Location:	REF - 1	REF - 2	REF - 3	EDF	₹ - 1	EDI	₹ - 2	EDI	₹ - 3
	Location:	KEF - I	KEF-2	KEF - 3	1	2	1	2	1	2
Species	Scientific Name				Number	of Indiv	iduals			
Fall 2006										
Alabama Hog Sucker	Hypentelium etowanum		4	1	1	3	1			1
Alabama Shiner	Cyprinella callistia									
Banded Sculpin	Cottus carolinae		11				1	2		
Black Redhorse	Moxostoma duquesnei									
Blackbanded Darter	Percina nigrofasciata	1	1	3	1	1				2
Blackspotted Topminnow	Fundulus olivaceus	1	8				2	2	3	
Blacktail Redhorse	Moxostoma poecilurum	2		2	1				1	1
Blacktail Shiner	Cyprinella venusta									
Bluegill	Lepomis macrochirus	15	53	5			2		8	24
Bronze Darter	Percina palmaris									
Channel Catfish	lctalurus punctatus									
Coldwater Darter	Etheostoma ditrema							1		1
Common Carp	Cyprinus carpio									
Coosa Darter	Etheostoma coosae		1	1						
Coosa Shiner	Notropis xaenocephalus		-	•						
Creek Chub	Semotilus atromaculatus									
Freshwater Drum	Aplodinotus grunniens									
Golden Redhorse	Moxostoma erythrurum			1						
Green Sunfish	Lepomis cyanellus		11				2	1	1	
Greenbreast Darter	Etheostoma jordani									
Largemouth Bass	Micropterus salmoides	1			1					
Largescale Stoneroller	Campostoma oligolepis		54	4	12	18	3	9	29	14
Longear Sunfish	Lepomis megalotis	4	4	12	5	4				5
Mobile Log Perch	Percina kathae									
Orangespotted Sunfish	Lepomis humilis		1							
Redbreast Sunfish	Leopmis auritus				6	2	1			
Redear Sunfish	Lepomis microlophus		2	2			1		3	4
Redeye Bass	Micropterus coosae									
Redspotted Sunfish	Lepomis miniatus		1							
Riffle Minnow	Phenacobius catostomus								1	
Rock Bass	Ambloplites rupestris									
Shadow Bass	Ambloplites ariommus									
Silverstripe Shiner	Notropis stilbius		2			6				
Southern Studfish	Fundulus stellifer		2	5						
Speckled Darter	Etheostoma stigmaeum			2						
Spotted Bass	Micropterus punctulatus	1		1		3	1		4	1
Spotted Sucker	Minytrema melanops									
Striped Shiner	Luxilus chrysocephalus		1							
Tri Color Shiner	Cyprinella trichroistia		1	9		5	4	2	4	4
Unknown	N/A			1					1	1
Warmouth	Lepomis gulosus	3	2							
Western Mosquitofish	Gambusia affinis		10		2	10		2		
	Total Number of Species	8	18	14	8	9	10	7	10	11
	Total Number of Fish	28	169	49	29	52	18	19	55	58
	Number of Darter Species	2	3	3	1	2	2	2	1	3
	Number of Sunfish Species	3	7	3	4	4	4	2	4	3
	Number of Sucker Species	1	1	3	2	1	1	0	1	2
	Total number of fish (EDRs	231								
	Total number of fish (Ref.)	246								

TABLE 39 FISH COMMUNITY SURVEY RESULTS - EMERGENT AQUATIC VEGETATION HABITAT

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Habitat Type:				Vegeta	ation				
	Location:	DEE 1	DEE 2	REF - 3		₹ - 1	EDI	₹ - 2	EDI	R - 3
		KEF - I	KEF-2	KEF - 3	1	2	1	2	1	2
Species	Scientific Name				Number	of Indiv	iduals			
Summer 2007										
Alabama Hog Sucker	Hypentelium etowanum		1	1	1			4		
Alabama Shiner	Cyprinella callistia			1			3	1		
Banded Sculpin	Cottus carolinae		6	1	4		2	10		
Black Crappie	Pomoxis nigromaculatus									
Black Redhorse	Moxostoma duquesnei	4								
Blackbanded Darter	Percina nigrofasciata	2	4		10		3	1	5	3
Blackspotted Topminnow	Fundulus olivaceus		3	1			6	4	7	2
Blacktail Redhorse	Moxostoma poecilurum	3			6		13	10	1	3
Blacktail Shiner	Cyprinella venusta							1		
Bluegill	Lepomis macrochirus	7	9	11	3		18	11	21	20
Bluegill x Green Sunfish	Lepomis sp.		1							
Bullhead Minnow	Pimephales vigilax									
Bronze Darter	Percina palmaris		1				4			
Channel Catfish	Ictalurus punctatus						1			
Coldwater Darter	Etheostoma ditrema									
Common Carp	Cyprinus carpio	1								
Coosa Darter	Etheostoma coosae		1						1	
Coosa Shiner	Notropis xaenocephalus		1							1
Emerald Shiner	Notropis atherinoides						4			9
Flathead Catfish	Pylodictis olivaris									
Freshwater Drum	Aplodinotus grunniens									
Golden Redhorse	Moxostoma erythrurum	7								
Green Sunfish	Lepomis cyanellus	2	8		4		2	1	2	
Greenbreast Darter	Etheostoma jordani							1		
Largemouth Bass	Micropterus salmoides			1				3	1	2
Largescale stoneroller	Campostoma oligolepis		21	2	9		84	81	29	19
Longear Sunfish	Lepomis megalotis	9	19		22		11	22	7	4
Longnose Gar	Lepisosteus osseus								1	1
Mimic Shiner	Notropis volucellus						65	16	5	226
Mobile Log Perch	Percina kathae	2	1							
Orangespotted Sunfish	Lepomis humilis			4					1	1
Redbreast Sunfish	Leopmis auritus			13	2		6	20	13	5
Redear Sunfish	Lepomis microlophus									
Redeye Bass	Micropterus coosae									
Redspotted Sunfish	Lepomis miniatus		1					1		1
Riffle Minnow	Phenacobius catostomus						5	5		
Shadow Bass	Ambloplites ariommus		1	1					1	
Silverstripe Shiner	Notropis stilbius	1		1			40	5		3
Southern Studfish	Fundulus stellifer		1	2						
Speckled Darter	Etheostoma stigmaeum		2		1		4	1	1	
Spotted Bass	Micropterus punctulatus	1			1		5	2	4	2
Spotted Sucker	Minytrema melanops			1						
Striped Shiner	Luxilus chrysocephalus							19		
Tri Color Shiner	Cyprinella trichroistia		3							
Warmouth	Lepomis gulosus	1								2
Western Mosquitofish	Gambusia affinis				14			4	1	
,	Total Number of Species	12	18	13	12	0	18	22	17	17
	Total Number of Fish	40	84	40	77	0	276	223	101	304
	Number of Darter Species	2	5	0	2	0	3	3	3	1
	Number of Sunfish Species	4	5	3	4	0	4	5	5	6
	Number of Sucker Species	3	1	2	2	0	1	2	1	1
	Total number of fish (EDRs)	981		1						
	Total number of fish (Ref.)	164								

Notes: N/A = Not available EDR = Ecologically diferentiable reach REF = Reference Location

TABLE 40 FISH COMMUNITY SURVEY RESULTS - RUN HABITAT

	Habitat Type:				Run					
	Location:	REF - 1	REF - 2	REF - 3		₹ - 1	EDI	R - 2	EDI	₹ - 3
		KEF-1	KEF-2	-	1	2	1	2	1	2
Species	Scientific Name			Nun	nber of	Individ	uals			
Fall 2006			1	1		1				
Alabama Hog Sucker	Hypentelium etowanum	1	22	1	5			2		2
Alabama Shiner	Cyprinella callistia									
Banded Sculpin	Cottus carolinae	1	5		1					1
Black Redhorse	Moxostoma duquesnei		25	10		5				
Blackbanded Darter	Percina nigrofasciata	6	5	3		1		3	1	1
Blackspottedtopminnow	Fundulus olivaceus									
Blacktail Redhorse	Moxostoma poecilurum	5		8	2	5	3		2	1
Blacktail Shiner	Cyprinella venusta			22	3	1				
Bluegill	Lepomis macrochirus	7	19	1	2		13	3		2
Bronze Darter	Percina palmaris		2							1
Channel Catfish	Ictalurus punctatus	4			1					
Coldwater Darter	Etheostoma ditrema	2								
Common Carp	Cyprinus carpio	4	_		1	_				
Coosa Darter	Etheostoma coosae		3			2				
Coosa Shiner	Notropis xaenocephalus									
Creek Chub	Semotilus atromaculatus				_	١.				
Freshwater Drum	Aplodinotus grunniens	40		_	8	1				1
Golden Redhorse	Moxostoma erythrurum	12		7	5	3				
Green Sunfish	Lepomis cyanellus		1				2	1	1	
Greenbreast Darter	Etheostoma jordani								1	
Largemouth Bass	Micropterus salmoides		1			1				_
Largescale Stoneroller	Campostoma oligolepis		3	1						3
Longear Sunfish	Lepomis megalotis	4	11	6	1	1	5	6		
Mobile Log Perch	Percina kathae		6							
Orangespotted Sunfish	Lepomis humilis						3			
Redbreast Sunfish	Leopmis auritus	1	1	4						1
Redear Sunfish	Lepomis microlophus	3	2				1	2		1
Redeye Bass	Micropterus coosae		6	1						
Redspotted Sunfish	Lepomis miniatus									
Riffle Minnow	Phenacobius catostomus							4	1	4
Rock Bass	Ambloplites rupestris									1
Shadow Bass	Ambloplites ariommus		3							
Silverstripe Shiner	Notropis stilbius	1				2		5		19
Southern Studfish	Fundulus stellifer									
Speckled Darter	Etheostoma stigmaeum			3						
Spotted Bass	Micropterus punctulatus	2	2	1	5	2		1	1	2
Spotted Sucker	Minytrema melanops		1							
Striped Shiner	Luxilus chrysocephalus		16	4.0				_		_
Tri Color Shiner	Cyprinella trichroistia	2		12				5	3	3
Unknown	N/A		0	4			1	1		
Warmouth	Lepomis gulosus		2	1						
Western Mosquitofish	Gambusia affinis		60	4.5	4.		<u> </u>			4-
	Total Number of Species	15	20	16	11	11	7	11	7	15
	Total Number of Fish	55	136	85	34	24	28	33	10	43
	Number of Darter Species	4	6	2	2	3	0	2	3	4
	Number of Sunfish Species	5	9	4	2	3	4	6	2	5
	Number of Sucker Species Total number of fish (EDRs)	3 172	2	4	3	3	1	1	1	2
	Total number of fish (Ref.)	276								
<u> </u>	Trotal Hulliber Of IISH (Ref.)	2/6								

TABLE 40 FISH COMMUNITY SURVEY RESULTS - RUN HABITAT

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Habitat Type:				Run					
	Location:	REF - 1	REF - 2	REF - 3	EDF	₹ - 1	EDI	₹ - 2	EDI	R - 3
		KEF-1	KEF-2		1	2	1	2	1	2
Species	Scientific Name			Nun	nber of	Individ	uals			
Summer 2007										
Alabama Hog Sucker	Hypentelium etowanum	1	11	1		2				
Alabama Shiner	Cyprinella callistia						_	1	_	
Banded Sculpin	Cottus carolinae						3		3	
Black Crappie	Pomoxis nigromaculatus		1		_	_			١.,	
Black Redhorse	Moxostoma duquesnei	6	10		7	7			1	
Blackbanded Darter	Percina nigrofasciata			2	1	1		1	1	
Blackspotted Topminnow	Fundulus olivaceus	0	2		4.4	45			1	1
Blacktail Redhorse	Moxostoma poecilurum	6	_	4	14	15	4	11	7	16
Blacktail Shiner	Cyprinella venusta	5	1		_	3	1	7	1	0.5
Bluegill	Lepomis macrochirus		10	2	7	3	24	4	4	25
Bluegill x Green Sunfish	Lepomis sp.									
Bullhead Minnow	Pimephales vigilax						_			
Bronze Darter	Percina palmaris				2		5		1	_
Channel Catfish	Ictalurus punctatus				3		1	4		5
Coldwater Darter	Etheostoma ditrema			1	4	2				
Common Carp	Cyprinus carpio				1	2				
Coosa Darter	Etheostoma coosae		_							
Coosa Shiner Emerald Shiner	Notropis xaenocephalus	1	1			2 2				6
Flathead Catfish	Notropis atherinoides Pylodictis olivaris					2	1			0
	Aplodinotus grunniens				16	9	1	2	1	1
Freshwater Drum Golden Redhorse	Moxostoma erythrurum	4	3	1	16 6	1		2	1	1
Green Sunfish	Lepomis cyanellus	4 2	2		2	2	3	4	!	
Greenbreast Darter	Etheostoma jordani	2		1	2	2	3	4	2	
Largemouth Bass	Micropterus salmoides		2		1		1			4
Largescale stoneroller	Campostoma oligolepis						'			4
Longear Sunfish	Lepomis megalotis		7	5	2	1	2	2	1	6
Longnose Gar	Lepisosteus osseus		'	3	2	'		_		0
Mimic Shiner	Notropis volucellus					5			'	1
Mobile Log Perch	Percina kathae		3	2	1	1	8		1	4
Orangespotted Sunfish	Lepomis humilis			_	•	'			1	_
Redbreast Sunfish	Leopmis auritus	7	2	17		3	3	4	7	2
Redear Sunfish	Lepomis microlophus	,		17	2	3	2	_	'	3
Redeye Bass	Micropterus coosae		7		_		_			
Redspotted Sunfish	Lepomis miniatus		'							
Riffle Minnow	Phenacobius catostomus					1				
Shadow Bass	Ambloplites ariommus		3							
Silverstripe Shiner	Notropis stilbius	2				3				
Southern Studfish	Fundulus stellifer	_								
Speckled Darter	Etheostoma stigmaeum	1					2	1	2	
Spotted Bass	Micropterus punctulatus	·	6	2	6	9	4	6	_	10
Spotted Sucker	Minytrema melanops			_	1		2			1
Striped Shiner	Luxilus chrysocephalus				•		_			
Tri Color Shiner	Cyprinella trichroistia									
Warmouth	Lepomis gulosus		1							
Western Mosquitofish	Gambusia affinis									
- stem mee quinonon	Total Number of Species	10	17	11	15	20	16	13	17	14
	Total Number of Fish	35	72	38	70	74	66	49	36	85
	Number of Darter Species	1	1	3	2	2	3	2	5	1
	Number of Sunfish Species	2	5	4	4	4	5	4	4	4
	Number of Sucker Species	4	3	3	4	4	2	2	3	2
	Total number of fish (EDRs)	380			<u> </u>	· · ·				
	Total number of fish (Ref.)	145								
	(. 10								

Notes: N/A = Not available EDR = Ecologically diferentiable reach REF = Reference Location

TABLE 41 FISH COMMUNITY SURVEY RESULTS - BACKWATER HABITAT

	Habitat Type:			В	ackwat	er				
			DEE 0	DEE 0	EDI	₹ - 1	EDF	R - 2	EDF	₹ - 3
	Location:	REF - 1	REF - 2	REF - 3	1	2	1	2	1	2
Species	Scientific Name			Nun	nber of	Individ	luals			
Fall 2006	-									
Alabama Hog Sucker	Hypentelium etowanum					1				
Alabama Shiner	Cyprinella callistia									
Banded Sculpin	Cottus carolinae					1				1
Black Redhorse	Moxostoma duquesnei			2	1	1				
Blackbanded Darter	Percina nigrofasciata					1			1	
Blackspotted Topminnow	Fundulus olivaceus						2		12	2
Blacktail Redhorse	Moxostoma poecilurum			7	11		4		'-	2
Blacktail Shiner	Cyprinella venusta			2			•			_
Bluegill	Lepomis macrochirus			43	21	8	13	6	24	6
Bronze Darter	Percina palmaris						10	Ŭ		
Channel Catfish	Ictalurus punctatus									
Coldwater Darter	Etheostoma ditrema						1		1	
Common Carp	Cyprinus carpio									
Coosa Darter	Etheostoma coosae									
Coosa Shiner	Notropis xaenocephalus									
Creek Chub	Semotilus atromaculatus								1	
Freshwater Drum	Aplodinotus grunniens									
Golden Redhorse	Moxostoma erythrurum			1						
Green Sunfish	Lepomis cyanellus					1	4	3	2	1
Greenbreast Darter	Etheostoma jordani									
Largemouth Bass	Micropterus salmoides				1					
Largescale Stoneroller	Campostoma oligolepis				6	10			5	
Longear Sunfish	Lepomis megalotis			1	11	14	5	8	8	3
Mobile Log Perch	Percina kathae								_	_
Orangespotted Sunfish	Lepomis humilis									
Redbreast Sunfish	Leopmis auritus			2		26	3			
Redear Sunfish	Lepomis microlophus			2	2	0	2	3		
Redeye Bass	Micropterus coosae			_			_			
Redspotted Sunfish	Lepomis miniatus									
Riffle Minnow	Phenacobius catostomus									
Rock Bass	Ambloplites rupestris									
Shadow Bass	Ambloplites ariommus									
Silverstripe Shiner	Notropis stilbius					10	3		1	
Southern Studfish	Fundulus stellifer					_				
Speckled Darter	Etheostoma stigmaeum			1						
Spotted Bass	Micropterus punctulatus				1	4	4	3	5	
Spotted Sucker	Minytrema melanops			10			2		1	
Striped Shiner	Luxilus chrysocephalus									
Tri Color Shiner	Cyprinella trichroistia					22	9		1	
Unknown	N/A						5		1	
Warmouth	Lepomis gulosus			2						
Western Mosquitofish	Gambusia affinis			<u> </u>		13	1	<u></u>		4
	Total Number of Species			11	8	13	14	5	13	7
	Total Number of Fish			73	54	112	58	23	63	19
	Number of Darter Species			0	1	3	2	1	3	1
	Number of Sunfish Species			5	4	6	8	4	5	4
	Number of Sucker Species			3	2	2	1	0	0	1
	Total number of fish (EDRs)	329								
	Total number of fish (Ref.)	73								

TABLE 41 FISH COMMUNITY SURVEY RESULTS - BACKWATER HABITAT

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Habitat Type:			В	ackwat	er				
	Location:	REF - 1	REF - 2	REF - 3	EDF	₹ - 1	EDF	₹ - 2	EDI	२ - 3
		KEF - I	KEF-2		1	2	1	2	1	2
Species	Scientific Name			Nun	nber of	Individ	luals			
Summer 2007										
Alabama Hog Sucker	Hypentelium etowanum				6	5				
Alabama Shiner	Cyprinella callistia									
Banded Sculpin	Cottus carolinae							2	14	1
Black Crappie	Pomoxis nigromaculatus			1			1			
Black Redhorse	Moxostoma duquesnei			2	1	3				
Blackbanded Darter	Percina nigrofasciata				1	1			2	1
Blackspotted Topminnow	Fundulus olivaceus						19	23	5	14
Blacktail Redhorse	Moxostoma poecilurum			6	18	8				
Blacktail Shiner	Cyprinella venusta					2				
Bluegill	Lepomis macrochirus			29	9	18	11	3	4	13
Bluegill x Green Sunfish	Lepomis sp.									
Bullhead Minnow	Pimephales vigilax									
Bronze Darter	Percina palmaris				3					
Channel Catfish	lctalurus punctatus									
Coldwater Darter	Etheostoma ditrema			2						
Common Carp	Cyprinus carpio									
Coosa Darter	Etheostoma coosae									
Coosa Shiner	Notropis xaenocephalus				2					
Emerald shiner	Notropis atherinoides				6		1			
Flathead Catfish	Pylodictis olivaris									
Freshwater Drum	Aplodinotus grunniens									
Golden Redhorse	Moxostoma erythrurum			4		4			1	
Green Sunfish	Lepomis cyanellus			1	1	3	12	9		1
Greenbreast Darter	Etheostoma jordani									
Largemouth Bass	Micropterus salmoides			3	1	2	5	1	1	2
Largescale stoneroller	Campostoma oligolepis				5		14	31		1
Longear Sunfish	Lepomis megalotis				23	24	17	41	4	5
Longnose Gar	Lepisosteus osseus						1			
Mimic Shiner	Notropis volucellus				2		28			
Mobile Log Perch	Percina kathae									
Orangespotted Sunfish	Lepomis humilis			3	2			3		1
Redbreast Sunfish	Leopmis auritus			4	16	7	25	27	1	15
Redear Sunfish	Lepomis microlophus			1		1				
Redeye Bass	Micropterus coosae									
Redspotted Sunfish	Lepomis miniatus									
Riffle Minnow	Phenacobius catostomus									
Shadow Bass	Ambloplites ariommus									
Silverstripe Shiner	Notropis stilbius				3					
Southern Studfish	Fundulus stellifer									
Speckled Darter	Etheostoma stigmaeum				1			1	1	
Spotted Bass	Micropterus punctulatus			1	2	10	2	10	2	
Spotted Sucker	Minytrema melanops			7						
Striped Shiner	Luxilus chrysocephalus									
Tri Color Shiner	Cyprinella trichroistia									
Warmouth	Lepomis gulosus			3		1				
Western Mosquitofish	Gambusia affinis				38	17	5	14	4	25
	Total Number of Species	0	0	14	19	15	13	12	11	11
	Total Number of Fish	0	0	67	140	106	141	165	39	79
	Number of Darter Species	0	0	1	3	1	0	1	2	1
	Number of Sunfish Species	0	0	6	5	6	4	5	3	5
	Number of Sucker Species	0	0	4	3	4	0	0	1	0
	Total number of fish (EDRs)	670								
	Total number of fish (Ref.)	67								

Notes:

 $\overline{N/A} = Not available$

EDR = Ecologically diferentiable reach REF = Reference Location

TABLE 42 REFERENCE AREA VEGETATION SURVEY RESULTS

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

			Refer	ence 1	Reference 2	Reference 3
Stratum	Common Name	Scientific Name	FF	SF	FF	FF
Fall 2006						
Tree	Ash, green	Fraxinus pennsylvanica			X	
	Box Elder	Acer negundo	Х		X	Х
	Butternut	Juglans cinerea				X
	Cherry	Prunus sp.	Х			X
	Hickory	Carya sp.	X		Х	X
	Maple, red	Acer rubrum	X			
	Oak, oak	Quercus nigra	X			Х
	Pine, long leaf	Pinus palustris	X			
	Southern Catalpa	Catalpa bignonioides	X			
	Sweetgum	Liquidambar styrae	X		Х	
	Sycamore	Platanus occidentalis			X	
	Tulip Tree	Liriodendron tulipifera			X	Х
	Walnut, black	Juglans nigra			X	
Shrubs/Vines	Ash, green	Fraxinus pennsylvanica	Х		X	
O	Buckeye	Aesculus sp.	X		,	
	Chinese Privet	Legustrum sinense	X		Х	Х
	Common Greenbrier	Smilax rotundifolia	X			X
	Eastern Hophornbean	Ostrya virginiana	X		Х	
	Japenese Honeysuckle	Lonicera japonica	X		X	Х
	Maple, red	Acer rubrum		Х	X	
	Maple, silver	Acer saccharinum	Х			
	Paw Paw	Asimina triloba			Х	
	Sassafras	Sassafras albidum			X	
	Southern Catalpa	Catalpa bignonioides			X	
	Sumac	Rhus sp.	Х		Α	Х
	Sweetgum	Liquidambar styrae	X			Λ
	Sycamore	Platanus occidentalis	X	Х		
	Tulip Tree	Liriodendron tulipifera	X		Х	
	Wild Grape	Vitis sp.	X		X	
Herbaceous	Aster	Aster sp.		Х	X	
Ticibaccous	Bamboo	Banbusa sp.	Х		Α	Х
	Blackberry	Rubus sp.	X	Х	Х	Λ
	Chinese Privet	Legustrum sinense		X	Α	
	Common Rush	Juncus effusus			Х	
	Deer Fern	Blechnum spicant			X	
	Goldenrod	Solidago sp.	Х	Х	X	X
	Grasses	Poa sp.		X	Α	Λ
	Oxeye	Heliopsis helianthoides			 	X
	Poison Ivy	Rhus radicans			X	^
	Pokeweed	Phytolacca americana		Х		Х
	Sedge, shining	Cyperus sp.			Х	^
	Jouge, Silling	-7F 3.00 GP.			^	
		Species Diversity Per Transect: Species Diversity Per Habitat:	23	8	24	14
		Forested Floodplain	_	39		
		Successional Field	=	39 8		
		Successional Field	=	0		

Notes:

 \overline{X} = Indicates presence

FF = Forested floodplain

SF = Successional field

TABLE 43 MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 1 - DEPOSITIONAL AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	REFERENCE - 1	DEPO	SITIONAL				
	Sample Date:	17 May 2007						
	Gear:	Petite Ponar Dre	edge (a	rea = 0.023	square me	ters)		
			Tol.			,	Density	
Taxon:		Common Name		DEP-1	DEP-1R	Total	(no./m2)	Percent
Haplotaxida			шаох	22	52.	Total	(110111112)	1 0.00
Паріоталіца	Naididae							
	Slavina appendiculata	naid worm	7.0		1	1	22	0.5%
Tubificida	Олита арропаналага	naia womi	7.0		·			0.070
	Tubificidae							
	Limnodrilus sp.	tube worm	9.4		1	1	22	0.5%
Veneroidea								
	Corbiculidae							
	Corbicula fluminea	Asiatic clam	6.1	5	8	13	283	6.8%
Ephemeropt	era							
	Tricorythidae							
	Tricorythodes sp.	mayfly	5.0	1	1	2	43	1.0%
Trichoptera								
	Psychomyiidae							
	Psychomyia flavida	caddisfly	2.4		1	1	22	0.5%
Coleoptera								
	Elmidae							
	Dubiraphia vittata	riffle beetle	5.9	2	2	4	87	2.1%
Diptera								
	Ceratopogonidae							
	Palpomyia gr.	biting midge	7.0		1	1	22	0.5%
	Chironomidae							
	Ablabesmyia mallochi	midge	7.2	5	2	7	152	3.6%
	Chironomus sp.	midge	9.6		2	2	43	1.0%
	Cladotanytarsus sp.	midge	4.0	5	39	44	957	22.9%
	Cryptochironomus fulvus gr.		6.4	3	2	5	109	2.6%
	Cryptotendipes sp.	midge	6.2	1	2	3	65	1.6%
	Paracladopelma sp.	midge	5.5	2		2	43	1.0%
	Paratendipes albimanus	midge	6.0		2	2	43	1.0%
	Phaenopsectra obedians gr.		6.5	1	23	24	522	12.5%
	Polypedilum scalaenum gr.	midge	8.4	14	22	36	783	18.8%
	Procladius sp.	midge	9.1	11	1	2	43	1.0%
	Stictochironomus sp.	midge	6.5		4	4	87	2.1%
	Tanytarsus sp.	midge	6.7	32	6	38	826	19.8%
	Total Taxa			12	18	19	1	
	Total Specimens			72	120	192		100.0%
	Total Density (no./m²)						4,174	

*Reference:

TABLE 44A MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 1 - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 1 E	MERGE	ΙΤΔΙΙΩΔ ΤΙ	C VEGETATIO)N	
		Sample Date:	6 November 2006	WILKOL	TI AQUAII	VEGETATIO	<u> </u>	
		Gear:	Sweep Net					
				Tol.				
Taxon:			Common Name	Index*	EAV-1	EAV-1R	Total	Percent
Mesogastro	poda							
	Pleurocerida	ae						
		Leptoxis sp.	rock snail	1.7		1	1	1.7%
Amphipoda								
	Talitridae							
		Hyalella azteca	side swimmer	7.8		4	4	6.9%
Decapoda								
	Cambaridae		<i>c</i> .	0.0			4	4.70/
1		Orconectes sp.	crayfish	2.6	11		1	1.7%
Isopoda	Asellidae							
	Asellidae	Cassidatas an	nill bug	9.1	1		1	1.7%
Ephemerop	tera	Caecidotea sp.	pill bug	ع. I	ı		ı	1.770
-bueineiob	Baetidae							+
	Daciidae	Acerpenna sp.	mayfly	3.7	1		1	1.7%
		Baetis sp.	mayfly	4.5	2	2	4	6.9%
		Centroptilum sp.	mayfly	6.6	1		1	1.7%
	Heptageniid			5.5		1		1 /0
	op.agoo	Stenonema sp.	mayfly	3.5	2		2	3.4%
Odonata			,,	0.0	-			
	Aeschnidae							
		Basiaeschna janata	dragonfly	7.3		1	1	1.7%
	Coenagrion							
		Enallagma sp.	damselfly	8.9	2	15	17	29.3%
Plecoptera								
	Capniidae							
		Paracapnia sp.	stonefly	0.1	1		1	1.7%
	Taenioptery							
		Taeniopteryx sp.	stonefly	5.4		1	1	1.7%
Hemiptera								
	Belostomati							
		Belostoma sp.	giant water bug	9.8	1		11	1.7%
Trichoptera								
	Polycentrop					_		
		Polycentropus sp.	caddisfly	3.5		2	2	3.4%
	Uenoidae	Moonbylov	on dellation	0.0	4		4	4 70/
Colcoptors		Neophylax sp.	caddisfly	2.2	1		1	1.7%
Coleoptera	Haliplidae							+
	i ialipiluae	Peltodytes duodecimpunctatus	crawling water beetle	8.7		1	1	1.7%
		Peltodytes sexmaculatus	crawling water beetle			1 1	<u>'</u> 1	1.7%
	Hydrophilida		orawing water beetle	0.1		 	ı	1.770
	. 15 at optimide	Hydrobius sp.	scavenger beetle	5.0	1	 	1	1.7%
Diptera		,	302.0901 200110	0.0	<u> </u>		<u> </u>	,0
p.o.a	Chironomida	ae						
		Ablabesmyia mallochi	midge	7.2	1	1	2	3.4%
		Corynoneuria sp.	midge	6.0	· · ·	1		1.7%
		Polypedilum halterale gr.	midge	7.3		1	1	1.7%
		Polypedilum illinoense gr.	midge	9.0	5	2	7	12.1%
		Polypedilum scalaenum gr.	midge	8.4	1	2	3	5.2%
		Rheocricotopus robacki	midge	7.3	1		1	1.7%
	Culicidae		mosquito	8.0	1		1	1.7%
		Total Taxa			16	14	25	
		Total Specimens			23	35	58	100.0%

^{*}Reference:

TABLE 44B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 1 - EMERGENT AQUATIC VEGETATION AREA 1

		Sample Location:	REFERENCE - 1 EI	MERGENT	AQUATIC	VEGETATIO	ON	
		Sample Date:	16 May 2007		714071110			
		Gear:	Sweep Net					
				Tol.				
Taxon:			Common Name	Index*	EAV-1	EAV-1R	Total	Percent
Basommatop	hora							
	Ancylidae							
		Ferrissia rivularis	limpet snail	6.6		1	1	0.1%
	Physidae							
		Physa sp.	pouch snail	8.8		10	10	1.0%
	Planorbida							2 121
	-	Gyraulus sp.	orb snail	4.2	2	2	4	0.4%
Mesogastrop		doe						
	Pleuroceri		have enail	2.4		4		0.40/
	Viviparida	Elimia sp.	horn snail	2.4		1	1	0.1%
	viviparida	Campeloma sp.	mystery snail	6.5		1	1	0.1%
Veneroidea		Сатреюна ър.	Illystery shall	0.5		'	ı	0.176
VOLIGIOIUEA	Corbiculid	l ae		+				
	Corbicalia	Corbicula fluminea	Asiatic clam	6.1	9	2	11	1.2%
	Sphaeriida		/ Glatio Glatti	0.1	<u> </u>			1.2/0
	Орнастиа	Pisidium sp.	pill clam	6.5	1	4	5	0.5%
Amphipoda			F 010111	5.0	· ·	•		5.576
	Crangony	ctidae						
	1 2 3 3 7	Crangonyx sp.	side swimmer	7.9		4	4	0.4%
	Talitridae							
		Hyalella azteca	side swimmer	7.8		28	28	2.9%
Isopoda								
	Asellidae							
		Caecidotea sp.	pill bug	9.1		1	1	0.1%
Hydracarina			water mite	5.5		1	1	0.1%
Ephemeropte	era							
	Baetidae							
		Centroptilum sp.	mayfly	6.6	6	7	13	1.4%
		Plauditus sp.	mayfly	4.5	1		1	0.1%
	Heptagen							
		Stenonema integrum	mayfly	5.7	2		2	0.2%
	Tricorythic							
		Tricorythodes sp.	mayfly	5.0	108	18	126	13.2%
Odonata		• 1						
	Coenagrio		down a lifty	0.0		2		0.20/
		Argia sp. Enallagma sp.	damselfly damselfly	8.2 8.9		6	<u>2</u> 6	0.2% 0.6%
	Gomphida		damselly	5.0	1	0	1	0.6%
	Gompnia	Dromogomphus sp.	dragonfly	5.9	- 1	1	<u>'</u> 1	0.1%
	Libellulida		uragonny	5.8		 ' 	I	0.170
	Libellullud	Perithemis sp.	dragonfly	9.8		1	1	0.1%
Hemiptera		. ontrolling op.	diagonny	5.0		<u> </u>		0.170
· .omptora	Belostoma	iatidae						
		Belostoma sp.	giant water bug	9.8		3	3	0.3%
	Corixidae		g nater 24g	1.0		1		2.070
		Trichocorixa sp.	water boatman	8.0	1		1	0.1%
	Gerridae							
		Gerris sp.	water strider	6.0		2	2	0.2%
Trichoptera								
	Hydropsyd							
		Hydropsyche sp.	caddisfly	4.3	2		2	0.2%
	Hydroptilio	dae						
		Hydroptila sp.	caddisfly	6.2	3		3	0.3%

TABLE 44B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 1 - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 1 EM	ERGENT	AQUATIC	VEGETATION	ON	
		Sample Date:	16 May 2007					
		Gear:	Sweep Net					
			•	Tol.				
Taxon:			Common Name	Index*	EAV-1	EAV-1R	Total	Percent
Coleoptera								
	Elmidae							
		Dubiraphia vittata	riffle beetle	5.9		2	2	0.2%
	Gyrinidae							
		Dineutus sp.	whirligig beetle	5.5	8		8	0.8%
		Gyrinus sp.	whirligig beetle	6.2		7	7	0.7%
	Haliplidae							
		Peltodytes sp.	crawling water beetle	8.7		6	6	0.6%
Diptera								
	Ceratopog	gonidae						
		Bezzia sp.	biting midge	7.0	1		1	0.1%
	Chironom	idae						
		Ablabesmyia mallochi	midge	7.2	33	32	65	6.8%
		Chironomus sp.	midge	9.6		8	8	0.8%
		Cricotopus sp.	midge	6.3	24		24	2.5%
		Cricotopus bicinctus	midge	8.5	8		8	0.8%
		Cryptotendipes sp.	midge	6.2	4		4	0.4%
		Dicrotendipes sp.	midge	8.1		24	24	2.5%
		Phaenopsectra obedians of	midge	6.5		16	16	1.7%
		Polypedilum halterale gr.	midge	7.3	16		16	1.7%
		Polypedilum illinoense gr.	midge	9.0	113	280	393	41.2%
		Rheotanytarsus sp.	midge	5.9	16	8	24	2.5%
		Synorthocladius sp.	midge	4.3	4		4	0.4%
		Tanytarsus sp.	midge	6.7	81	32	113	11.8%
		Total Taxa			22	29	42	
		Total Specimens			444	510	954	100.0%

^{*}Reference:

TABLE 45A MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 1 - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 1 R	IFFI F				
		Sample Date:	9 November 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	RIF-1	RIF-1R	Total	Percent
Basommato	phora							
	Lymnaeidae							
		Fossaria sp.	pond snail	7.0		4	4	1.1%
	Physidae							
N 4		Physa sp.	pouch snail	8.8		4	4	1.1%
Mesogastro	Pleurocerida	1						
	Pieuroceria	Elimia sp.	horn snail	2.4		4	4	1.1%
		Leptoxis sp.	rock snail	1.7	268	208	476	55.6%
Veneroidea		Есрголів эр.	TOOK SHAII	1.7	200	200	470	33.070
7 0110101404	Corbiculidae	9						
		Corbicula fluminea	Asiatic clam	6.1	13	12	25	3.2%
	Sphaeriidae							
		Pisidium sp.	pill clam	6.5		2	2	0.5%
Ephemerop	1				-			
	Baetidae					_	_	
		Acentrella sp.	mayfly	3.6		2	2	0.5%
	Fnb '''	Baetis sp.	mayfly	4.5	2	31	33	8.3%
	Ephemerelli	Serratella sp.	movifly	1.5		1	1	0.20/
	Heptageniid	· · · · · · · · · · · · · · · · · · ·	mayfly	1.5		1	1	0.3%
	rieptageriilo	Stenonema sp.	mayfly	3.5	12	34	46	9.1%
		Stenonema mediopunctatum	mayfly	3.7	11	4	15	1.1%
	Isonychiidae			0				,0
	, , , , , , , , , , , , , , , , , , , ,	Isonychia sp.	mayfly	3.4		1	1	0.3%
Odonata								
	Coenagrion	idae						
		Argia sp.	damselfly	8.2		1	1	0.3%
Plecoptera								
	Capniidae							
		Allocapnia sp.	stonefly	2.4		1	1	0.3%
	Taenioptery	Ť	-1	F 4		00	00	0.00/
Magalantar	<u> </u>	Taeniopteryx sp.	stonefly	5.4		32	32	8.6%
Megaloptera	Corydalidae							
	Coryuanuae	Corydalus cornutus	dobsonfly	5.1	1		1	0.0%
Trichoptera		Corydaids corridius	dobsonity	5.1	'			0.076
THOHOPtora	Glossosoma	atidae						
	0.000000	Glossosoma sp.	caddisfly	1.5	1	4	5	1.1%
	Goeridae		ĺ					
		Goera sp.	caddisfly	0.1	6	1	7	0.3%
	Hydropsych							
		Cheumatopsyche sp.	caddisfly	6.2		1	1	0.3%
		Hydropsyche sp.	caddisfly	4.3		1	1	0.3%
		Hydropsyche bronta	caddisfly	5.0	11	2	3	0.5%
	Lepidostom		a a d P - 0	0.0		4	_	0.007
	Lonton	Lepidostoma sp.	caddisfly	0.9	1	1	2	0.3%
	Leptocerida	Nectopsyche sp.	caddisfly	4.5	1		1	0.0%
Coleoptera		ηνουιομογοπό δρ.	Caudisily	4.5	ı		l I	0.0%
Joieopiera	Elmidae			+ +				
	Liiiidae	Dubiraphia vittata	riffle beetle	5.9		2	2	0.5%
		Macronychus glabratus	riffle beetle	4.5		1	1	0.3%
		Microcylloepus pusillus	riffle beetle	2.1		2	2	0.5%
	İ	Optioservus sandersoni	riffle beetle	4.0	20	13	33	3.5%
	Psephenida							
		Psephenus herricki	water penny	2.3	3	3	6	0.8%
Diptera					-			
	Simuliidae							
		Simulium sp.	black fly	4.0		2	2	0.5%
		Total Taxa			13	27	29	100.007
1	1	Total Specimens			340	374	714	100.0%

^{*}Reference:

TABLE 45B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 1 - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Comple I section:	REFERENCE - 1 R	IEEI E				
		Sample Location: Sample Date:		IFFLE				
			16 May 2007					
		Gear:	Kick Net					
_				Tol.		515.45		
Taxon:			Common Name	Index*	RIF-1	RIF-1R	Total	Percent
Haplotaxida								
	Lumbricio	dae	earth worm	8.0	4		4	1.0%
Mesogastrop								
	Pleuroce			0.4		1.1	40	0.40/
		Elimia sp.	horn snail	2.4	2	11	13 170	3.1%
Veneroidea		Leptoxis sp.	rock snail	1.7	170		170	41.2%
veneroluea	Corbiculio	 						
	Corbicult	Corbicula fluminea	Asiatic clam	6.1	38	17	55	13.3%
Hydracarina		Corbicula naminoa	water mite	5.5		1	1	0.2%
Ephemeropt	era		Tractor Trinto	0.0				0.270
	Baetidae							
		Baetis sp.	mayfly	4.5	2	24	26	6.3%
	Ephemer							
		Serratella sp.	mayfly	1.5		1	1	0.2%
	Heptager		,					4.007
	la a montale "	Stenonema sp.	mayfly	3.5	2	2	4	1.0%
	Isonychii		mostle.	2.4	E		7	4 70/
	Tricorythi	Isonychia sp.	mayfly	3.4	5	2	7	1.7%
	THEOTYTH	Tricorythodes sp.	mayfly	5.0		1	1	0.2%
Odonata		Theorythodes sp.	Illayily	3.0		'		0.270
Odonata	Coenagri	onidae						
	- Coonagn	Enallagma sp.	damselfly	8.9	1		1	0.2%
Plecoptera			, , ,					
·	Perlidae							
		Acroneuria abnormis	stonefly	2.0	2		2	0.5%
		Perlesta sp.	stonefly	4.7	1		1	0.2%
Hemiptera								
	Corixidae		water boatman	9.0		1	1	0.2%
Megaloptera								
	Corydalic		dobsonfly	5.1	1		1	0.2%
Trichoptera		Corydalus cornutus	dobsoring	5.1	<u> </u>			0.276
Thoroptera	Hydropsy	l vchidae						
	riyaropoy	Cheumatopsyche sp.	caddisfly	6.2	9	4	13	3.1%
		Hydropsyche sp.	caddisfly	4.3		4	4	1.0%
		Hydropsyche bronta	caddisfly	5.0	25	9	34	8.2%
		Hydropsyche venularis	caddisfly	4.9	5		5	1.2%
Coleoptera								
	Elmidae							
		Dubiraphia bivittata	riffle beetle	5.9		1	1	0.2%
		Macronychus glabratus	riffle beetle	4.5	1		1	0.2%
		Optioservus sp.	riffle beetle	2.3	2	4	6	1.5%
	Cyrinida	Stenelmis crenata gr.	riffle beetle	5.1	1	1	1	0.2%
	Gyrinidae	e Dineutus sp.	whirligig beetle	5.5	2	 	2	0.5%
Diptera		Dirioutus sp.	wriningig beetie	5.5		 		0.5%
Dipicia	Chironon	ı nidae				+		
	3 011011	Cardiocladius sp. (tent.)	midge	5.8		1	1	0.2%
		Cricotopus sp.	midge	6.3		3	3	0.7%
		Cryptochironomus fulvus gr.	midge	6.4		3	3	0.7%
		Microtendipes pedellus gr.	midge	5.5		1	1	0.2%
		Parametriocnemus sp.	midge	3.6		1	1	0.2%
		Polypedilum flavum	midge	4.7	2		2	0.5%
		Rheotanytarsus sp.	midge	5.9	1		1	0.2%
		Tanytarsus sp.	midge	6.7		9	9	2.2%
	Simuliida							
		Simulium sp.	black fly	4.0		37	37	9.0%
		Total Taxa			20	21	33	
		Total Specimens			276	137	413	100.0%

^{*}Reference:

TABLE 46A MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 1 - RUN AREA 1

		Sample Location:	REFERENCE - 1 R	UN				
		Sample Date:	9 November 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	RUN - 1	RUN - 1R	Total	Percent
Alloeocoela								
	Plagiostomic	dae						
		Hydrolimax grisea	flat worm	5.2	4		4	2.4%
Hoplonemer		, u						
•	Tetrastemma	atidae						
		Prostoma graescense	proboscis worm	6.1	1		1	0.6%
Lumbricina		•						
	Lumbricidae		earth worm	8.0		1	1	0.6%
Tubificida								
	Tubificidae							
		Aulodrilus pluriseta	tube worm	2.9	1		1	0.6%
		Ilydrilus templetoni	tube worm	9.0	1		1	0.6%
		Limnodrilus sp.	tube worm	9.4	3		3	1.8%
Basommator	ohora							
	Ancylidae							
		Ferrissia rivularis	limpet snail	6.6	1		1	0.6%
	Physidae							
		Physa sp.	pouch snail	8.8	1		1	0.6%
Veneroidea								
	Corbiculidae							
		Corbicula fluminea	Asiatic clam	6.1	3	3	6	3.6%
Ephemeropt								
	Baetidae							
		Baetis sp.	mayfly	4.5	1		1	0.6%
		Procloeon sp.	mayfly	6.0	9		9	5.4%
	Heptageniida							
		Stenacron interpunctatum	mayfly	6.9		1	1	0.6%
		Stenonema sp.	mayfly	3.5	2	2	4	2.4%
	Isonychiidae							
		Isonychia sp.	mayfly	3.4	11		1	0.6%
Odonata								
	Coenagrioni							
		Argia sp.	damselfly	8.2		2	2	1.2%
		Enallagma sp.	damselfly	8.9	1		1	0.6%
	Gomphidae							
		Dromogomphus sp.	dragonfly	5.9	1	3	4	2.4%
	1.9 0. 2.3	Hagenius sp.	dragonfly	3.9	1		11	0.6%
	Libellulidae	Magrapia	4		4			4.007
Dlagartans		Macromia sp.	dragonfly	6.2	11	2	3	1.8%
Plecoptera	Conniides							
	Capniidae	Allogoppio	otoneth.	0.4	2	 	2	4.00/
	Dorlidos	Allocapnia sp.	stonefly	2.4	2	 	2	1.2%
	Perlidae	Agnotina ca	otonofly.	0.0		1	1	0.69/
	Perlodidae	Agnetina sp.	stonefly	0.0		1	<u> </u>	0.6%
	renodidae	Jeonaria en	otonofly.	1.1	1	-	1	0.69/
	Taenioptery	Isoperla sp.	stonefly	1.4	1	-	I	0.6%
	rraemobietV(1				ļ
		Tagniontony co	otonofly.	5 A	2	2	1	2 40/
Hemiptera		Taeniopteryx sp.	stonefly	5.4	2	2	4	2.4%

TABLE 46A MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 1 - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 1 R	UN				
		Sample Date:	9 November 2006					
		Gear:	Kick Net					
			THIS IN THE	Tol.				
Taxon:			Common Name	Index*	RUN - 1	RUN - 1R	Total	Percent
Trichoptera						11011	1010.	1 0.00
monopiora	Goeridae							
	Cochaac	Goera sp.	caddisfly	0.1		1	1	0.6%
	Hydropsych		caddiony	0.1				0.070
	i iyaropoyar	Cheumatopsyche sp.	caddisfly	6.2		1	1	0.6%
		Hydropsyche sp.	caddisfly	4.3		2	2	1.2%
	Hydroptilida		- cada.c.iy			_	_	1.270
	,	Hydroptila sp.	caddisfly	6.2		1	1	0.6%
	Lepidostom		- cada.c.iy	- U				0.070
		Lepidostoma sp.	caddisfly	0.9		1	1	0.6%
	Leptocerida		22.2.0.0,	1		•		210,0
		Mystacides sp.	caddisfly	2.6		11	11	6.5%
		Nectopsyche sp.	caddisfly	4.5	3	1	4	2.4%
		Oecetis sp.	caddisfly	3.6	1	1	2	1.2%
		Triaenodes sp.	caddisfly	3.8		1	1	0.6%
	Polycentrop							
	,	Polycentropus sp.	caddisfly	3.5		1	1	0.6%
Coleoptera								
	Elmidae							
		Dubiraphia vittata	riffle beetle	5.9	21	6	27	16.1%
		Macronychus glabratus	riffle beetle	4.5	1		1	0.6%
Diptera								
	Chironomid	lae						
		Corynoneuria sp.	midge	6.0	2	1	3	1.8%
		Cryptochironomus fulvus gr.	midge	6.4	2		2	1.2%
		Dicrotendipes modestus	midge	8.7		3	3	1.8%
		Eukiefferiella sp.	midge	2.7	1		1	0.6%
		Microtendipes pedellus gr.	midge	5.5		1	1	0.6%
		Orthocladiinae	midge	6.0		2	2	1.2%
		Parakiefferiella sp.	midge	5.3	2		2	1.2%
		Paralaterborniella nigrohalteralis		4.7	1		1	0.6%
		Phaenopsectra obedians gr.	midge	6.5	1	5	6	3.6%
		Polypedilum halterale gr.	midge	7.3	3		3	1.8%
		Polypedilum illinoense gr.	midge	9.0	1		1	0.6%
		Pseudochironomus sp.	midge	5.5	1		1	0.6%
		Tanytarsus sp.	midge	6.7	7	4	11	6.5%
		Thienemanniella sp.	midge	5.8	1		1	0.6%
		Zavrelia sp.	midge	5.3	5		5	3.0%
		Total Taxa			36	27	51	
		Total Specimens			102	66	168	100.0%

*Reference:

TABLE 46B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 1 - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 1 R	UN				
		Sample Date:	16 May 2007					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	RUN-1	RUN-1R	Total	Percent
Hoplonemert	tea							
•	Tetras	temmatidae						
		Prostoma graecense	proboscis worm	6.1	1		1	0.4%
Tubificida								
	Tubific							
		Limnodrilus sp.	tube worm	9.4	11		1	0.4%
Basommatop								
	Planor	rbidae	orb snail	6.3		1	1	0.4%
Mesogastrop								
	Pleuro	oceridae		L				
		Leptoxis sp.	rock snail	1.7	4		4	1.6%
Veneroidea	<u> </u>							
	Corbic	culidae	A = : = 4:	0.4	40		00	0.007
1		Corbicula fluminea	Asiatic clam	6.1	16	4	20	8.0%
Isopoda	Δ	1						
	Asellic		-915	0.0			4	0.40/
Enhancers:	0.00	Lirceus sp.	pill bug	8.0	1		1	0.4%
Ephemeropte	era Baetid	la a						
	Baetio			0.0	4	1	•	0.00/
	Coord	Centroptilum sp.	mayfly	6.6	11	1	2	0.8%
	Caeni		m ovelly c	7.4	1		1	0.4%
	Tricon	Caenis sp. ythidae	mayfly	7.4	1		1	0.4%
	Tricory	Tricorythodes sp.	moufly	5.0	15	5	20	8.0%
Odonoto		Theorymodes sp.	mayfly	5.0	10	5	20	6.0%
Odonata	Coope	 agrionidae						
	COEIIA	Argia sp.	damselfly	8.2	1		1	0.4%
Hemiptera		Argia sp.	damsemy	0.2	<u> </u>			0.470
ricinipicia	Corixio	dae	water boatman	9.0	2		2	0.8%
Trichoptera	CONTAIN		water beatman	0.0				0.070
monopiora	Leptor	ceridae						
	Loptot	Mystacides sp.	caddisfly	2.6	3		3	1.2%
		Oecetis sp.	caddisfly	3.6	1		1	0.4%
		Triaenodes sp.	caddisfly	3.8	1		1	0.4%
Coleoptera		,	,					
•	Elmida	ae						
		Dubiraphia vittata	riffle beetle	5.9	4	1	5	2.0%
		Macronychus glabratus	riffle beetle	4.5	1		1	0.4%
Diptera								
	Chiron	nomidae						
		Ablabesmyia mallochi	midge	7.2	2		2	0.8%
		Chironomus sp.	midge	9.6	2	1	3	1.2%
		Cricotopus sp.	midge	6.3	1	1	2	0.8%
		Cryptochironomus fulvus gr.	midge	6.4	7	14	21	8.4%
		Cryptotendipes sp.	midge	6.2	1	2	3	1.2%
		Dicrotendipes sp.	midge	8.1	13	1	14	5.6%
		Microtendipes pedellus gr.	midge	5.5	4	7	11	4.4%
		Parachironomus sp.	midge	9.4	11		1	0.4%
		Phaenopsectra obedians gr.	midge	6.5	27	1	28	11.2%
		Polypedilum illinoense gr.	midge	9.0	8		8	3.2%
<u> </u>		Rheotanytarsus exiguum gr.	midge	5.9	9	5	14	5.6%
		Tanytarsus sp.	midge	6.7	74	3	77	30.8%
		Thienemannimyia gr.	midge	6.0	11	<u></u>	1	0.4%
		Total Taxa			28	14	29	
İ		Total Specimens			203	47	250	100.0%

^{*}Reference:

TABLE 47A MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 2 - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 2 E	MERGE	ΝΤ ΔΟΙΙΔΤΙ	C VEGETATION	ON	
		Sample Date:	29 October 2006		HI AQUAII	VEGETATIO		
		Gear:	Sweep Net					
			Owcep Net	Tol.				
Taxon:			Common Name	Index*	EAV 1	EAV-1R	Total	Percent
Basommato	phora		- Common Humo	maox			iotai	1 0100110
Baseminate	Planorbidae							
	1 idilorbiddo	Helisoma sp.	orb snail	6.2		1	1	0.6%
Mesogastro	ooda	полосина ор.	OID GIIGH	0.2		•	•	0.070
eeegaeae	Pleurocerida	ne						
		Elimia sp.	horn snail	2.4	12		12	7.6%
		Leptoxis sp.	rock snail	1.7	15	76	91	58.0%
Veneroidea			Took ond.			. •	0.	33.373
	Corbiculidae							
		Corbicula fluminea	Asiatic clam	6.1		1	1	0.6%
Decapoda							-	0.07.0
	Cambaridae							
		Orconectes sp.	crayfish	2.6	2	5	7	4.5%
	Baetiscidae		y			_	-	
		Bastisca gibbera	mayfly	1.4	1		1	0.6%
	Ephemerelli		,,		•		-	,
		Eurylophella sp.	mayfly	4.3	1		1	0.6%
	Heptageniid		-,,					
		Stenacron interpunctatum	mayfly	6.9		1	1	0.6%
		Stenonema smithae	mayfly	3.5		1	1	0.6%
Odonata			,,	0.0			-	0.070
	Aeschnidae							
		Basiaeschna janata	dragonfly	7.3	1	3	4	2.5%
	Calopterygic		uragormy	7.0		<u> </u>		2.070
	Caloptorygic	Calopteryx maculata	damselfly	7.8	1		1	0.6%
	Coenagrioni		damoonly	7.0			•	0.070
	Coonagnoni	Enallagma sp.	damselfly	8.9	6	10	16	10.2%
Hemiptera			dameemy	0.0				10.270
riomptora	Veliidae							
		Microvelia sp.	short-legged strider	9.0		1	1	0.6%
Trichoptera		innererena epi	Silent legged etilider	0.0				0.070
	Hydropsych	idae						
	,	Cheumatopsyche sp.	caddisfly	6.2		1	1	0.6%
	Polycentrop		- caaa.cy	0.2				0.070
	,	Polycentropus sp.	caddisfly	3.5	1		1	0.6%
Coleoptera								
	Elmidae							
		Microcylloepus pusillus	riffle beetle	2.1		1	1	0.6%
	Dytiscidae	i i i y i i i i i i i i i i i i i i i i				-	-	,
	,	Agabus sp.	diving beetle	8.8	1		1	0.6%
	Gyrinidae				•		-	,
		Dineutus discolor	whirligig beetle	5.5		4	4	2.5%
	Haliplidae		3.3			-	-	1
		Peltodytes sexmaculatus	crawling water beetle	8.7	1		1	0.6%
	Psephenida		3		· · · · · · · · · · · · · · · · · · ·		-	
	22,233.334	Ectopria nervosa	false water penny	4.1	1		1	0.6%
Diptera		,	in the second perior		•			2.0,0
	Chironomida	ae						1
		Polypedilum illinoense gr.	midge	9.0	1	3	4	2.5%
<u> </u>		Paramerina sp.	midge	4.3	<u>'</u> 1		1	0.6%
		Thienemannimyia gr.	midge	6.0		2	2	1.3%
	Sarcophagic		mage	0.0				1.070
	Caroopriagio	Myxosargus sp.	flesh fly	8.0	2		2	1.3%
<u> </u>		Total Taxa	noon ny	0.0	15	14	24	1.570
		Total Specimens			47	110	157	100.0%
		i otal opecimens	1		71	1 10	101	100.070

*Reference:

TABLE 47B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 2 - EMERGENT AQUATIC VEGETATION AREA 1

		Sample Location:	REFERENCE - 2 E	MERGEN	TAUOA TI	IC VEGETAT	TION	
		Sample Date:	17 May 2007	I	II AQUAI	IO VEGETA	TIOIN .	
		Gear:	Sweep Net					
		Journ 1	Owecop Net	Tol.				
Taxon:			Common Name	Index*	EAV-1	EAV-1R	Total	Percent
Mesogastropod	da			ших			1000	. 0.00
ooogaaopoo	Pleurocer	idae						
		Elimia sp.	horn snail	2.4		24	24	1.2%
		Leptoxis sp.	rock snail	1.7	424	432	856	41.2%
Decapoda				1				
	Cambarid	ae						
		Orconectes sp.	crayfish	2.6		1	1	0.0%
Hydracarina			water mite	5.5	1		1	0.0%
Ephemeroptera	3							0.070
	Baetidae							
		Acerpenna pygmaeus	mayfly	3.7		2	2	0.1%
		Callibaetis sp.	mayfly	9.8		1	1	0.0%
		Centroptilum sp.	mayfly	6.6	4		4	0.2%
		Plauditus sp.	mayfly	4.5	-	24	24	1.2%
	Caenide		,,					
		Caenis sp.	mayfly	7.4	1		1	0.0%
	Ephemere							0.070
	Бриоти	Ephemerella sp.	mayfly	2.0		2	2	0.1%
		Eurylophella sp.	mayfly	4.3	1	2	3	0.1%
	Heptagen				•	_	-	01170
	riopiagori	Stenonema sp.	mayfly	3.5		1	1	0.0%
	Isonychiid		mayny	0.0				0.070
	loonyonic	Isonychia sp.	mayfly	3.4		1	1	0.0%
	Tricorythic		mayny	0.1				0.070
	Triodry	Tricorythodes sp.	mayfly	5.0	72	122	194	9.3%
Odonata		Theorythodes op.	mayny	0.0		122	104	0.070
Odonata	Aeschnida	1 ae						
	710001111101	Boyeria sp.	dragonfly	5.9	1		1	0.0%
Plecoptera		Doyona op.	dragormy	0.0				0.070
riocopiora	Perlidae							
	Torridae	Perlesta sp.	stonefly	4.7		10	10	0.5%
Hemiptera		r chesta sp.	Storiety	7.7		10	10	0.570
Tiomptoru	Gerridae			+ +				
	Jonnac	Gerris sp.	water strider	6.0	2		2	0.1%
Trichoptera	1	20.110 00.	Water etrider	0.0				0.170
Thoriopicia	Leptocerio	i dae		+ +				
	Loptocom	Mystacides sp.	caddisfly	2.6	1		1	0.0%
	Polycentre		Caddistry	2.0	'			0.070
	. Olyconti	Polycentropus sp.	caddisfly	3.5	1	1	2	0.1%
Coleoptera	1	r orgoonicopus sp.	Caddisity	5.5	<u> </u>	<u>'</u>		0.170
Coleoptera	Elmidae			+ +				
	Limuae	Dubiraphia vittata	riffle beetle	5.9	1		1	0.0%
	1	Macronychus glabratus	riffle beetle	4.5	2	3	5	0.0%
	Gyrinidae		Time Deelle	7.5		3	J	U.Z /0
	Gymnidae	Dineutus sp.	whirligig beetle	5.5		5	5	0.2%
	Psepheni		writingly beetle	5.5		3	Ü	U.Z.70
	rsepneni		water nearly	2.2		1	1	0.09/
	1	Psephenus herricki	water penny	2.3		1	1	0.0%

TABLE 47B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 2 - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 2 E	MERGEN	NT AQUAT	IC VEGETAT	ΓΙΟΝ	
		Sample Date:	17 May 2007					
		Gear:	Sweep Net					
				Tol.				
Taxon:			Common Name	Index*	EAV-1	EAV-1R	Total	Percent
Diptera								
	Ceratopo	gonidae						
		Palpomyia gr.	biting midge	7.0	1		1	0.0%
	Chaoborio							
		Chaoborus punctipennis	phantom midge	8.5	2		2	0.1%
	Chironom		,					
		Corynoneuria sp.	midge	6.0		8	8	0.4%
		Microtendipes pedellus gr.	midge	5.5	1		1	0.0%
		Parachironomus sp.	midge	9.4	3		3	0.1%
		Paracladopelma sp.	midge	5.5		8	8	0.4%
		Paramerina sp.	midge	4.3	9		9	0.4%
		Paratendipes albimanus	midge	6.0	3		3	0.1%
		Polypedilum sp.	midge	5.6		112	112	5.4%
		Polypedilum illinoense gr.	midge	9.0	69		69	3.3%
		Polypedilum scalaenum gr.	midge	8.4		544	544	26.2%
		Psectrocladius sp.	midge	3.6	1		1	0.0%
		Rheotanytarsus exiguum gr.	midge	5.9		8	8	0.4%
		Rheotanytarsus sp.	midge	5.9	1		1	0.0%
		Synorthocladius sp.	midge	4.3	1		1	0.0%
		Tanytarsus sp.	midge	6.7	1	32	33	1.6%
		Thienemanniella sp.	midge	5.8		8	8	0.4%
		Thienemannimyia gr.	midge	6.0	2	112	114	5.5%
	Culicidae		mosquito	8.0	2		2	0.1%
	Ephydrida	ie	shore fly	6.0		3	3	0.1%
	Empididae	9						
		Hemerodromia sp.	dance fly	7.6		1	1	0.0%
	Sciomyzio	lae	·					
		Sepedon sp.	marsh fly	10.0	1		1	0.0%
		Total Taxa	·		26	26	45	
		Total Specimens			608	1,468	2,076	100.0%

^{*}Reference:

TABLE 48A MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 2 - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 2 R	IFFLE				
		Sample Date:	29 October 2006	i				
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	RIF-1	RIF-1R	Total	Percent
Lumbricina								
	Lumbricidae	9	earth worm	8.0	2	4	6	3.5%
Mesogastro								
	Pleurocerida							
		Leptoxis sp.	rock snail	1.7	32	15	47	27.6%
Veneroidea								
	Corbiculidae		A 1 41 1					0.00/
F .	<u> </u>	Corbicula fluminea	Asiatic clam	6.1		1	1	0.6%
Ephemerop								
	Baetidae	Pactic on	mouth	4.5	4	1	5	2.9%
	Heptageniid	Baetis sp.	mayfly	4.5	4	1	5	2.9%
	періаденно	Stenacron pallidum	mayfly	2.7	3		3	1.8%
		Stenonema sp.	mayfly	3.5	<u>5</u>	1	6	3.5%
		Stenonema mediopunctatum	mayfly	3.7	1	1	1	0.6%
	Isonychiidae		mayny	5.1	1		<u>'</u>	0.076
	150rry or maak	Isonychia sp.	mayfly	3.4	1	6	7	4.1%
Odonata			· · · · · · · · · · · · · · · · · · ·	J. ,		<u> </u>	,	,0
	Coenagrion	idae						
		Argia sp.	damselfly	8.2		1	1	0.6%
	Gomphidae		1					
		Lanthus sp.	dragonfly	1.5	3	1	4	2.4%
Plecoptera		·	j					
	Perlidae							
		Acroneuria abnormis	stonefly	2.0		1	1	0.6%
Megaloptera	a							
	Corydalidae							
		Corydalus cornutus	dobsonfly	5.1	1	5	6	3.5%
		Nigronia serricornis	fishfly	4.9	2	1	3	1.8%
Trichoptera								
	Hydropsych							
		Cheumatopsyche sp.	caddisfly	6.2	7	8	15	8.8%
		Hydropsyche sp.	caddisfly	4.3		2	2	1.2%
	D	Hydropsyche bronta	caddisfly	5.0	1	9	10	5.9%
	Philopotami		a a al alt a flui.	0.7		4	-	0.00/
		Chimarra aterrima Chimarra obscura	caddisfly	2.7	1 4	10	5 14	2.9% 8.2%
	Polycentrop		caddisfly	2.1	4	10	14	0.2%
	i-oiyc e ntiop	Polycentropus sp.	caddisfly	3.5		1	1	0.6%
Coleoptera		i oiyo c iiiiopus sp.	Caudisily	3.5		'	I	0.0%
Colcopiera	Elmidae			 				
	Limidae	Microcylloepus pusillus	riffle beetle	2.1		1	1	0.6%
		Optioservus sp.	riffle beetle	2.3	1	3	4	2.4%
		Stenelmis crenata gr.	riffle beetle	5.1	1	1	2	1.2%
	Psephenida	· · · · · · · · · · · · · · · · · · ·		J. 1		· ·		1.270
	22,27.07.1100	Ectopria nervosa	false water penny	4.1	1		1	0.6%
		Psephenus herricki	water penny	2.3	21		21	12.4%
Diptera		<u>'</u>	'- '					
	Chaoborida	ė						
		Chaoborus punctipennis	phantom midge	8.5	1		1	0.6%
	Chironomida	ae						
		Polypedilum scalaenum gr.	midge	8.4		2	2	1.2%
		Total Taxa			19	21	26	
		Total Specimens			92	78	170	100.0%

^{*}Reference:

TABLE 48B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 2 - RIFFLE AREA 1

		Sample Location:	REFERENCE - 2 R	IFFLE				
		Sample Date:	17 May 2007					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	RIF-1	RIF-1R	Total	Percent
Haplotaxida								
	Lumbricul	idae						
		Lumbriculus variegatus	earth worm	7.0	1	1	2	0.1%
Basommatop	hora							
	Planorbida	ae						
		Gyraulus sp.	orb snail	4.2	1		1	0.1%
Mesogastrop	oda							
3	Pleurocer	idae						
		Leptoxis sp.	rock snail	1.7	60	29	89	5.0%
Veneroidea	1	, , , , , , , , , , , , , , , , , , ,			-			
	Corbiculid	lae						
		Corbicula fluminea	Asiatic clam	6.1		7	7	0.4%
Decapoda								
	Cambarid	ae						
		Orconectes sp.	crayfish	2.6	6	3	9	0.5%
Ephemeropte	ra		, .					
	Baetidae							
		Acentrella sp.	mayfly	3.6	216		216	12.2%
		Baetis sp.	mayfly	4.5	120	6	126	7.1%
		Plauditus sp.	mayfly	4.5		12	12	0.7%
	Caenide		- 7	_				
		Caenis sp.	mayfly	7.4		1	1	0.1%
	Heptagen		- 7					
	1	Stenacron interpunctatum	mayfly	6.9		1	1	0.1%
		Stenonema sp.	mayfly	3.5	136	26	162	9.1%
	Isonychiid		- 7					
	, , , ,	Isonychia sp.	mayfly	3.4	41	4	45	2.5%
	Tricorythic		, ,					
		Tricorythodes sp.	mayfly	5.0	32	11	43	2.4%
Odonata		,	, ,					
	Coenagrio	nidae						
		Argia sp.	damselfly	8.2		1	1	0.1%
	Gomphida		,					
		Ophiogomphus sp.	dragonfly	5.5	2		2	0.1%
Plecoptera								
·	Perlidae							
		Perlesta sp.	stonefly	4.7	1		1	0.1%
Megaloptera		,	ĺ					
,	Corydalida	ae						
		Corydalus cornutus	dobsonfly	5.1	3	1	4	0.2%
		Nigronia serricornis	fishfly	4.9		2	2	0.1%

TABLE 48B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 2 - RIFFLE AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 2 RI	FFI F				
		Sample Date:	17 May 2007					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	RIF-1	RIF-1R	Total	Percent
Trichoptera								
	Brachycer	ntridae						
		Micrasema sp.	caddisfly	0.6	9	1	10	0.6%
	Hydropsyd	chidae						
		Cheumatopsyche sp.	caddisfly	6.2	288	188	476	26.8%
		Hydropsyche sp.	caddisfly	4.3		4	4	0.2%
		Hydropsyche nr. betteni	caddisfly	7.8	32		32	1.8%
		Hydropsyche bronta	caddisfly	5.0	8		8	0.5%
	Hydroptilio							
		Hydroptila sp.	caddisfly	6.2	62	65	127	7.1%
	Lepidosto							
	1	Lepidostoma sp.	caddisfly	0.9		8	8	0.5%
	Philopotar							
	1	Chimarra sp.	caddisfly	2.7	8	4	12	0.7%
	Uenoidae		1	0.7			_	0.757
0.1		Neophylax sp.	caddisfly	2.2		8	8	0.5%
Coleoptera								
	Elmidae		'm d	0.4				0.40/
		Microcylloepus pusillus	riffle beetle	2.1	1		1	0.1%
	-	Optioservus sp.	riffle beetle	2.3	10		10	0.6%
		Optioservus ovalis	riffle beetle	4.0		3	3	0.2%
	1	Oulimnius latiusculus	riffle beetle	1.8		1	1	0.1%
	Doonbonia	Stenelmis crenata gr.	riffle beetle	5.1	2	4	6	0.3%
	Psephenic		folos water nemen	4.4	4		1	0.40/
		Ectopria nervosa	false water penny	4.1	1	40	1	0.1%
Diptera		Psephenus herricki	water penny	2.3	6	10	16	0.9%
Dipleia	Chironomi	idaa						
	Chilohom	Ablabesmyia sp.	midge	7.2	4		4	0.2%
		Ablabesmyia mallochi	midge	7.2	4	4	4	0.2%
		Cricotopus bicinctus	midge	8.5	1	4	1	0.2 %
		Cricotopus trifascia	midge	2.8	2		2	0.1%
		Cryptochironomus fulvus g	midge	6.4	1		1	0.1%
		Microtendipes pedellus gr.	midge	5.5	1		1	0.1%
		Paracladopelma sp.	midge	5.5	1		1	0.1%
		Phaenopsectra obedians g	midge	6.5		4	4	0.2%
	1	Polypedilum flavum	midge	4.7	21	96	117	6.6%
		Rheocricotopus robacki	midge	7.3	1	4	5	0.3%
		Rheotanytarsus exiguum g	*	5.9	29		29	1.6%
		Rheotanytarsus sp.	midge	5.9		100	100	5.6%
		Synorthocladius sp.	midge	4.3	1	8	9	0.5%
		Tanytarsus sp.	midge	6.7	5	12	17	1.0%
		Thienemanniella sp.	midge	5.8	-	4	4	0.2%
		Thienemannimyia gr.	midge	6.0	4	4	8	0.5%
		Tvetenia sp.	midge	3.6	3	12	15	0.8%
	Simuliidae		Ĭ					
		Simulium sp.	black fly	4.0	8		8	0.5%
		Total Taxa	Ť		37	35	52	
1		Total Specimens			1,128	649	1,777	100.0%

^{*}Reference:

TABLE 49A MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 2 - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 2 R	UN				
		Sample Date:	29 October 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	RUN-1	RUN-1R	Total	Percent
Basommato	ophora							
	Lymnaeidae							
		Fossaria sp.	pond snail	7.0		1	1	3.1%
Mesogastro								
	Pleurocerida	ae						
		Leptoxis sp.	rock snail	1.7	5	8	13	40.6%
Ephemerop								
	Baetiscidae							
		Bastisca gibbera	mayfly	1.4	1	1	2	6.3%
	Heptageniio							
		Stenacron pallidum	mayfly	2.7		1	1	3.1%
Odonata								
	Coenagrion							
		Argia sp.	damselfly	8.2		1	1	3.1%
	Gomphidae							
		Gomphus sp.	dragonfly	5.8		3	3	9.4%
		Gomphus descriptus	dragonfly	5.8	1		1	3.1%
		Hagenius brevistylus	dragonfly	3.9		1	1	3.1%
		Lanthus sp.	dragonfly	1.5		1	1	3.1%
Megaloptera								
	Sialidae							
		Sialis sp.	alderfly	7.2	2		2	6.3%
Coleoptera	1							
	Elmidae							
	1	Dubiraphia vittata	riffle beetle	5.9	1		1	3.1%
		Macronychus glabratus	riffle beetle	4.5		2	2	6.3%
	Psephenida							
		Psephenus herricki	water penny	2.3	1	2	3	9.4%
		Total Taxa			6	10	13	
		Total Specimens			11	21	32	100.0%

^{*}Reference:

TABLE 49B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 2 - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 2 RI	JN				
		Sample Date:	17 May 2007					
		Gear:	Kick Net					
		- Court	I I I I I I I I I I I I I I I I I I I	Tol.				
Taxon:			Common Name	Index*	RUN-1	RUN-1R	Total	Percent
Haplotaxida	<u> </u>			maox	itoit i	itoit iit	i otai	. 0.00.11
Παρισταλίαε	Lumbricida		earth worm	8.0		1	1	0.1%
Basommato		Ī	outil Wollin	0.0		·	<u> </u>	0.170
	Planorbida	! e						
		Gyraulus sp.	orb snail	4.2		1	1	0.1%
Mesogastro	ppoda							
	Pleurocerio	lae						
		Elimia sp.	horn snail	2.4	40	4	44	2.6%
		Leptoxis sp.	rock snail	1.7	912	71	983	57.0%
Veneroidea	ı	, ,						
	Corbiculida	ie						
		Corbicula fluminea	Asiatic clam	6.1		4	4	0.2%
Decapoda								
	Cambarida	ė						
		Orconectes sp.	crayfish	2.6		1	1	0.1%
Ephemerop	tera	,	<u> </u>					
	Baetidae							
		Acentrella sp.	mayfly	3.6	1		1	0.1%
		Baetis sp.	mayfly	4.5		73	73	4.2%
	Ephemerel		, ,					
		Eurylophella sp.	mayfly	4.3		8	8	0.5%
	Heptagenii							
	.,	Stenacron interpunctatum	mayfly	6.9	2		2	0.1%
	Tricorythida							
	,	Tricorythodes sp.	mayfly	5.0	40	248	288	16.7%
Odonata		,	1			_		
	Coenagrior	nidae						
		Argia sp.	damselfly	8.2		64	64	3.7%
	Gomphidae		,					
	'	Hagenius sp.	dragonfly	3.9		4	4	0.2%
Trichoptera		,	<u> </u>					
	Hydroptilida	ae						
		Hydroptila sp.	caddisfly	6.2		15	15	0.9%
	Leptocerida		ĺ					
	,	Triaenodes sp.	caddisfly	3.8		1	1	0.1%
	Polycentro		<u> </u>					
		Polycentropus sp.	caddisfly	3.5		3	3	0.2%
Coleoptera			<u> </u>					
	Elmidae							
		Macronychus glabratus	riffle beetle	4.5		3	3	0.2%
		Stenelmis crenata gr.	riffle beetle	5.1	1		1	0.1%
	Gyrinidae							
	1	Dineutus sp.	whirligig beetle	5.5	5	1	6	0.3%
	Psephenida		33					
	Psephenida		false water penny	4.1		1	1	0.1%

TABLE 49B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 2 - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location:	REFERENCE - 2 R	UN				
	Sample Date:	17 May 2007					
	Gear:	Kick Net					
			Tol.				
Taxon:		Common Name	Index*	RUN-1	RUN-1R	Total	Percent
Diptera							
	Chironomidae						
	Ablabesmyia mallochi	midge	7.2	36	20	56	3.2%
	Cricotopus sp.	midge	6.3	4	1	5	0.3%
	Dicrotendipes sp.	midge	8.1		1	1	0.1%
	Microtendipes pedellus gr.	midge	5.5	4		4	0.2%
	Paratendipes albimanus	midge	6.0	28	5	33	1.9%
	Phaenopsectra obedians gi	r. midge	6.5	16	3	19	1.1%
	Rheotanytarsus exiguum gi	r. midge	5.9	16	8	24	1.4%
	Synorthocladius sp.	midge	4.3	4	4	8	0.5%
	Tanytarsus sp.	midge	6.7	52	13	65	3.8%
	Total Taxa			16	26	30	
	Total Specimens			1,164	560	1,724	100.0%

^{*}Reference:

TABLE 50A MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 3 - BACKWATER AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 3 B	ACK WAT	ΓER				
		Sample Date:	1 November 2006						
		Gear:	Petite Ponar Dredg	e (area =	0.023 squ	are meters)			
				Tol.				Density	
Taxon:			Common Name	Index*	BW-1	BW-1R	Total	(no./m ²)	Percent
Tubificida									
	Tubificidae								
		Branchiura sowerybi	tube worm	8.3		1	1	22	1.9%
		Limnodrilus sp.	tube worm	9.4	2	4	6	130	11.3%
Mesogastro	poda								
	Viviparidae								
		Campeloma sp.	mystery snail	6.5	1		1	22	1.9%
Ephemerop									
	Caenide								
		Caenis sp.	mayfly	7.4		1	1	22	1.9%
Plecoptera									
	Capniidae								
		Allocapnia sp.	stonefly	2.4	1		1	22	1.9%
Diptera									
	Ceratopogo								
		Sphaeromias sp.	biting midge	6.0		1	1	22	1.9%
	Chironomida								
		Ablabesmyia mallochi	midge	7.2		1	1	22	1.9%
		Chironomini	midge	6.0	3		3	65	5.7%
		Cricotopus bicinctus	midge	8.5		3	3	65	5.7%
		Cryptochironomus fulvus gr.	midge	6.4	4	4	8	174	15.1%
		Dicrotendipes sp.	midge	8.1		3	3	65	5.7%
		Paratanytarsus sp.	midge	8.4		1	1	22	1.9%
		Procladius sp.	midge	9.1		1	1	22	1.9%
		Pseudochironomus sp.	midge	5.5		15	15	326	28.3%
		Tanytarsus sp.	midge	6.7		7	7	152	13.2%
		Total Taxa			5	12	15		
		Total Specimens	-		11	42	53		100.0%
		Total Density (no./m²)						1,152	

*Reference:

TABLE 50B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 3 - BACKWATER AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Sample Location	: REFERENCE - 3 E	BACKWAT	ER				
	Sample Date:	17 May 2007						
	Gear:	Petite Ponar Dred	ge (area =	0.023 squ	are meters)			
			Tol.	•			Density	
Taxon:		Common Name	Index*	BW-1	BW-1R	Total	(no./m2)	Percent
Tubificida								
	Tubificidae							
	Branchiura sowery	/bi tube worm	8.3	1		1	22	16.7%
Mesogastrop	ooda							
	Viviparidae							
	Campeloma sp.	mystery snail	6.5		3	3	65	50.0%
Veneroidea								
	Corbiculidae							
	Corbicula fluminea	Asiatic clam	6.1	1		1	22	16.7%
Diptera								
'	Chironomidae							
	Cladotanytarsus s	p. midge	4.0	1		1	22	16.7%
	Total Taxa			3	1	4		
	Total Specimens			3	3	6		100.0%
	Total Density (no	./m²)				·	130	

*Reference:

TABLE 51 MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 3 - DEPOSITIONAL AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Comple Leastion.	DEFEDENCE 2	DEDC	CITIONIAL				
		Sample Location:	REFERENCE - 3	DEPC	SITIONAL				
		Sample Date:	17 May 2007		0.00	2	-1\		
		Gear:	Petite Ponar Dre		area = 0.02	3 square m	eters)	D	
Towani			Common Name	Tol.	DEP-1	DEP-1R	Total	Density	Davaget
Taxon:			Common Name	inaex"	DEP-1	DEP-1K	rotai	(no./m2)	Percent
Haplotaxida	I complete at a coltral								
	Lumbriculid			7.0				00	0.00/
T. 1.16 - 1.1.		Lumbriculus variegatus	earth worm	7.0		1	1	22	2.0%
Tubificida	Tubificials								
	Tubificidae	Pothrionourum voidovalu onum	tubo worm	4.0	1		1	22	2.00/
		Bothrioneurum vejdovskyanum Branchiura sowerybi	tube worm tube worm	4.0 8.3	11	1	<u>1</u> 1	22 22	2.0% 2.0%
				9.4	2	1	3	65	6.0%
Managatuan		Limnodrilus sp.	tube worm	9.4		1	3	65	6.0%
Mesogastrop	Viviparidae								
	viviparidae	Campeloma sp.	myotom conoil	6.5		1	1	22	2.0%
Veneroidea		Саттретотна ър.	mystery snail	0.5		- 1	ı	22	2.0%
veneroidea	Corbiculida								
	Corbiculida	Corbicula fluminea	Asiatic clam	6.1	1	2	3	65	6.0%
Trichoptera		Corpicula numinea	ASIALIC CIAITI	0.1	<u>'</u>		<u> </u>	05	0.0%
Піспорієта	Leptocerida								
	Leptocerius	Mystacides sp.	caddisfly	2.6	1		1	22	2.0%
	Polycentrop		Caddisity	2.0			· ·	22	2.070
	Folycentrop	Polycentropus sp.	caddisfly	3.5		1	1	22	2.0%
Coleoptera		l olycentropus sp.	Caddisity	5.5		'	!	22	2.070
Coleoptera	Elmidae								
	Limidae	Dubiraphia vittata	riffle beetle	5.9	1		1	22	2.0%
Diptera		Babirapina vittata	Time beene	0.0	'		<u>'</u>	22	2.070
Dipicia	Chironomid	l lae							
	Ormonomia	Ablabesmyia mallochi	midge	7.2		6	6	130	12.0%
		Cladotanytarsus sp.	midge	4.0	2	Ŭ	2	43	4.0%
		Cryptochironomus fulvus gr.	midge	6.4		2	2	43	4.0%
		Microtendipes pedellus gr.	midge	5.5	4	7	11	239	22.0%
		Nilothauma breyi (tent.)	midge	5.0	1		1	22	2.0%
		Paratendipes albimanus	midge	6.0	-	1	<u>·</u> 1	22	2.0%
		Phaenopsectra obedians gr.	midge	6.5	3		3	65	6.0%
		Polypedilum scalaenum gr.	midge	8.4		1	1	22	2.0%
		Procladius sp.	midge	9.1	3		3	65	6.0%
		Stictochironomus sp.	midge	6.5	1		1	22	2.0%
		Tanypodinae	midge	6.0		1	1	22	2.0%
		Tanytarsus sp.	midge	6.7	1	3	4	87	8.0%
		Zavrelia sp.	midge	5.3	1		1	22	2.0%
		Total Taxa			13	13	22		
		Total Specimens			22	28	50		100.0%
		Total Density (no./m²)						1,087	

*Reference:

TABLE 52A MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 3 - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 3 E	MERGEN	T AQUATIO	VEGETATIO	N	
		Sample Date:	1 November 2006					
		Gear:	Sweep Net					
				Tol.				
Taxon:			Common Name	Index*	EAV-1	EAV-1R	Total	Percent
Tricladida								
	Planariidae							
		Dugesia tigrina	flat worm	7.2		1	1	3.7%
Basommato								
	Physidae							
		Physa sp.	pouch snail	8.8		2	2	7.4%
Mesogastro								
	Pleurocerid	lae						
		Leptoxis sp.	rock snail	1.7		2	2	7.4%
Decapoda								
	Cambarida	e						
		Orconectes sp.	crayfish	2.6	1		1	3.7%
Hydracarina	а		water mite	5.5	6	1	7	25.9%
Ephemerop	otera							
	Baetidae							
		Baetis sp.	mayfly	4.5		1	1	3.7%
	Heptagenii	dae						
		Stenacron interpunctatum	mayfly	6.9	1		1	3.7%
Odonata								
	Coenagrior							
		Enallagma sp.	damselfly	8.9	1	3	4	14.8%
Coleoptera								
	Gyrinidae							
		Dineutus sp.	whirligig beetle	5.5	1	2	3	11.1%
Diptera								
	Chironomic							
		Dicrotendipes sp.	midge	8.1		1	1	3.7%
		Tanypodinae	midge	6.0	1		1	3.7%
		Tanytarsus sp.	midge	6.7	2		2	7.4%
	Simuliidae							
		Simulium sp.	black fly	4.0	1		1	3.7%
		Total Taxa			8	8	13	
		Total Specimens			14	13	27	100.0%

^{*}Reference:

TABLE 52B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 3 - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 3 E	MERGENT	AQUATIC	VEGETATIO	ON	
		Sample Date:	17 May 2007					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	EAV-1	EAV-1R	Total	Percent
Basommator	ohora							
	Planorbida	ae	orb snail	6.3	1		1	0.3%
Mesogastrop	oda							
	Pleuroceri	dae						
		Leptoxis sp.	rock snail	1.7		2	2	0.6%
Veneroidea								
	Corbiculida	ae						
		Corbicula fluminea	Asiatic clam	6.1	3	6	9	2.8%
Decapoda								
-	Cambarida	ae						
		Orconectes sp.	crayfish	2.6	1	1	2	0.6%
Ephemeropt	era		·					
	Baetidae							
		Acentrella sp.	mayfly	3.6		1	1	0.3%
		Baetis sp.	mayfly	4.5		1	1	0.3%
		Centroptilum sp.	mayfly	6.6		7	7	2.1%
	Ephemere							
		Eurylophella sp.	mayfly	4.3		2	2	0.6%
Odonata								
	Aeschnida	ie						
		Boyeria sp.	dragonfly	5.9	1		1	0.3%
		Boyeria vinosa	dragonfly	5.9		1	1	0.3%
	Libellulidae	e	dragonfly	6.7		3	3	0.9%
		Macromyia illinoiensis	dragonfly	6.2	1		1	0.3%
		Neurocordulia sp.	dragonfly	3.4	1		1	0.3%
	Gomphida		dragonfly	5.0		1	1	0.3%
		Hagenius sp.	dragonfly	3.9	1		1	0.3%
Plecoptera			,					
	Capniidae		stonefly	0.9	1		1	0.3%
Trichoptera			•					
•	Hydropsyc	chidae						
		Cheumatopsyche sp.	caddisfly	6.2		1	1	0.3%
	Hydroptilid		j					
		Hydroptila sp.	caddisfly	6.2	4		4	1.2%
	Leptocerid							
	i .	Oecetis sp.	caddisfly	3.6	1		1	0.3%

TABLE 52B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 3 - EMERGENT AQUATIC VEGETATION AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 3 E	MERGENT	AQUATIC	VEGETATIO	ON	
		Sample Date:	17 May 2007					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	EAV-1	EAV-1R	Total	Percent
Diptera								
	Chironomic	lae						
		Ablabesmyia mallochi	midge	7.2	4	2	6	1.8%
		Cricotopus sp.	midge	5.3		2	2	0.6%
		Cricotopus nr. politus	midge	6.3	14		14	4.3%
		Cricotopus bicinctus	midge	8.5	2		2	0.6%
		Cryptotendipes sp.	midge	6.2		1	1	0.3%
		Dicrotendipes sp.	midge	8.1	4	4	8	2.4%
		Parakiefferiella sp.	midge	5.3		1	1	0.3%
		Paratendipes albimanus	midge	6.0		1	1	0.3%
		Phaenopsectra obedians gr.	midge	6.5	4		4	1.2%
		Phaenopsectra punctipes gr.	midge	6.5	4		4	1.2%
		Polypedilum illinoense gr.	midge	9.0	84	28	112	34.3%
		Procladius sp.	midge	9.1		1	1	0.3%
		Rheotanytarsus exiguum gr.	midge	5.9	40		40	12.2%
		Rheotanytarsus sp.	midge	5.9		4	4	1.2%
		Stenochironomus sp.	midge	6.4	2		2	0.6%
		Tanytarsus sp.	midge	6.7	68	15	83	25.4%
	Simuliidae							
		Simulium sp.	black fly	4.0		1	1	0.3%
		Total Taxa	,		20	22	36	
		Total Specimens			241	86	327	100.0%

^{*}Reference:

TABLE 53A MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 3 - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 3 R	UN				
		Sample Date:	1 November 2006					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	RUN-1	RUN-1R	Total	Percent
Lumbricina								
	Lumbricida	e	earth worm	8.0		2	2	5.0%
Tubificida								
		Limnodrilus sp.	tube worm	9.4	2		2	5.0%
Veneroidea								
	Corbiculida	e						
		Corbicula fluminea	Asiatic clam	6.1		2	2	5.0%
Hydracarina	a		water mite	5.5	1		1	2.5%
Ephemerop	tera							
	Heptagenii	dae						
		Stenacron interpunctatum	mayfly	6.9	1		1	2.5%
Odonata								
	Coenagrior	nidae						
		Argia sp.	damselfly	8.2	9	11	20	50.0%
Trichoptera								
	Philopotam	idae						
		Chimarra obscura	caddisfly	2.7		1	1	2.5%
	Polycentrop	oodidae						
		Neureclipsis sp.	caddisfly	4.1		1	1	2.5%
		Polycentropus sp.	caddisfly	3.5		1	1	2.5%
Diptera								
	Chironomic	dae						
		Orthocladiinae	midge	6.0	1		1	2.5%
		Procladius sp.	midge	9.1		1	1	2.5%
		Tanypodinae	midge	6.0		1	1	2.5%
		Tanytarsus sp.	midge	6.7	1	4	5	12.5%
	Tipulidae	·	-					
		Tipula sp.	crane fly	7.3	1		1	2.5%
		Total Taxa			7	9	14	
		Total Specimens			16	24	40	100.0%

*Reference:

TABLE 53B MACROINVERTEBRATE TAXONOMIC RESULTS: REFERENCE AREA 3 - RUN AREA 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

		Sample Location:	REFERENCE - 3 R	UN				
		Sample Date:	17 May 2007					
		Gear:	Kick Net					
				Tol.				
Taxon:			Common Name	Index*	RUN-1	RUN-1R	Total	Percent
Nematoda			round worm	6.0		1	1	0.4%
Hoplonemerte	ea							
	Tetrastem	matidae						
		Prostoma graecense	proboscis worm	6.1	2	6	8	3.5%
Tubificida								
	Tubificidae							
		Aulodrilus sp.	tube worm	5.5		1	1	0.4%
		Branchiura sowerybi	tube worm	8.3		1	1	0.4%
		Limnodrilus sp.	tube worm	9.4	1		1	0.4%
Veneroidea								
	Corbiculida							
	1	Corbicula fluminea	Asiatic clam	6.1	1		1	0.4%
	Sphaeriida							
_		Pisidium sp.	pill clam	6.5		2	2	0.9%
Decapoda								
	Cambarida							
		Orconectes sp.	crayfish	2.6	2		2	0.9%
Ephemeropte								
	Baetidae							
	0	Centroptilum sp.	mayfly	6.6		1	1	0.4%
	Caenide			7.4				4.00/
		Caenis sp.	mayfly	7.4	1	2	3	1.3%
	Heptagenii			0.0			40	7.00/
		Stenacron interpunctatum	mayfly	6.9	8	8	16	7.0%
	Tui a a usutla i al	Stenonema sp.	mayfly	3.5		5	5	2.2%
	Tricorythid		m ov th	5.0		1	1	0.40/
Odonata		Tricorythodes sp.	mayfly	5.0		'	ı	0.4%
Odonata	Aeschnida							+
	Aesciilida	Boyeria sp.	dragonfly	5.9		1	1	0.4%
	Coenagrio		uragoriny	5.9		'	!	0.4%
	Coerragilo	Argia sp.	damselfly	8.2		3	3	1.3%
	Gomphida		dragonfly	5.0		2	2	0.9%
Trichoptera	Compilida	<u> </u>	dragoring	5.0				0.570
Пспориста	Hydroptilid							
	Trydroptilla	Hydroptila sp.	caddisfly	6.2	1	4	5	2.2%
	Leptocerid		Gaddiony	0.2	•		- J	2.270
		Mystacides sp.	caddisfly	2.6	3	8	11	4.8%
		Oecetis sp.	caddisfly	3.6		1	1	0.4%
Diptera		T.					•	
1	Chironomic	dae						
		Ablabesmyia mallochi	midge	7.2	3	17	20	8.8%
		Cricotopus annulator gr.	midge	6.3		2	2	0.9%
		Dicrotendipes sp.	midge	8.1	1	13	14	6.2%
		Paratendipes albimanus	midge	6.0		1	1	0.4%
		Polypedilum illinoense gr.	midge	9.0	1	3	4	1.8%
		Procladius sp.	midge	9.1	2	1	3	1.3%
		Psectrocladius sp.	midge	3.6		1	1	0.4%
		Rheotanytarsus sp.	midge	5.9	1	11	12	5.3%
		Tanytarsus sp.	midge	6.7	8	96	104	45.8%
		Total Taxa			14	25	28	
	1	Total Specimens			35	192	227	100.0%

^{*}Reference:

TABLE 54 SOIL MACROINVERTEBRATE SURVEY RESULTS

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

			RE	F - 1					RI	EF - 2					REF	- 3					EDR	-1					ED	R - 2					ED	R - 3		
Taxon:	FT1-1	FT1-2	FT1-3	WT1-1	WT1-2	WT1-3	ST1-1	ST1-2	ST1-3	WT1-1	WT1-2	WT1-3*	FT1-1	FT1-2	FT1-3	ST1-1	ST1-2	ST1-3	ST1-1	ST1-2	ST1-3	WT1	WT2	WT3	ST2-1	ST2-2	ST2-3	WT2-1	WT2-2	WT-3	FT2-1	FT2-2	FT2-3	FT3-1	FT3-2	FT3-3
Collembola	4	20	4	16	1	8	24	32		20	8	23	16	20	20	20	20		8	252	60	256	76	192	88	8		12	20	4		12				28
Other Small Invertebrates							4	8		8				4	4	8				8	16	4		12	76	8	8	4	8	4			4	4		8
Spiders			1				5	1				3	3	5			4	2		1	3	2	6	4	2	5		1	5	3		4	1		1	3
Centipedes								1												1	1	3	3	2		1								1		1
Millipedes																													1		1	2				
Isopods				1																	7	2	2	1	2				1	1	1					
Earthworms											1										1	2	1						4							1
Ants	4	1	4			6	21	3	17		10	17	7	28	2	11	3	6	5	2	3	11	1		14	65	6		22	9	7	19		1	6	5
Crickets							1						1	3						4										3						
Flies			3									29				3						1	1		5		1			9			1			
Beetles			1	1	1	2	3			1	2	13	5	3			1			1	3			1	2	3	1		3		3	7			2	4
Beetle pupa	1																																			
Beetle larva			1																													3				1
Opilionids																							2	10												
Lepidoptera																												1								
Hemipteran																																	2			
Total Number of Organisms	9	21	14	18	2	16	58	45	17	29	21	85	32	63	26	42	28	8	13	269	94	281	92	222	189	90	16	18	64	33	12	47	8	6	9	51

Notes:
*Indicates that samples were counted three times for a quality assurance/quality control test, and the highest number was used.

**Collembola were in mineral oil pockets with the rest of the specimens and could not be sorted. All collembola were counted for a total of 23.

REF = Reference location

EDR = Ecologically differentiable reach
FT = Field transect

WT = Wooded transect

ST = Successional transect

TABLE 55 TERRESTRIAL REPTILE AND AMPHIBIAN SURVEY RESULTS SUMMARY

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

	Hal	bitat Type:				Ма	int	ain	ed	Fie	ld						Fc	orest	ed	Flo	odp	olai	n						Suc	cce	ssic	nal	Fie	eld			
		Location:	ED	R -	1	ED	R -	2	ED	R -	. 3	REF-1ª	REF-2	REF-3	ED	R - 1	1 1	EDR	- 2	E	DR	- 3	REF-1ª	REF-2	REF-3	ΕI	DR	- 1	Εſ	OR ·	- 2	ED	R -	3 1	REF-1	REF-2	REF-3
Species	Scientific Name	Transect	1	2	3	1	2	3	1	2	3	1	1	1	1	2 3	3	1 2	3	1	2	3	1	1	1	1	2	3	1	2	3	1	2	3	1	1	1
Spring 2007																																					
Black Racer	Coluber constrictor						-*					-						Х		-			•													-	
Carolina Anole	Anolis carolinensis						-					-								-			-	х												-	
Chorus Frog	Pseudacris feriarum						-					-								-			-													-	
River Cooter	Pseudemys concinna						-		Х			-								-			-													-	
Turtle (unknown)	N/A				х		-					-						Х		-			-			х										-	

Notes:

- 1. Terrestrial herptile surveys were conducted from May 29 to 30, 2007.
- * The "-" symbol is used to indicate that a survey was performed, but no species were observed. Empty boxes indicate that no survey was performed along that particular transect.
- [a] = Transect line different from previous investigations.
- N/A = Not applicable.
- EDR = Ecologically differentiable reach
- REF = Reference location

TABLE 57 AQUATIC REPTILE AND AMPHIBIAN SURVEY RESULTS

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

Date	EDR	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)				
Spring 2007											
5_21_07	1	Snapping Turtle	1	Sight	Backwater	33° 35′ 41.8″	85° 49' 44.0"				
5_21_07	1	Copperhead	1	Sight	Mud Bar	33° 35' 25.8"	85° 49' 57.5"				
5_21_07	1	River Cooter	1	Sight	Gravel Bar	33° 35' 17.9"	85° 50' 04.5"				
5_21_07	1	Stinkpot	1	Sight	Island	33° 35' 10.8"	85° 50' 33.0"				
5_21_07	1	Turtle	NA	Sign	Sand Bar	33° 35' 07.9"	85° 50' 39.6"				
5_21_07	1	Snake	1	Sight	NA	33° 35' 07.1"	85° 50' 41.3"				
5_21_07	1	Copperhead	1	Sight	Water	33° 35' 07.2"	85° 50' 45.8"				
5_21_07	1	Turtle	NA	Sign	Deposition	33° 35′ 03.1″	85° 51' 01.4"				
5_21_07	1	Turtle	NA	Sign	Bank	33° 34′ 54.4″	85° 51' 13.4"				
5_21_07	1	Copperhead	1	Sight	Island	33° 34' 52.2"	85° 51' 25.5"				
5_21_07	1	Turtle	NA	Track	Deposition	33° 34' 52.4"	85° 51' 28.4"				
5_21_07	1	Frog	1	Sight	Bank	33° 34' 41.3"	85° 51' 52.8"				
5_21_07	1	Turtle	1	Sight	Log	33° 34' 38.9"	85° 51' 56.4"				
5_21_07	1	Turtle	1	Sight	Log	33° 34' 34.5"	85° 52' 07.9"				
5_21_07	1	Black Racer	1	Sight	Bank	33° 34' 34.1"	85° 52' 12.9"				
5_21_07	1	Frog	1	Sight	Bank	33° 34′ 33.0″	85° 52' 16.0"				
5_21_07	1	Turtle	4	Sight	Deposition	33° 34' 31.6"	85° 52' 44.0"				
5_21_07	1	Garter Snake	1	Sight	Deposition	33° 34' 31.6"	85° 52' 44.0"				
5_22_07	1	Common Map Turtle	1	Sight	Bank	33° 34' 53.1"	85° 54' 22.1"				
5_22_07	1	Common Map Turtle	8	Sight	Deadfall	32° 34′ 45.3″	85° 54' 42.2"				
5_22_07	1	Turtle	1	Sight	Mid-Channel	32° 34' 45.9"	85° 54' 47.8"				
5_22_07	1	Copperhead	1	Sight	Mid-Channel	32° 34' 45.9"	85° 54' 47.8"				
5_22_07	2	Turtle	1	Sight	Deadfall	33° 34' 10.9"	85° 56' 04.7"				
5_22_07	2	Common Map Turtle	1	Sight	Deposition	33° 33' 47.5"	85° 56' 40.4"				
5_22_07	2	Common Map Turtle	1	Sight	Log	33° 33′ 56.3″	85° 57' 21.9"				
5_22_07		Stinkpot	1	Sight	Bank	33° 33' 49.5"	85° 57' 36.7"				
5_22_07	2	Eastern Painted Turtle	1	Sight	Mid-Channel	33° 33′ 10.0″	85° 58' 45.3"				
5_22_07		Turtle	1	Sight	Mid-Channel	33° 33' 11.0"	85° 59' 16.4"				
5_22_07	2	Snake	1	Sight	Mid-Channel	33° 32' 59.1"	86° 00' 01.3"				
5_22_07	2	Turtle	NA	Sight	NA	33° 33′ 04.8″	86° 00' 14.2"				
5_23_07		Stinkpot	1	Sight	Sand Bar	33° 33' 30.4"	86° 00' 42.7"				
5_23_07		Softshell Turtle	1	Sight	Sand Bar	33° 33' 37.1"	86° 00' 45.9"				
5_23_07	3	Cottonmouth	1	Sight	Bank	33° 33' 41.1"	86° 01' 02.6"				
5_23_07		Eastern Painted Turtle	1	Sight	Bank	33°33'39.2"	86°01'05.1"				
5_23_07	3	Stinkpot	1	Sight	Bank	33° 33' 38.8"	86° 01' 05.1"				
5_23_07		Stinkpot	1	Sight	Deadfall	33° 33' 05.1"	86° 01' 06.3"				
5_23_07	3	Common Map Turtle	1	Sight	Bank	33° 33' 17.0"	86° 01' 29.4"				
5_23_07	3	Frog	1	Sight	Sand Bar	33° 33' 10.8"	86° 01' 52.7"				
5_23_07	3	Common Map Turtle	1	Sight	Sand Bar	33° 33' 07.1"	86° 02' 04.1"				
5_24_07	3	Common Map Turtle	1	Sight	Mud Flat	33° 32' 36.4"	86° 02' 36.2"				
5_24_07	3	Turtle	NA	Sign	Mud Flat	33° 32' 33.9"	86° 02' 40.1"				
5_24_07	3	Frog	1	Sight	NA	33° 32' 18.3"	86° 03' 00.2"				
5_24_07	3	Common Map Turtle	1	Sight	Log	33° 32' 16.7"	86° 03' 04.6"				
5_24_07	3	Copperhead	1	Sight	Mid-Channel	33° 33' 01.3"	86° 04' 27.2"				
5_24_07	3	Turtle	1	Sight	Mid-Channel	33° 33' 08.6"	86° 04' 31.7"				
5_24_07	3	Turtle	1	Sight	Log	33° 32' 33.4"	86° 04' 50.2"				

Notes:

EDR = Ecologically Differentiable Reach (see Figure 1)

NA = Not Available or Not Applicable

NR = Not Recorded

Global positioning system coordinates in NAD 83; latitude and longitude in degrees, minutes, seconds.

TABLE 58 REFERENCE AREA AQUATIC BIRD, MAMMAL, AMPHIBIAN, AND REPTILE SURVEY RESULTS

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT ANNISTON PCB SITE, ANNISTON, ALABAMA

Date	REF	Wildlife Species	Count	Observation Type	Habitat	Location (Northing)	Location (Southing)				
Spring 2007											
5 23 07	1	Raccoon	N/A	Track	N/A	33° 35' 2.6"	85° 46' 4.9"				
5 23 07	1	Raccoon	N/A	Sign	N/A	33° 35' 2.4"	85° 46' 3.4"				
5_23_07	1	Muskrat	N/A	Track	N/A	33° 35' 2.4"	85° 46' 3.4"				
5_23_07	1	Raccoon	N/A	Track	Deposition	33° 35' 0.8"	85° 46' 0.9"				
5 23 07	1	Duck	N/A	Track	Deposition	33° 35' 0.8"	85° 46' 0.9"				
5 23 07	1	Fox	N/A	Track	Deposition	33° 35' 0.8"	85° 46' 0.9"				
5 23 07	1	Raccoon	N/A	Track	Bank	33° 35' 7.6"	85° 46' 6.4"				
5_23_07	1	Turtle	1	Sight	Mid-Channel	33° 35' 7.6"	85° 46' 6.4"				
5_23_07	1	Raccoon	N/A	Track	Deposition	33° 35' 3.4"	85° 46' 6.1"				
5_23_07	1	Groundhog	N/A	Track	Bank	33° 35' 7.0"	85° 46' 8.9"				
5 23 07	1	Stinkpot	1	Sight	Bank	33° 36' 0.0"	85° 46' 2.9"				
5_23_07	1	Raccoon	N/A	Track	Deposition	33° 36' 0.6"	85° 46' 3.6"				
5_23_07	1	Duck	N/A	Track	Deposition	33° 36' 2.7"	85° 46' 6.2"				
5 23 07	1	Turtle	N/A	Track	Deposition	33° 36' 2.7"	85° 46' 6.2"				
5_23_07	1	Bird	N/A	Track	Deposition	33° 36' 2.7"	85° 46' 6.2"				
5_23_07	1	Deer	N/A	Track	Deposition	33° 36' 2.7"	85° 46' 6.2"				
5 23 07	1	Raccoon	N/A	Track	Deposition	33° 36' 4.1"	85° 46' 8.5"				
5 23 07	1	Wood Duck	N/A	Track	Deposition	33° 36' 4.1"	85° 46' 8.5"				
5 23 07	1	Raccoon	N/A	Track	Mud Flat	33° 36' 5.1"	85° 47' 0.0"				
5 23 07	1	Wood Duck	N/A	Track	Mud Flat	33° 36' 5.1"	85° 47' 0.0"				
5_23_07	1	Turtle	1	Sight	Mud Flat	33° 36' 5.1"	85° 47' 0.0"				
5_23_07	1	Beaver	N/A	Track	Mud Flat	33° 36' 5.3"	85° 47' 1.4"				
5_23_07	1	Beaver	N/A	Track	Bank	33° 36′ 6.4″	85° 47' 4.3"				
5_23_07	1	Beaver	N/A	Sign	Dam	33° 36' 8.6"	85° 47' 8.4"				
				Ü							
5_24_07	2	Start				33° 30' 3.3"	86° 00' 6.1"				
5_24_07	2	Muskrat	N/A	Sight	Mid-Channel						
5_24_07	2	Turtle	1	Sight	Log						
5_24_07	2	Beaver	N/A	Sign	Bank						
5_24_07	2	Mallard	3	Sight	Mid-Channel						
5_24_07	2	Cottonmouth	1	Sight	Bank						
5_24_07	2	Muskrat or Beaver	1	Sight	Mid-Channel						
5_24_07	2	End		-		33° 29' 6.9"	86° 00' 2.3"				
5_24_07	3	Start				33° 23' 7.9"	86° 04' 6.8"				
5_24_07	3	Green Frog	N/A	Sight	Bank						
5_24_07	3	Muskrat or Beaver	N/A	Sight	Bank						
5_24_07	3	End				33° 23' 6.2"	86° 04' 4.7"				

Notes:

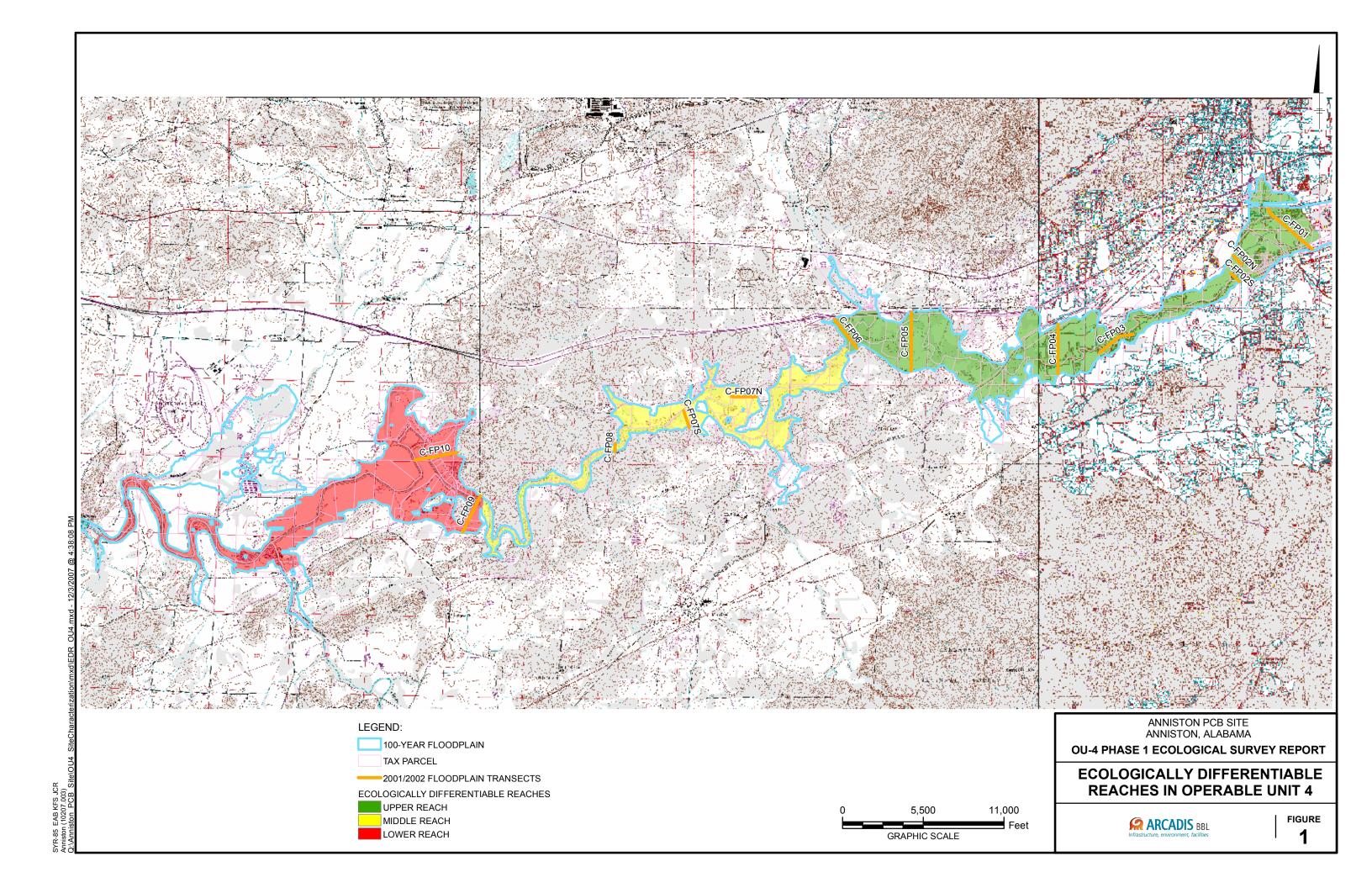
1. Global positioning system coordinates in NAD 83; latitude and longitude in degrees, minutes, seconds.

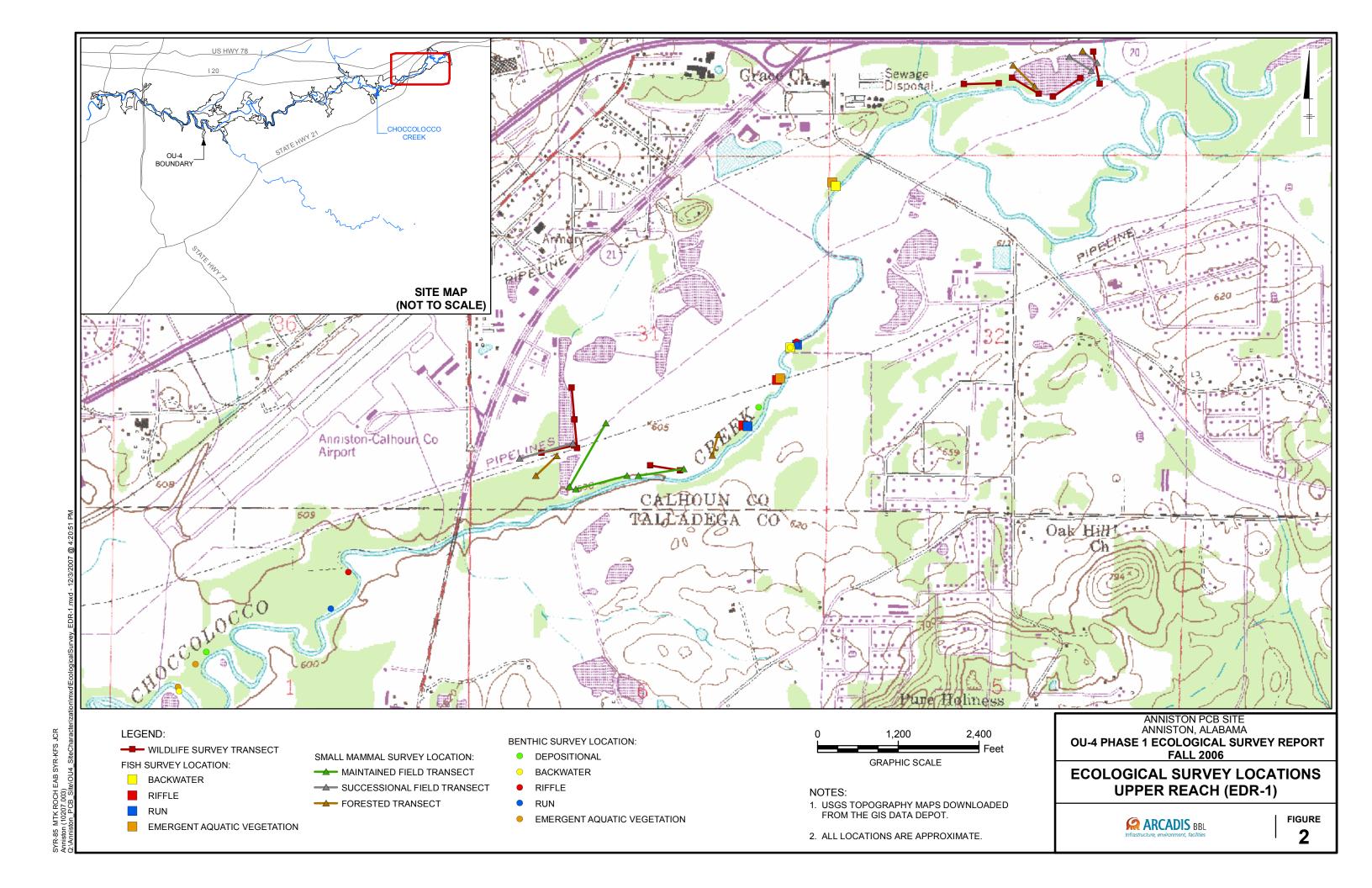
EDR = Ecologically differentiable reach (see Figure 2-1)

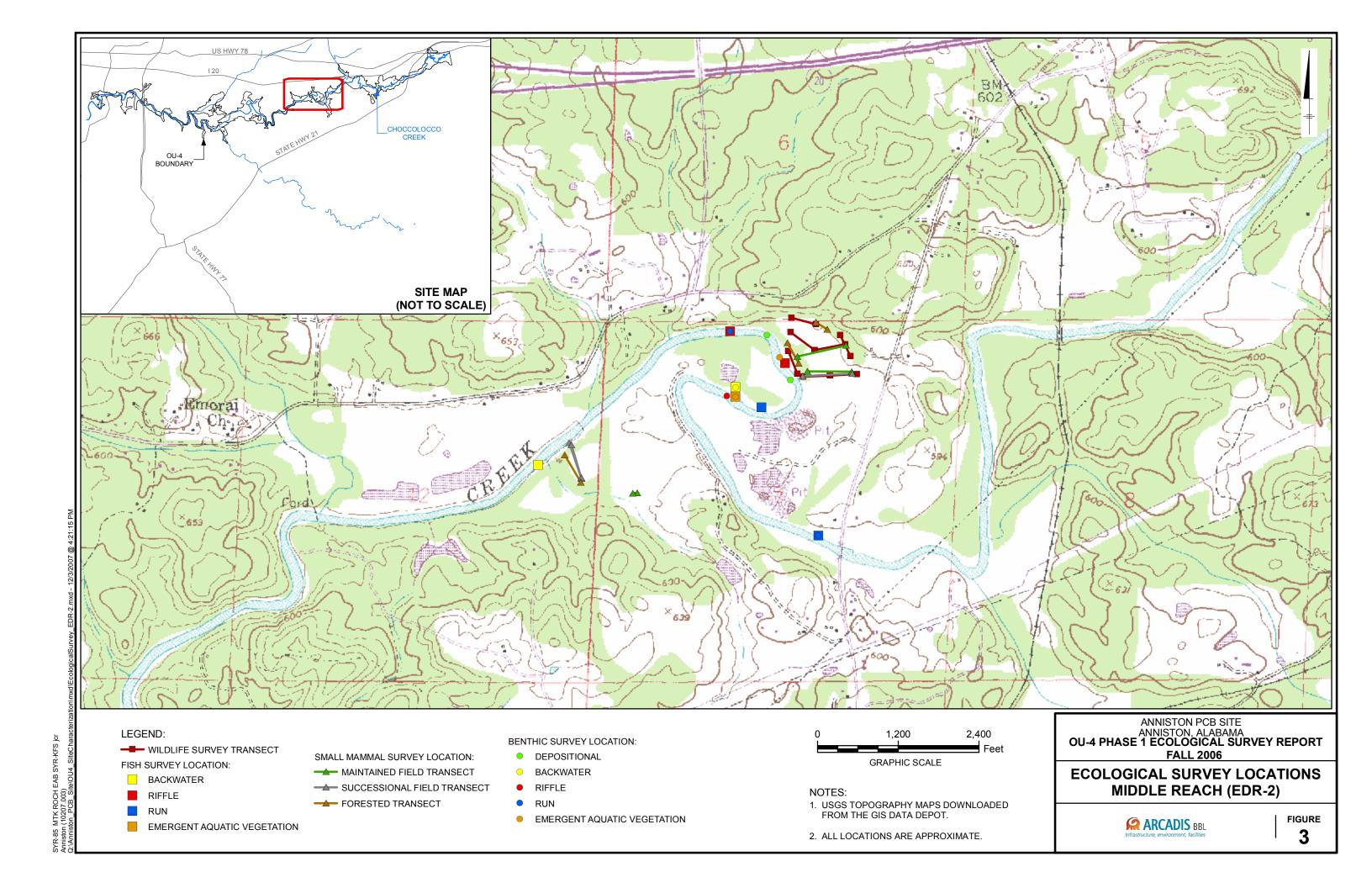
N/A = Not available or not applicable

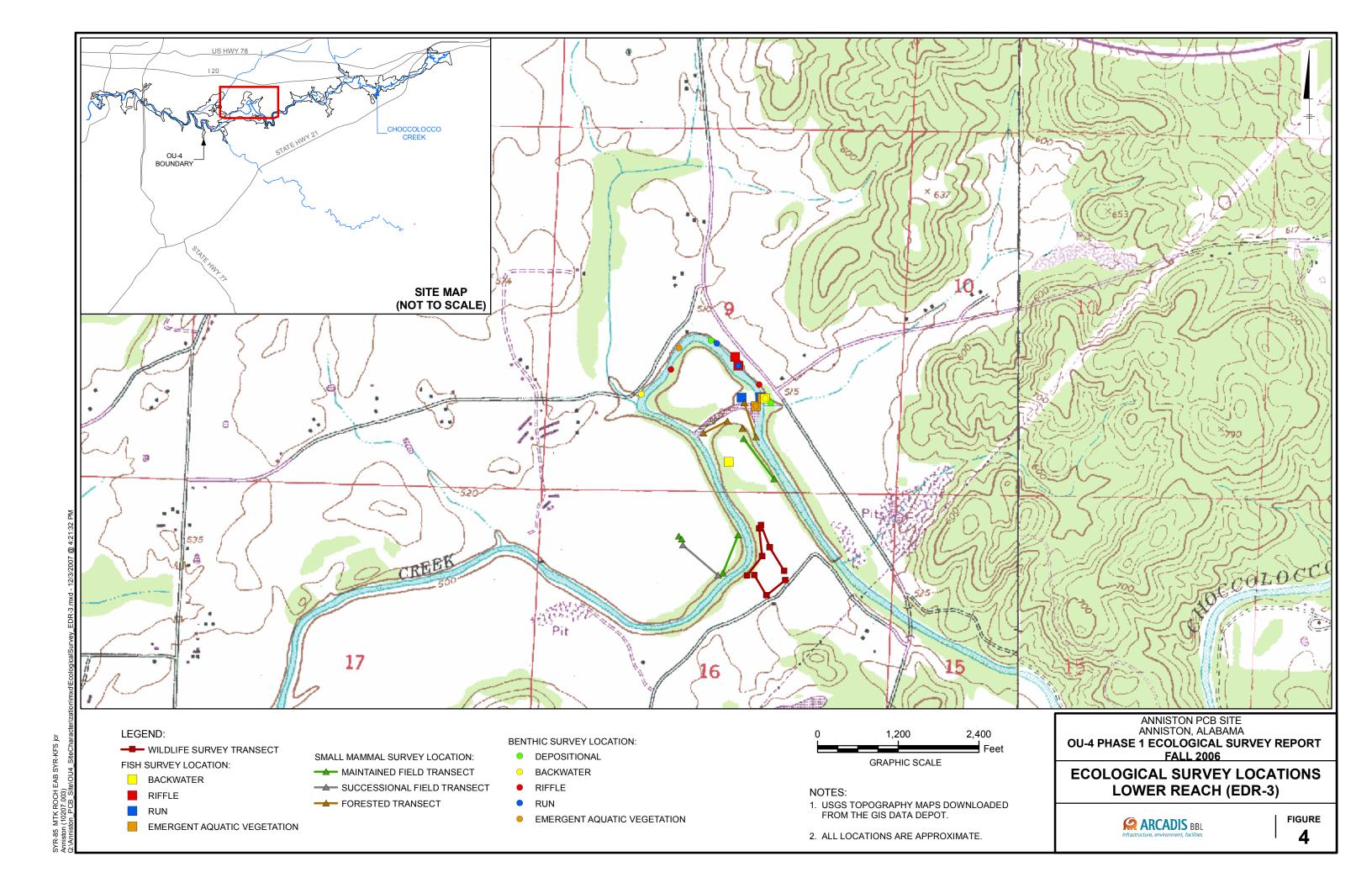


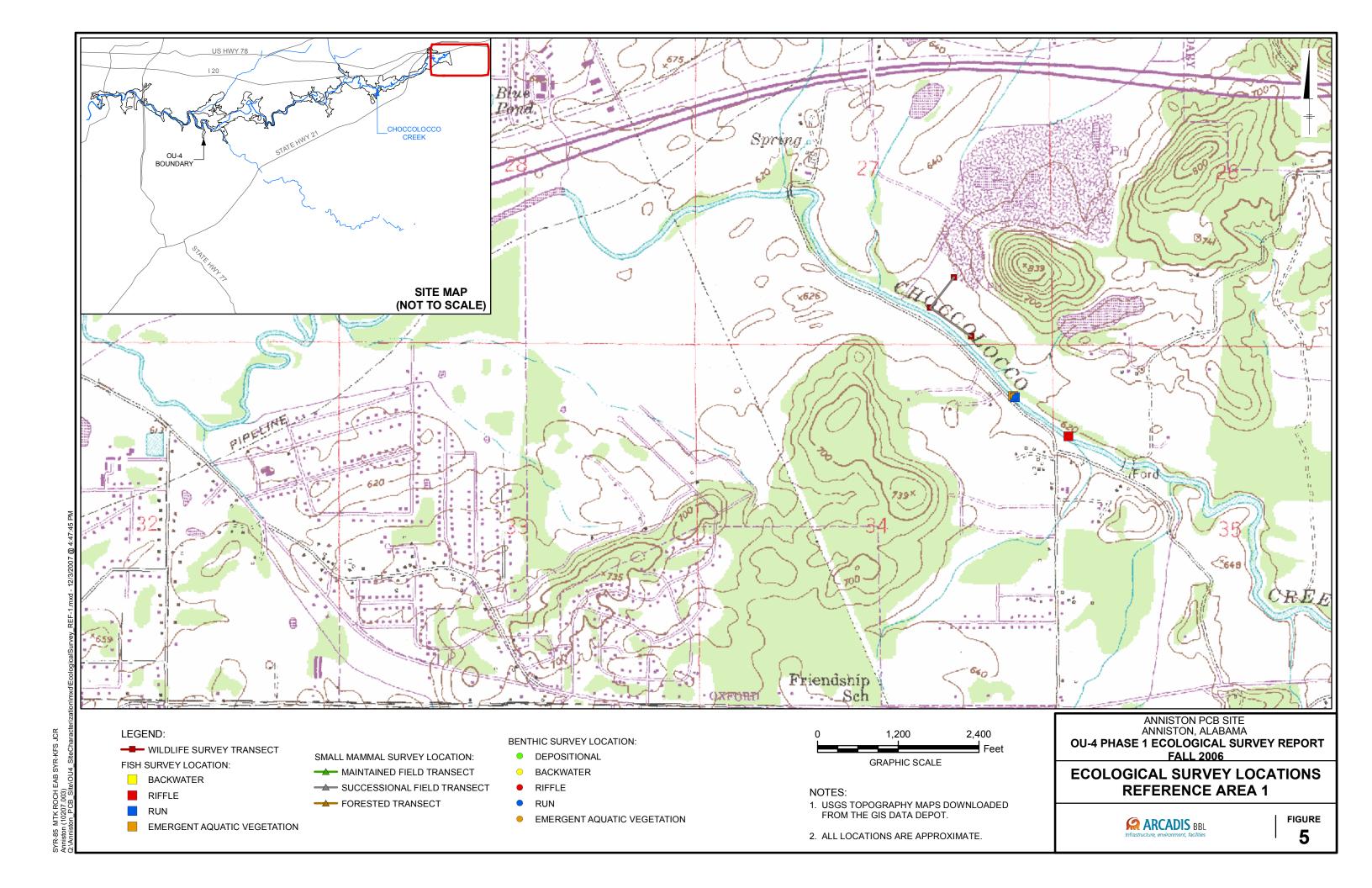
Figures

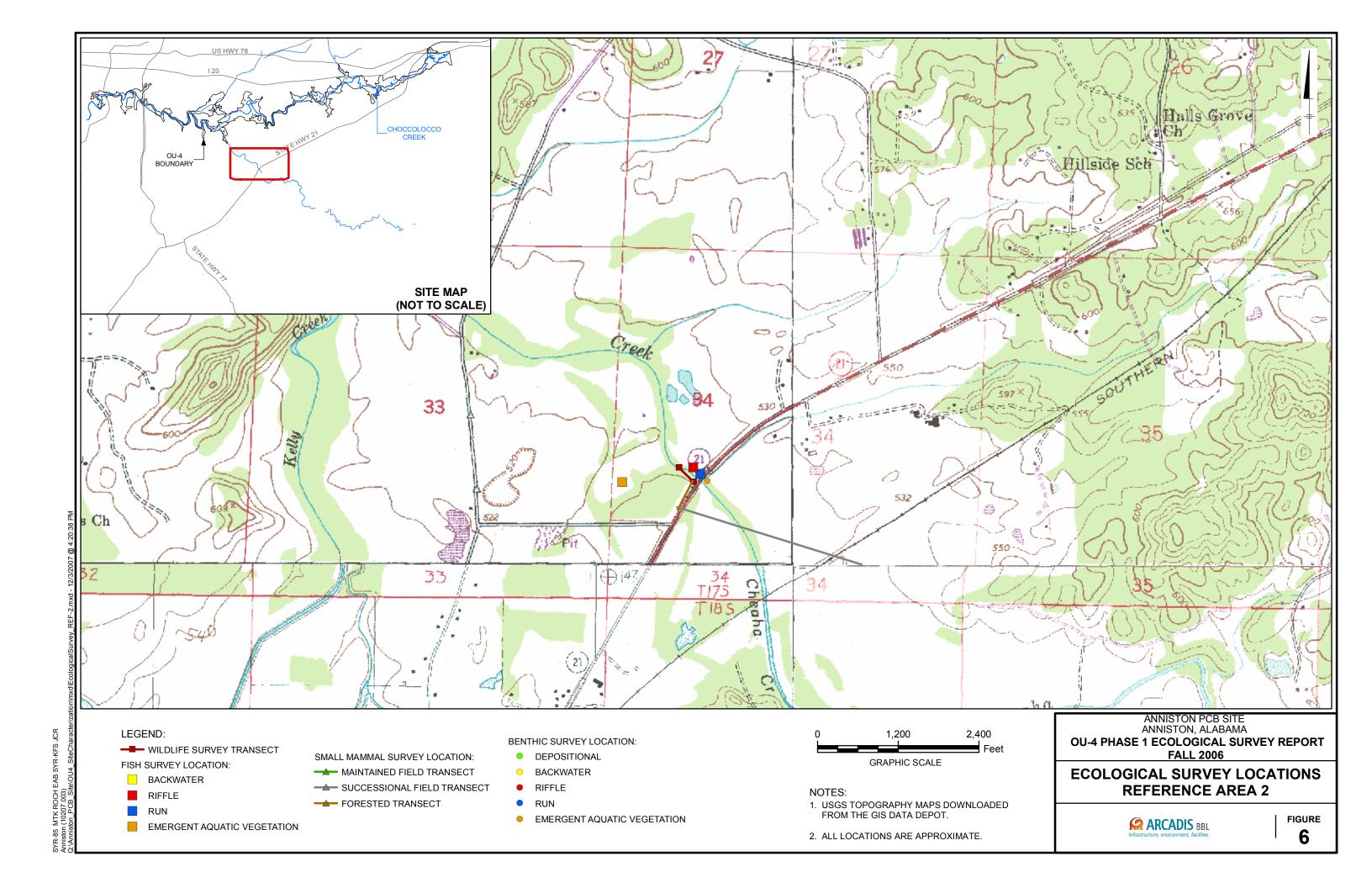


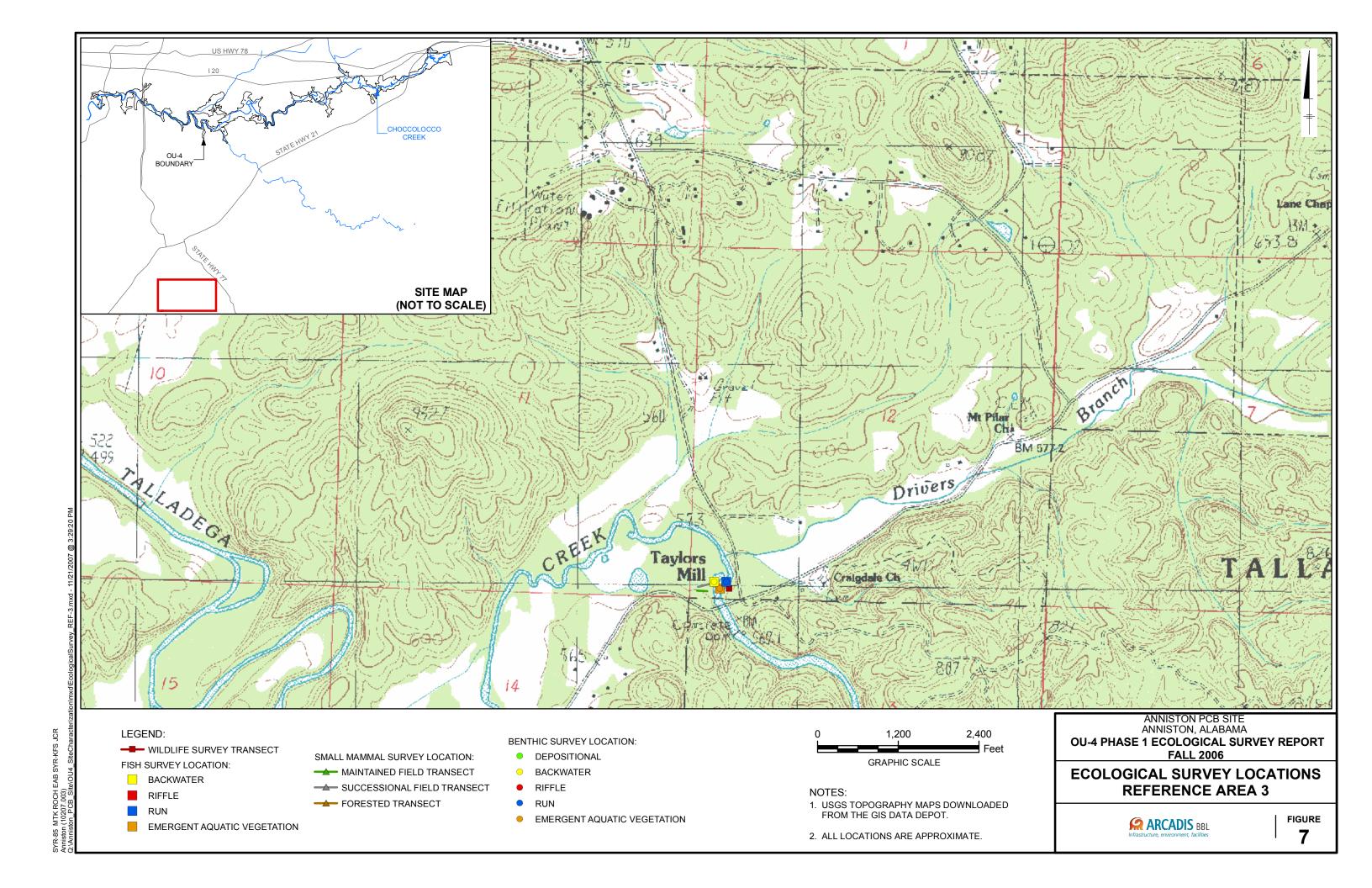


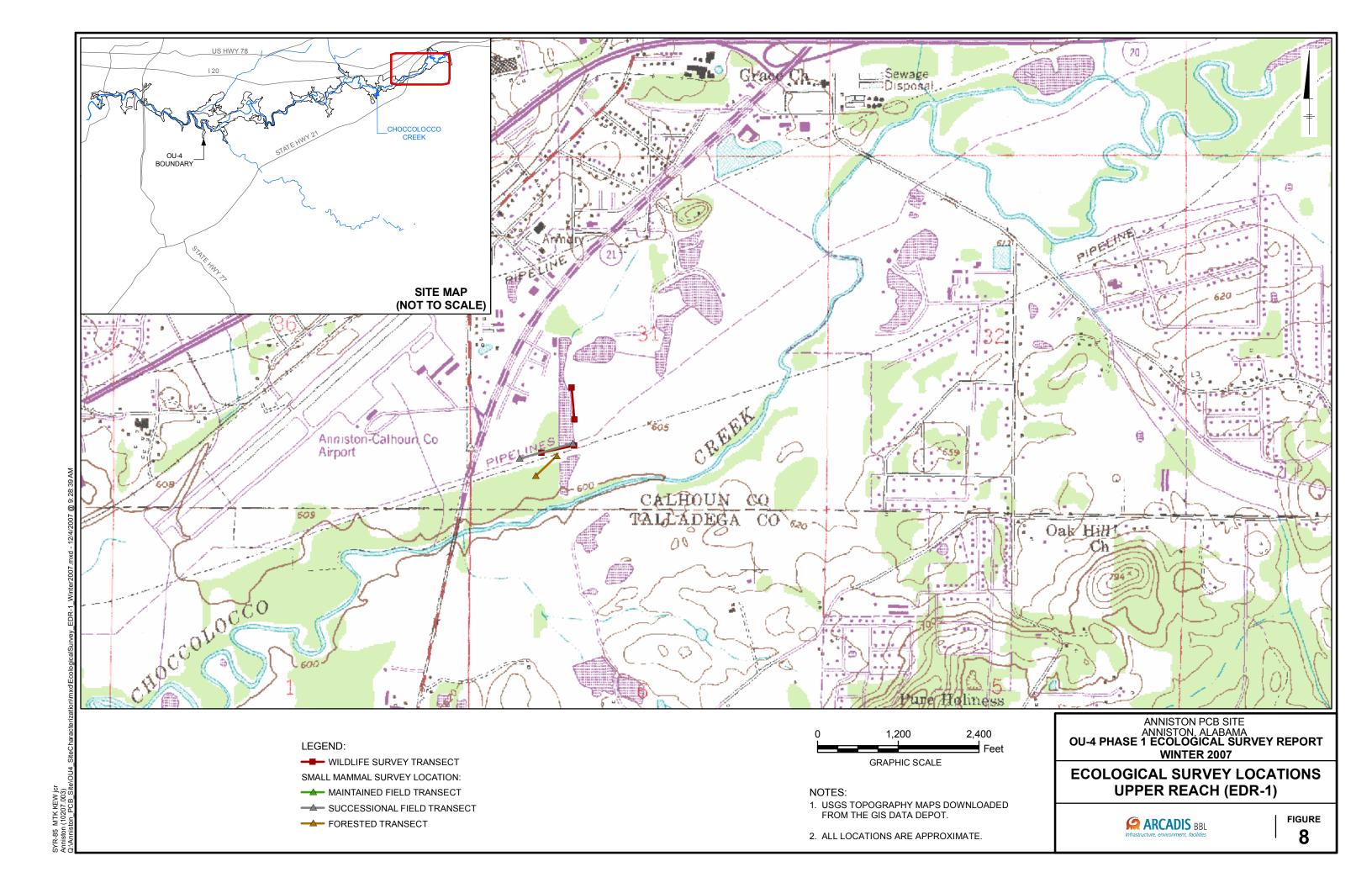


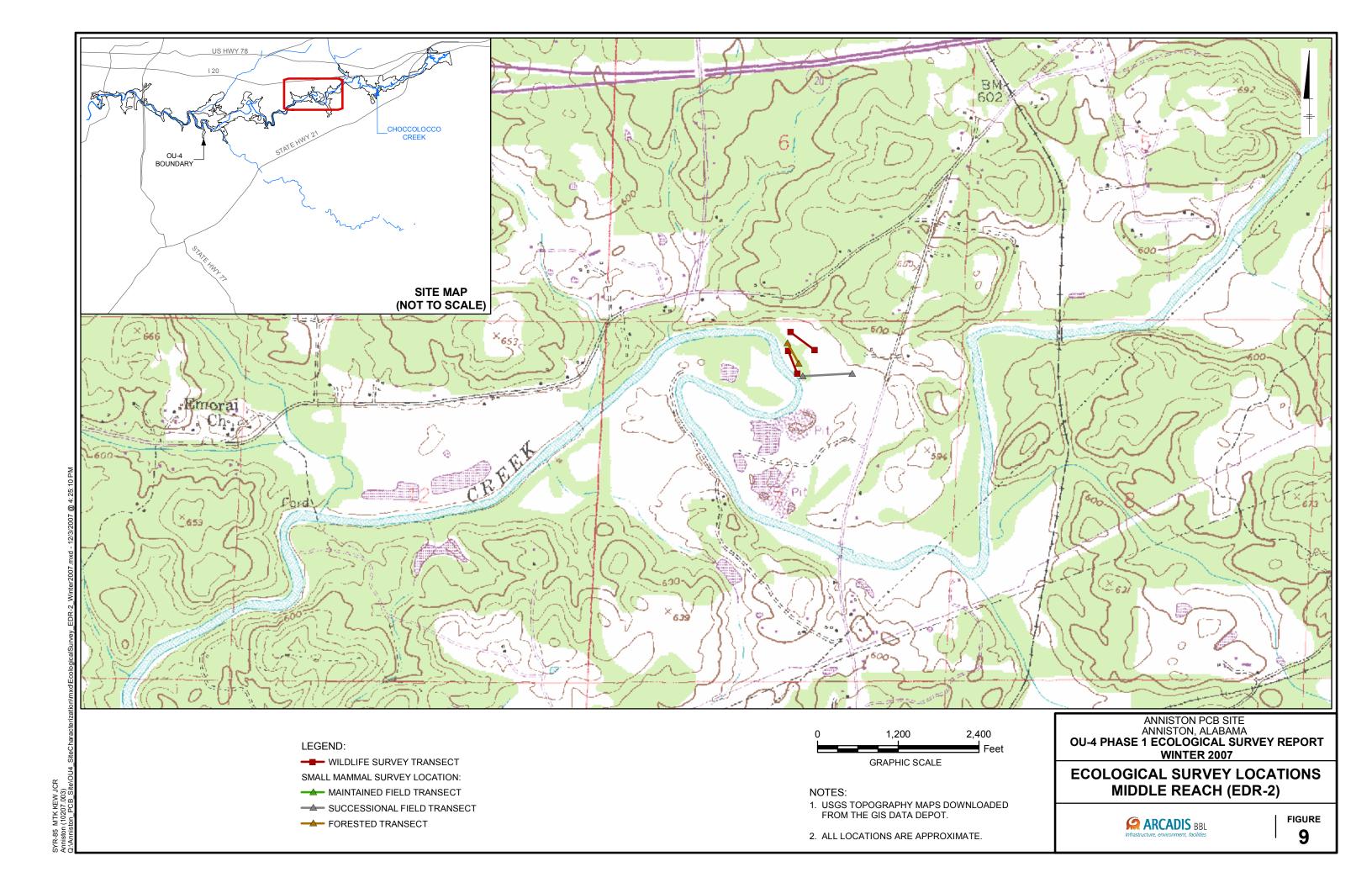


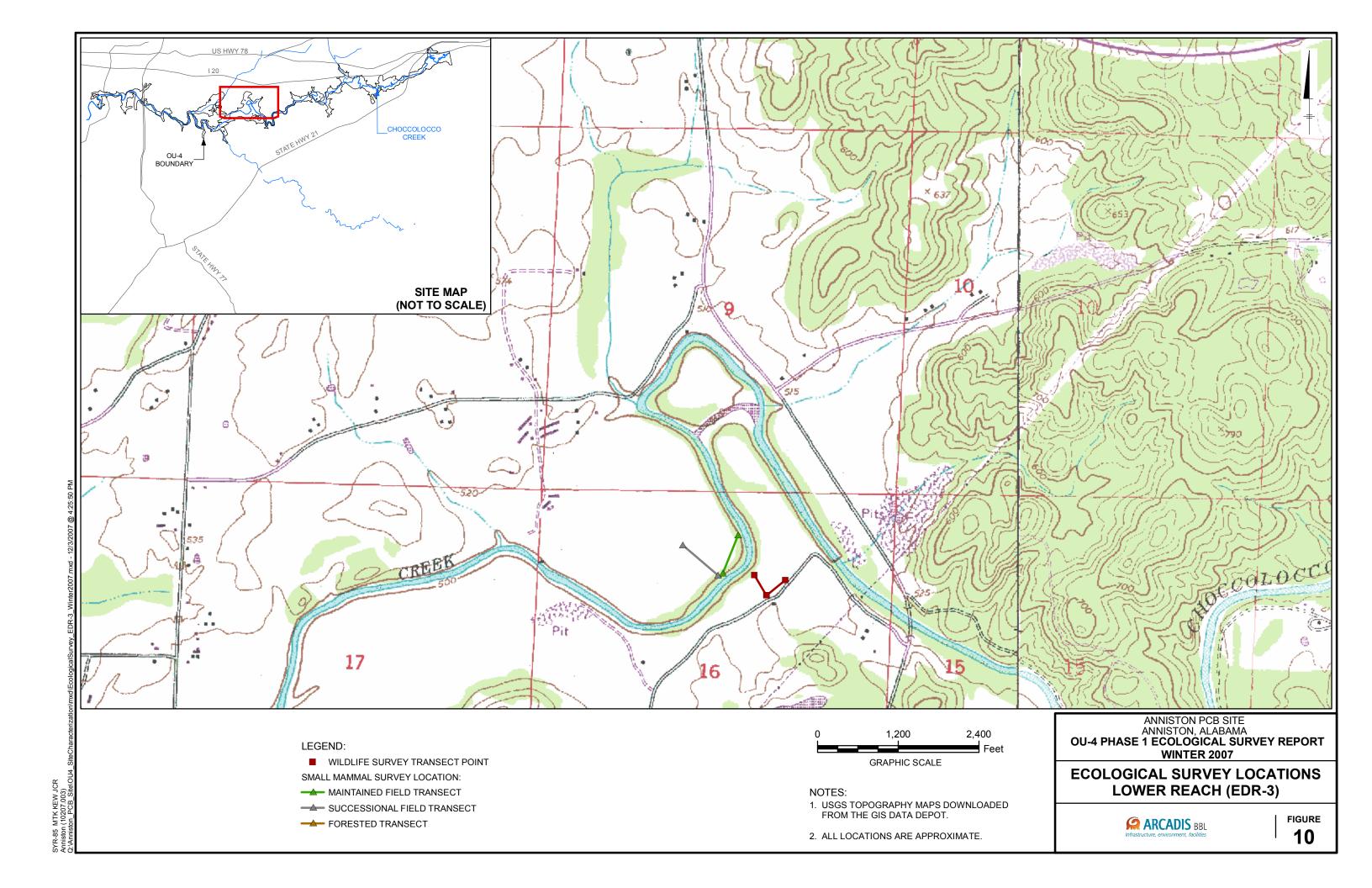


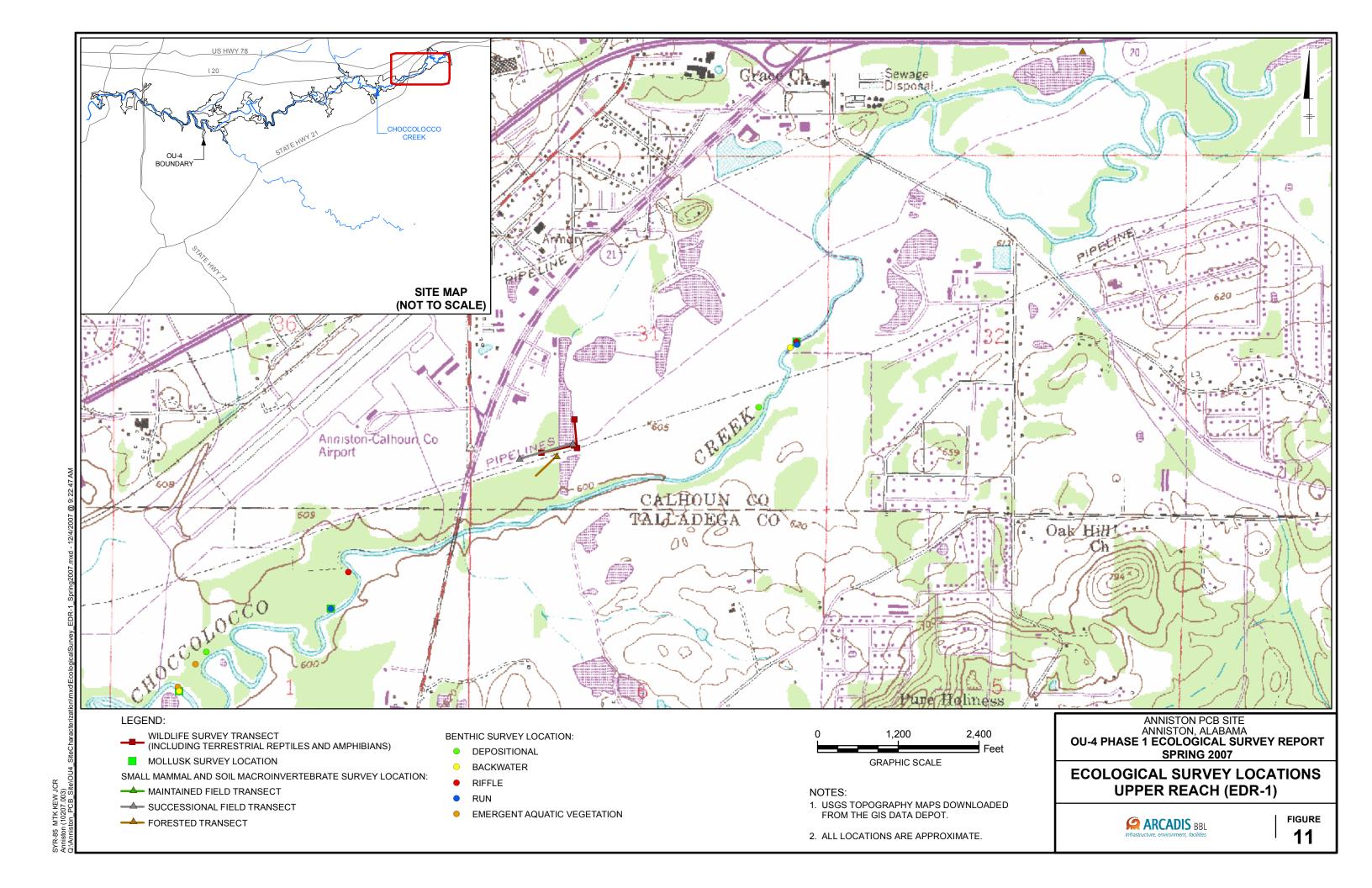


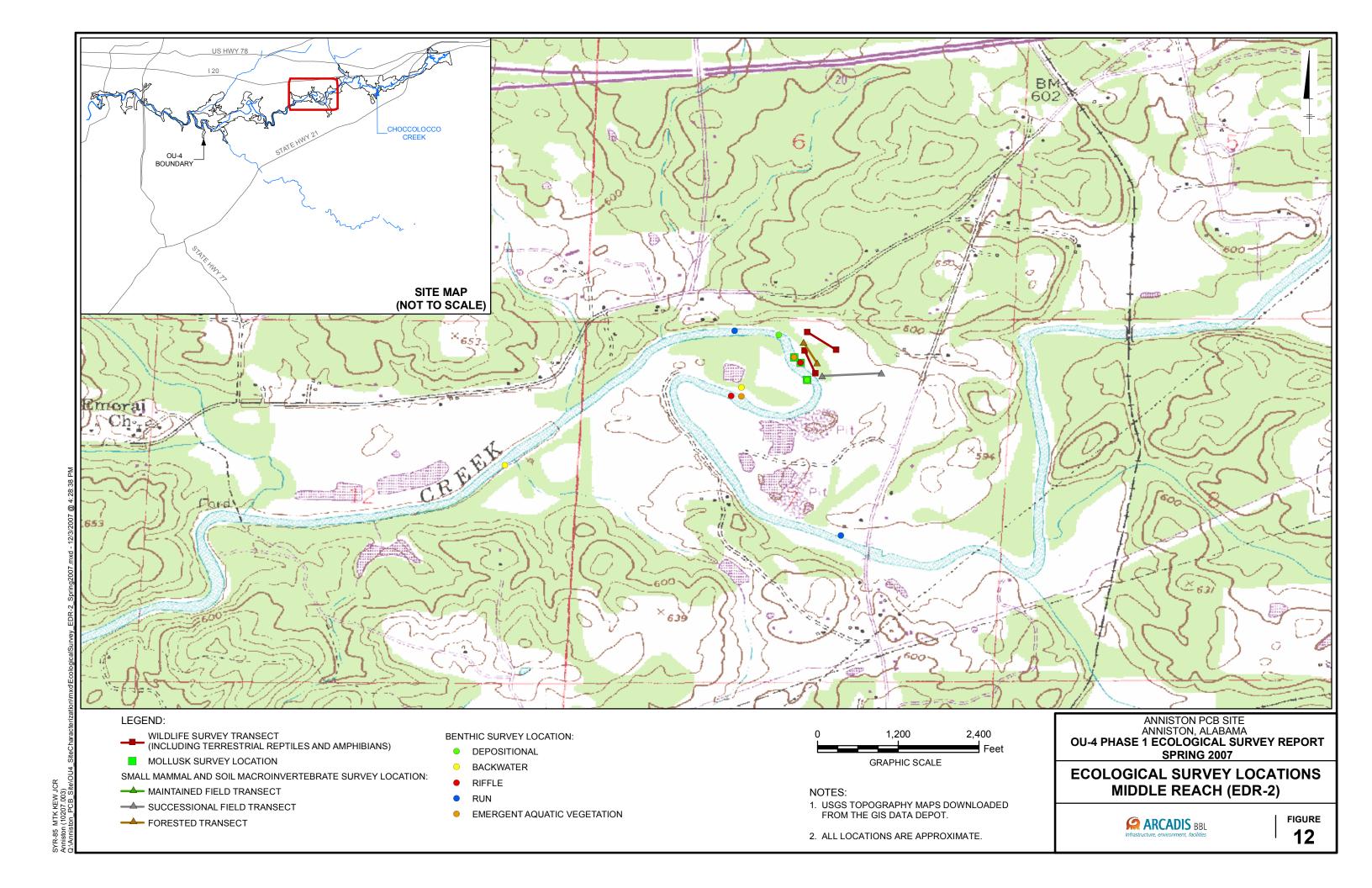


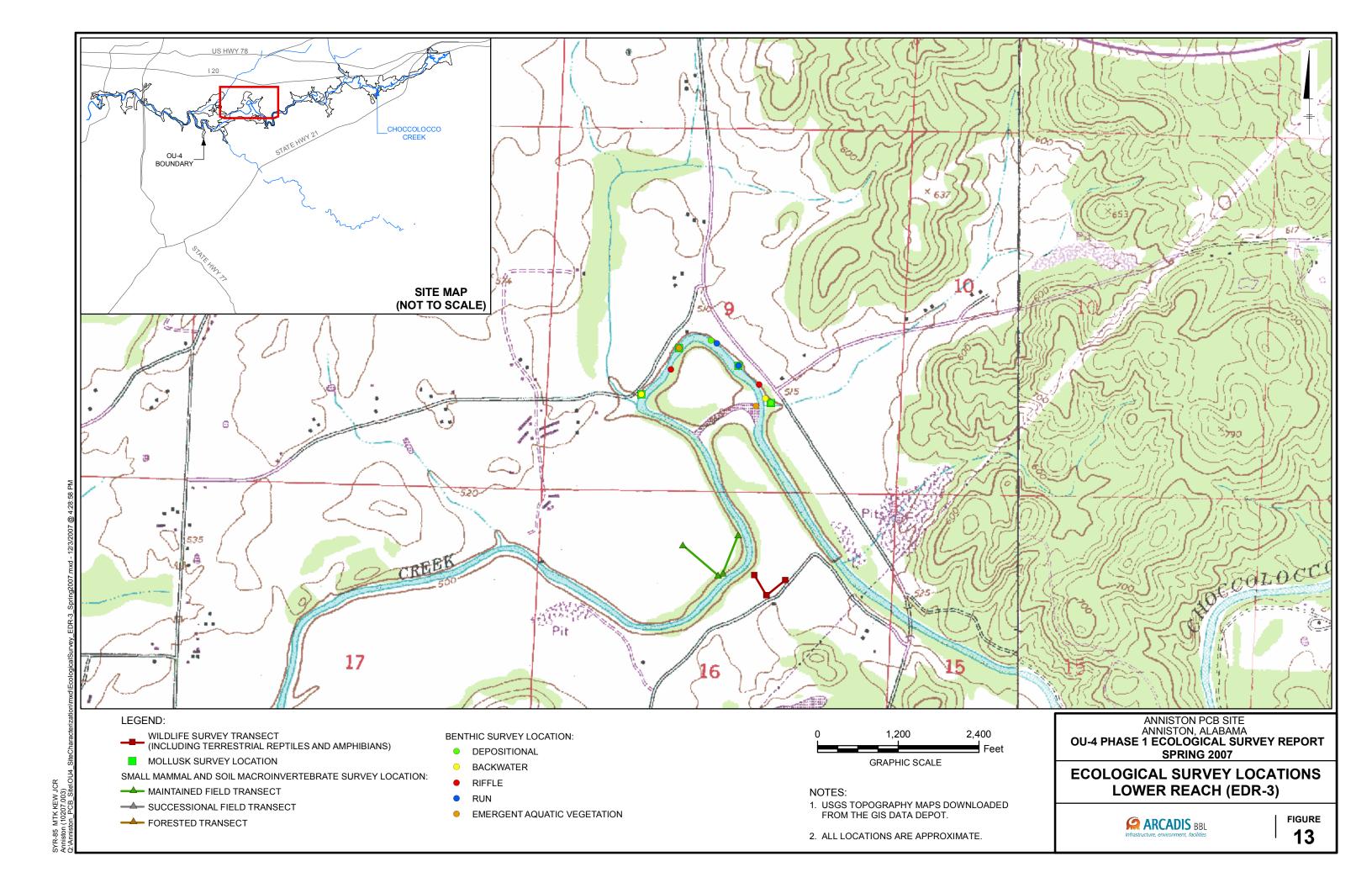


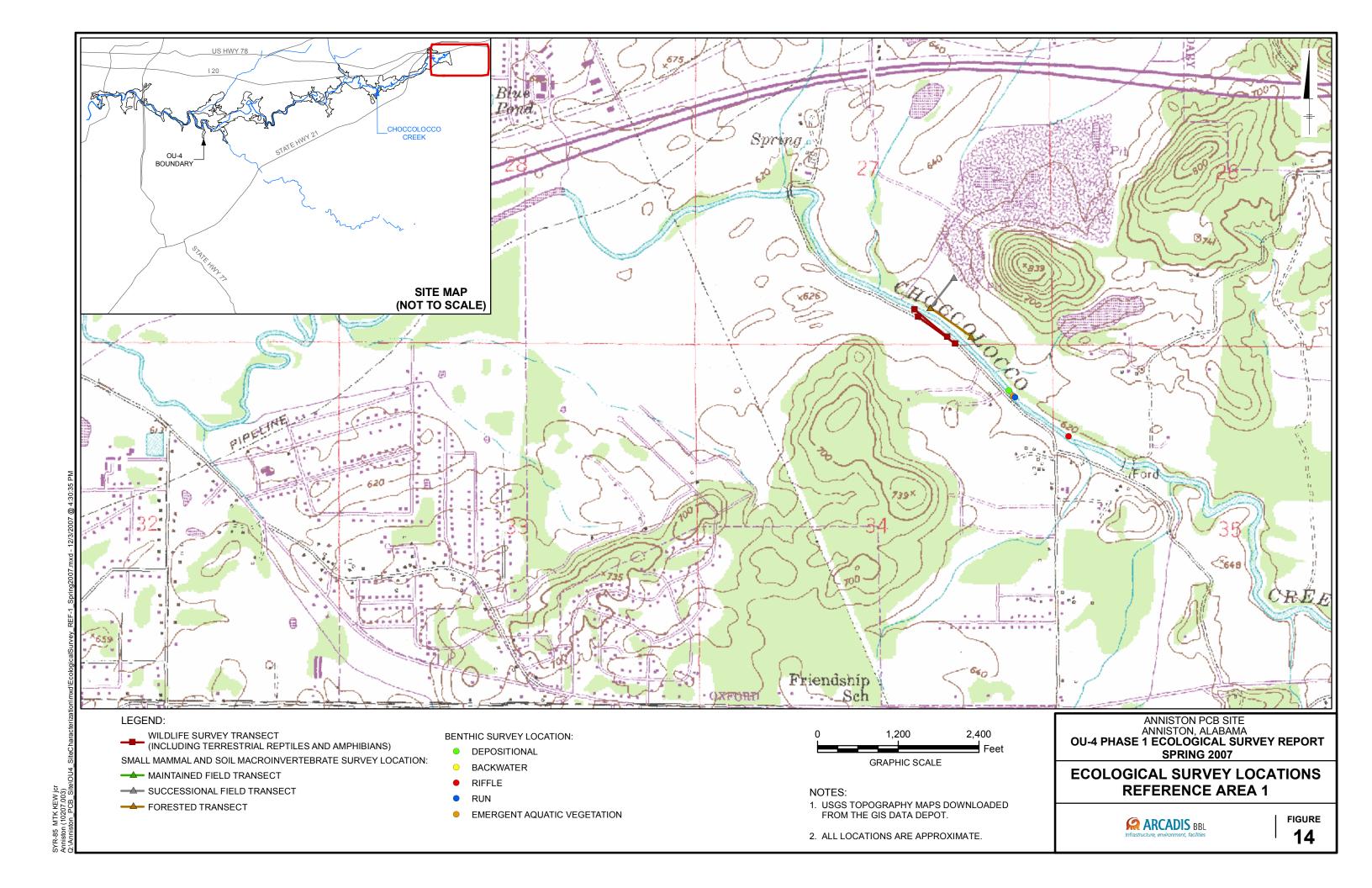


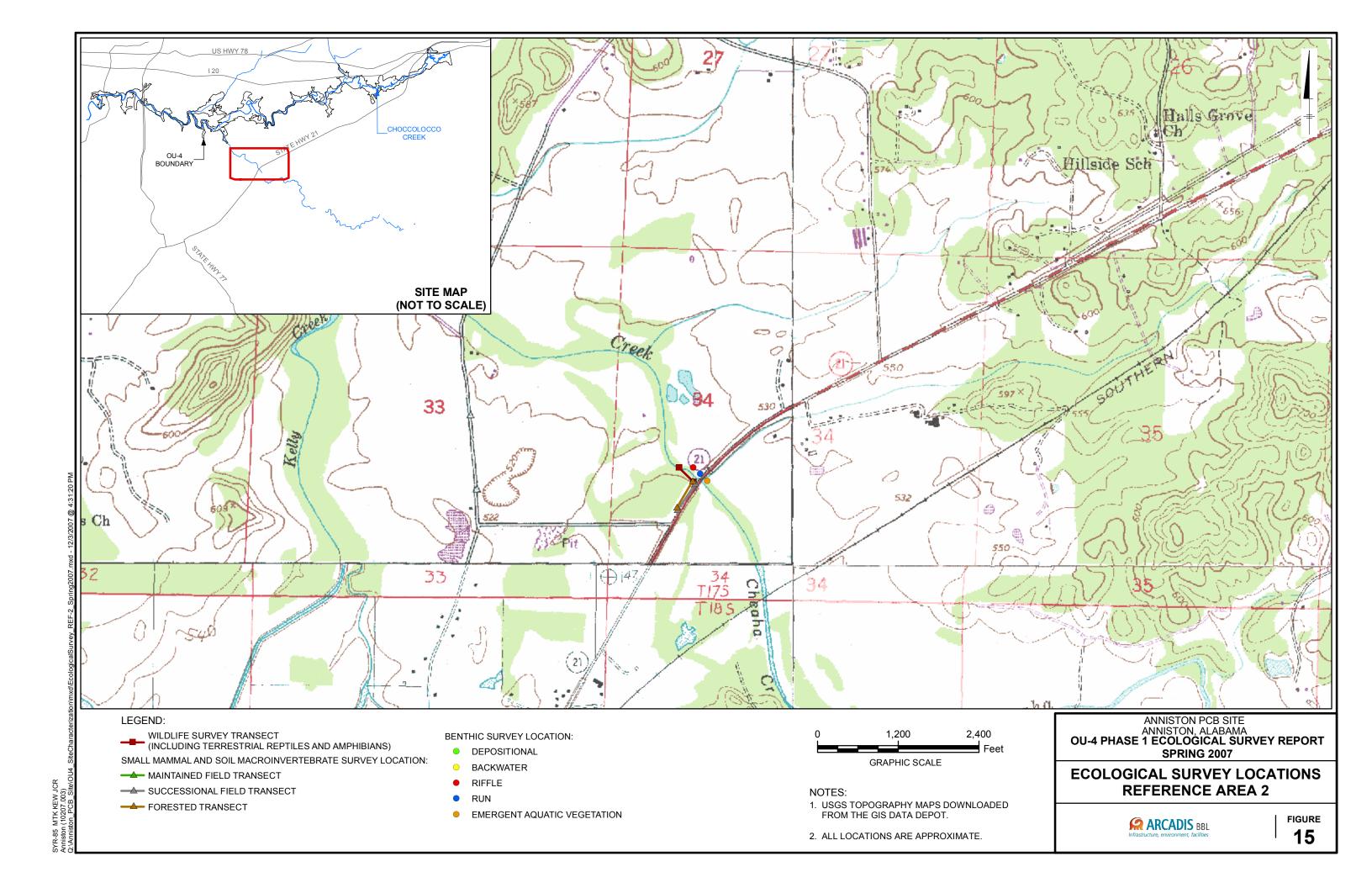


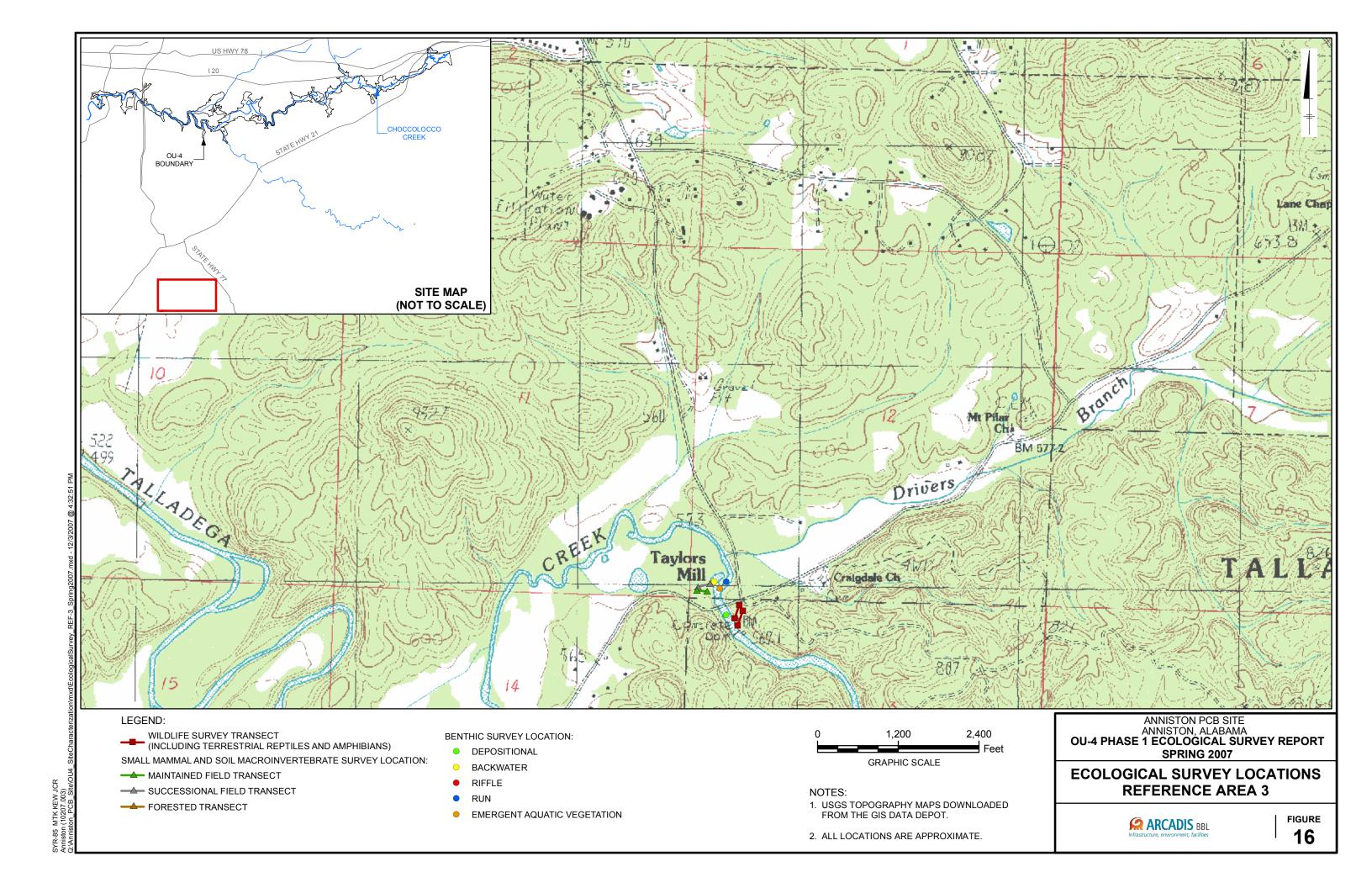


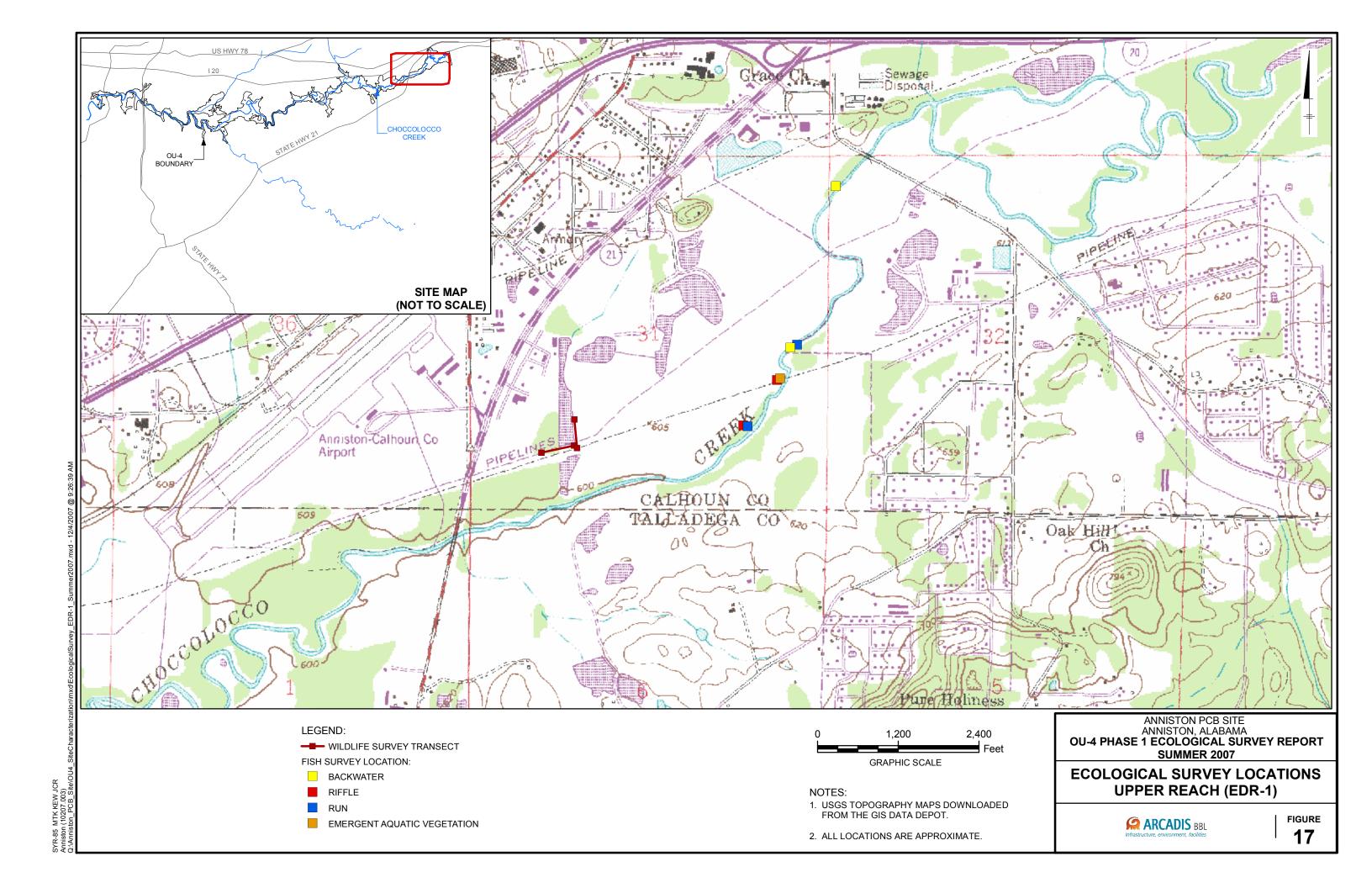


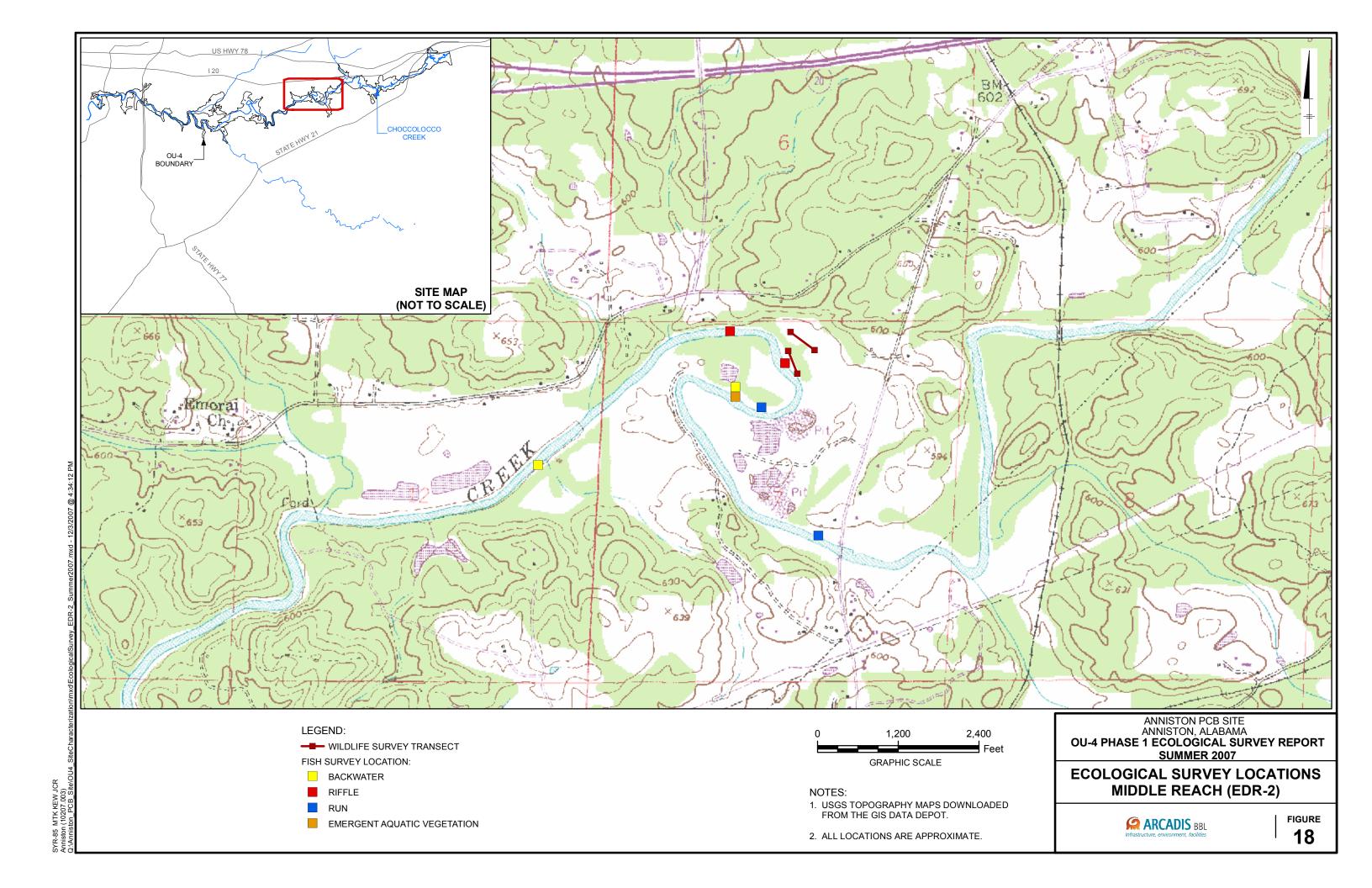


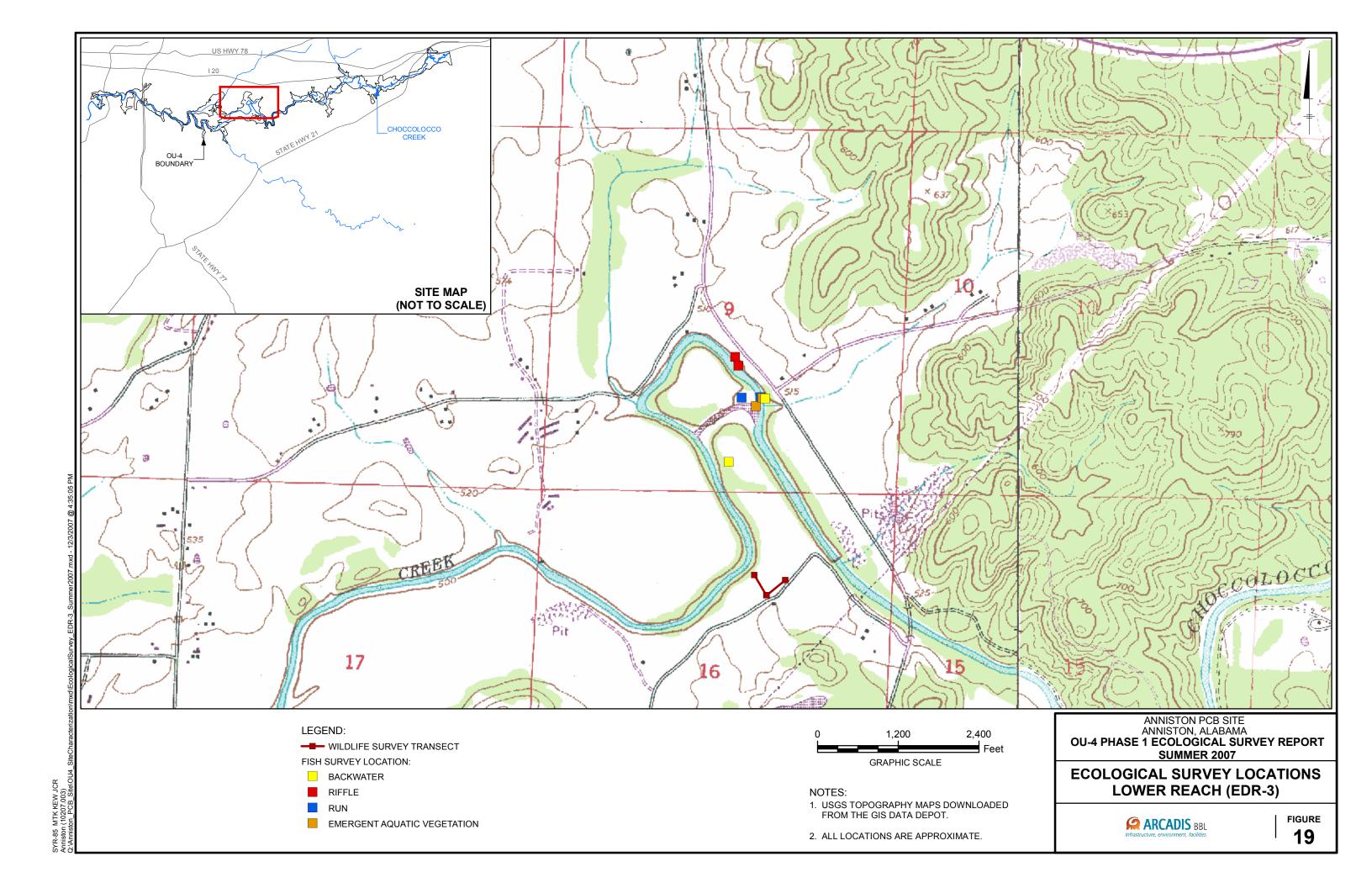


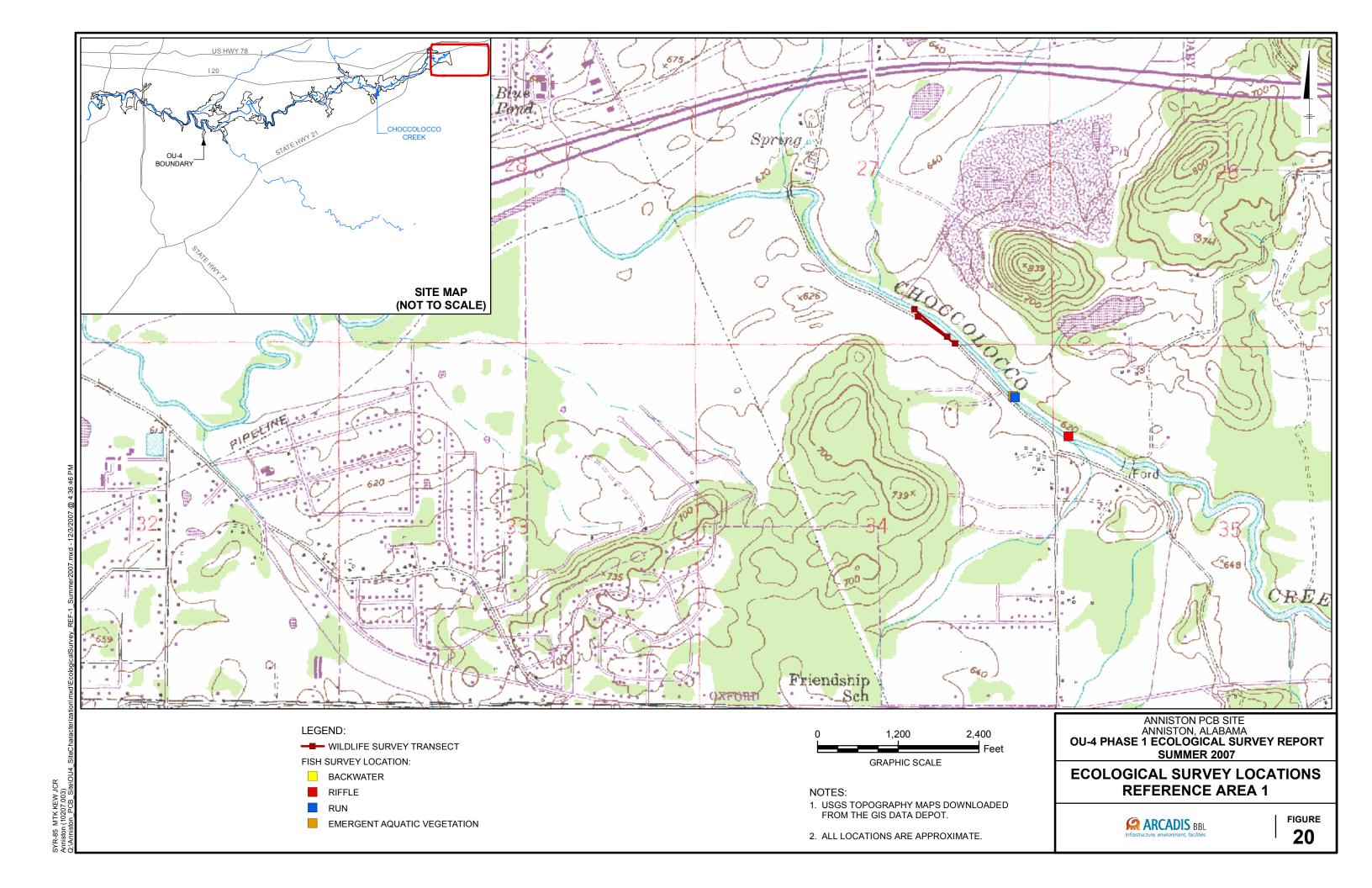


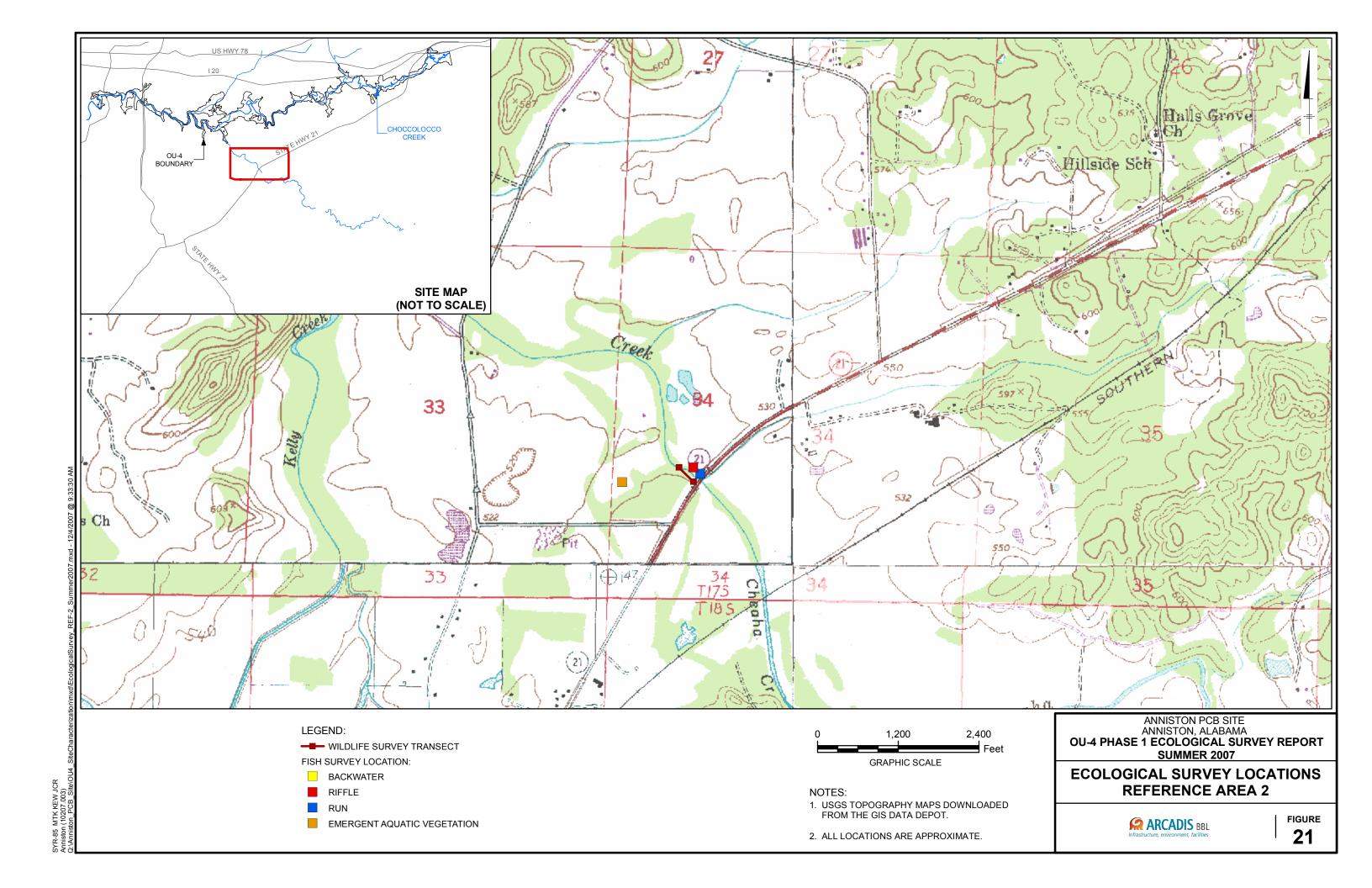


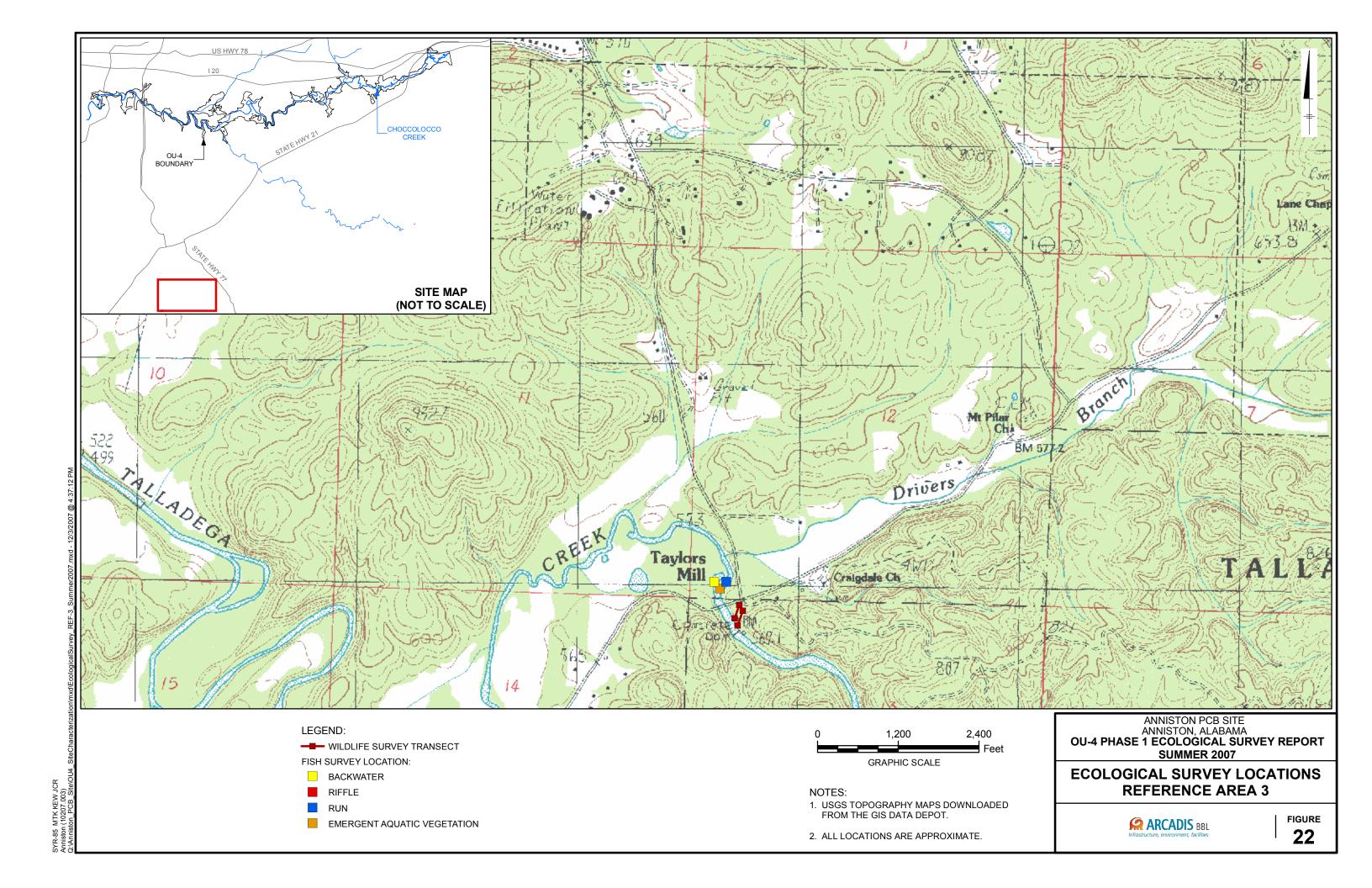












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Appendix A

Photographs of Small Mammal and Soil Macroinvertebrate Community Survey Locations



REF1 - Forested Transect 1



REF1 - Maintained Field Transect 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





REF2 - Forested Transect 1



REF2 - Successional Field Transect 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





REF3 - Maintained Field Transect



REF3 - Successional Field Transect 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Forested Transect 1



EDR1 - Forested Transect 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT







EDR1 - Forested Transect 3



EDR1 - Maintained Field Transect 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Maintained Field Transect 2



EDR1 - Maintained Field Transect 3

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Successional Field Transect 1



EDR1 - Successional Field Transect 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Successional Field Transect 3



EDR2 - Forested Transect 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Forested Transect 2



EDR2 - Forested Transect 3

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Maintained Field Transect 1



EDR2 - Maintained Field Transect 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Maintained Field Transect 3



EDR2 - Successional Field Transect 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Successional Field Transect 2



EDR2 - Successional Field Transect 3

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Forested Transect 1



EDR3 - Forested Transect 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Forested Transect 3



EDR3 - Maintained Field Transect 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Maintained Field Transect 2



EDR3 - Maintained Field Transect 3

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Successional Field Transect 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT

PHOTOGRAPHS OF SMALL MAMMAL COMMUNITY SURVEY LOCATIONS



FIGURE A-16

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Appendix B

Photographs of Benthic Macroinvertebrate and Mollusk Community Survey Locations



REF1 - Riffle 1



REF1 - Run 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





REF1 - Emergent Aquatic Vegetation 1



REF1 - Deposition 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





REF2 - Riffle 1



REF2 - Run 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





REF2 - Emergent Aquatic Vegetation 1



REF3 - Run 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





REF3 - Emergent Aquatic Vegetation 1



REF3 - Backwater 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





REF3 - Deposition 1



REF3 - Riffle 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Riffle 2



EDR1 - Run 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Run 2



EDR1 - Emergent Aquatic Vegetation 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Emergent Aquatic Vegetation 2



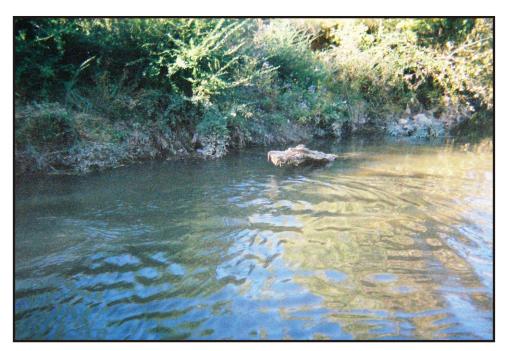
EDR1 - Backwater 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Backwater 2



EDR1 - Deposition 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Deposition 2



EDR2 - Riffle 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Riffle 2



EDR2 - Run 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT

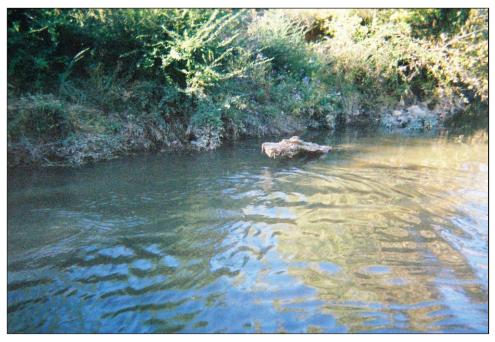




EDR2 - Run 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Emergent Aquatic Vegetation 1



EDR2 - Emergent Aquatic Vegetation 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Backwater 1



EDR2 - Backwater 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Deposition 1



EDR2 - Deposition 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Riffle 1



EDR3 - Riffle 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Run 1



EDR3 - Run 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Emergent Aquatic Vegetation 1



EDR3 - Emergent Aquatic Vegetation 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Backwater 1



EDR3 - Backwater 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Deposition 1



EDR3 - Depostion 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT



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Appendix C

Photographs of Fish Community Survey Locations



REF1 - Riffle 1



REF1 - Run 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





REF1 - Emergent Aquatic Vegetation 1



REF2 - Riffle 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





REF2 - Run 1



REF3 - Run 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





REF3 - Emergent Aquatic Vegetation 1



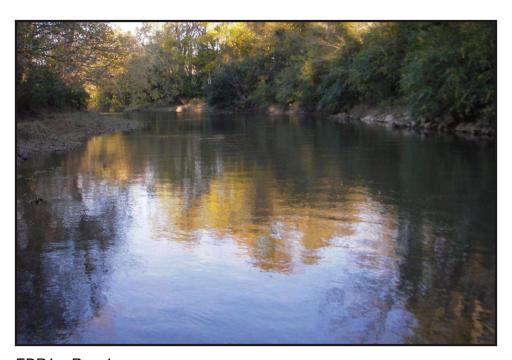
REF3 - Backwater 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Riffle 1



EDR1 - Run 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR1 - Run 2



EDR1 - Backwater 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Riffle 1



EDR2 - Riffle 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Run 2



EDR2 - Emergent Aquatic Vegetation 1 and 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR2 - Backwater 1



EDR2 - Backwater 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Riffle 1



EDR3 - Riffle 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Run 1



EDR3 - Emergent Aquatic Vegetation 1

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT





EDR3 - Backwater 1



EDR3 - Backwater 2

OU-4 PHASE 1 ECOLOGICAL SURVEY REPORT



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Appendix D

Physical Characteristics/Water Quality Field Data Sheets

Fall 2006 and Spring 2007

ARCADIS BBL

Appendix D

Physical Characteristics/Water Quality Field Data Sheets

Fall 2006

STREAM NAME Choice.	Creek LOC	ATION REF1 R	I-1 (Photo # 22, Benthic # 3)
	5.77653 RI-1R NOT	Vostream	on sharp bend of road
INVESTIGATORS BBL			
FORM COMPLETED BY	U DAT TIMI		REASON FOR SURVEY Bentl Comm-
WEATHER CONDITIONS	storm (heavy rain (steady showers (interr %) %cloud co	rain) nittent) ver	INSTREAM FEATURES Water Depth
VEGETATION	ate the dominant type oted emergent ating Algae	and record the domina Rooted submergent Attached Algae	ant species present ☐ Rooted floating ☐ Free floating
(within 1 m of substrate) Speci	rerature 14.0 °C fic Conductance 0.1 fived Oxygen 9.26	0 > /	Water Odors Normal/None
pH_	5.7 idity 48		Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other
T - 11	nstrument Used	1-22	Turbidity (if not measured) Clear A'Slightly turbid Opaque O Stained Turbid Other
Oils	rmal Gewage emical Ganaerobic	☐ Petroleum ☐ None	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other

INC	INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		.0	Detritus	sticks, wood, coarse plant		
Boulder	> 256 mm (10")	10		materials (CPOM)	2	
Cobble	64-256 mm (2.5"-10")	10	Muck-Mud	black, very fine organic	٠	
Gravel	2-64 mm (0.1"-2.5")	60		(FPOM)	5	
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	0			trace	
Clay	< 0.004 mm (slick)	0				

STREAM NAME CL	occ. Creek	LOCATION	REF1	RU-1	(Photo # 23	. Bonthic #3
LAT 33.5980.5 L	ONG 85.77914	Rus			off road	
SAMPLE# REF1	eu-1 RU-1R	NOTES	- 1100	12		1
INVESTIGATORS	BBL					
FORM COMPLETED BY	JCV	DATE 11/9/06 TIME 4:00	AM PM	REASON FO Ben	DR SURVEY	
* 5 sweep	5	•				
WEATHER CONDITIONS	Now storm rain (: showers %	(heavy rain) steady rain) (intermittent) oud cover ar/sunny			h <u>3, 1</u> (ft) or sity <u>0,55</u> (ft/sec	_
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	□ Rooted sub	mergent	t species prese	ent ed floating	ee floating
WATER QUALITY (within 1 m of substrate)	Temperature 14.2 Specific Conductance Dissolved Oxygen	0.107	2	Vater Odors Normal/None Petroleum Fishy		
	pH 6.7 Turbidity 40		C	Vater Surface I Slick □ Sh YNone □ O	Oils teen O Globs O	Flecks
	WQ Instrument Used	<u> </u>		urbidity (if ne i Clear ✓2 SI i Opaque □ St	ightly turbid . 🛚	Turbid Other
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana	vage 📮 Petrol aerobic 🗀 None	eum C	eposits I Sludge O Sa TRelict shells	wdust 🗆 Pape	r fiber Æ Sand
	Oils Absent Slight	☐ Moderate ☐ I	Profuse	71000		

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus sticks, wood, coarse materials (CPOM)	sticks, wood, coarse plant	
Boulder	> 256 mm (10")	10		materials (CPOM)	leaves 10
Cobble	64-256 mm (2.5"-10")	< 5	Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")	f 20		(FPOM)	10
Sand	0.06-2mm (gritty)	65	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	45			25
Clay	< 0.004 mm (slick)	_]		

STREAM NAME Ch.	u Creek	LOCATION	REF .	1 EAV-1	(photo#24	#3)
LAT 33, 59811 L	ONG 85.77923	Sme	II GAV	batch ne	lar	
SAMPLE# REF1 EA	V-1 : EAV-1R	NOTES la	unch a	real		
INVESTIGATORS	381		<u> </u>			
FORM COMPLETED BY	JW	DATE 11/6/00 TIME 2 20	AM FM	REASON FOR S	URVEY Comm	
	· · · · · · · · · · · · · · · · · · ·	•	.:			
WEATHER CONDITIONS	Now	4		INSTREAM FEATURES		-
	rain ((heavy rain) steady rain) (intermittent)		Water Depth	, 4 (ft) or m	
	<u>∠0</u> %⊠ %cl	oud cover ar/sunny		Water Velocity _ (within 1 m of su	0. Z (ft/sec) or bstrate)	m/sec
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and record to Rooted subj	mergent	t species present Rooted flo	ating 🔾 Free floa	iting
WATER QUALITY (within 1 m of substrate)	Temperature 12 . 4 Specific Conductance Dissolved Oxygen	6.113		Vater Odors Normal/None Petroleum Fishy	Sewage Chemical Other	
	pH 6.7 Turbidity 16	····	Ü	Vater Surface Oils I Slick	☐ Globs ☐ Fleck	cs
	WQ Instrument Used	<u>V-ZZ</u>		urbidity (if not mo Clear D'Slightl Opaque D Stained	v turbid . 🔲 Turb	
SEDIMENT/ SUBSTRATE	Odors Normal Sev Chemical Ana	vage Petrole aerobic None	eum 📮	eposits I Sludge 🗖 Sawdu I Relict shells	st Paper fiber	r 🖸 Sand
	Oils	D.Modomto □ D.F				•

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		.0	Detritus	Detritus sticks, wood, coarse plant materials (CPOM)	40
Boulder	> 256 mm (10")	. 0	1		
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")	15		(FPOM)	30
Sand	0.06-2mm (gritty)	40	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	40	1		
Clay	< 0.004 mm (slick)	< 5]		

STREAM NAME CL	eaha Creek LOCATION	REF-2 (RI-1) (photo#20, benthic#2)
LAT 33 . 50404 L		
SAMPLE# REF-2 RI	-1,-1R NOTES	Approximately 60 yds downstream of Rte. 21 Bridge
INVESTIGATORS	BBL	or diage
FORM COMPLETED BY	JCV TIME UIT	AM PM Bentling
5 sweep passes	per sample: replicate	collected approx. 10 yds downstream in rif
WEATHER CONDITIONS	Now storm (heavy rain)	INSTREAM FEATURES
	rain (steady rain) showers (intermittent) Scloud cover clear/sunny	Water Depth 0.9 ft or m Water Velocity 1.7 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type and record Rooted emergent Rooted su Floating Algae Attached	bmergent Rooted floating D From floating
WATER QUALITY (within 1 m of substrate)	Temperature 14.8 °C Specific Conductance 0.076 Dissolved Oxygen 10.03	Water Odors O Normal/None C Sewage Petroleum C Chemical Fishy Other
	pH <u>6.76</u> Turbidity <u>< 1</u>	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	WQ Instrument Used U-2Z	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Petro Chemical Anaerobic None Other	
	Oils ☑ Absent ☐ Slight ☐ Moderate ☐	Profuse

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		10	Detritus sticks, wood, coarse plant		:
Boulder	> 256 mm (10")	20	1	materials (CPOM)	45
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")	30		(FPOM)	<5
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	0			< 5
Clay	< 0.004 mm (slick)	0	1		

STREAM NAME Che	aha Creek LOCATION RFA	2 (2 1) (1)
	and Creek LOCATION REL	2 (RU-1) (photo # 21, benthic # 2
LAT 33.50 378 L	The state of the s	nately loyds downstream of
SAMPLE# REF-Z R	UN-1, -IR NOTES 164	dge
INVESTIGATORS	BBL	
FORM COMPLETED BY		REASON FOR SURVEY
	3:50	M (PM) Benthic Comm.
5 swee	p passes per sample	
WEATHER CONDITIONS	Now	INSTREAM FEATURES
	storm (heavy rain) rain (steady rain) showers (intermittent)	Water Depth 2.1 (ft) or m
	% %cloud cover	Water Velocity O.GB Msed or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type and record the d ☐ Rooted emergent ☐ Rooted submerg ☐ Floating Algae ☐ Attached Algae	ominant species present ent □ Rooted floating □ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 14.9 °C Specific Conductance 0.075 Dissolved Oxygen 10.19	Water Odors Normal/None
	pH 6.67 Turbidity < 1	Water Surface Oils Slick Sheen Globs Flecks None Other
	WQ Instrument Used V-22	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Petroleum Chemical Anaerobic None Other	Deposits Sludge Sawdust Paper fiber Sand Relict shells Other
	Ojls ☑ Absent □ Slight □ Moderate □ Profu	

INC	INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		2.0	Detritus	sticks, wood, coarse plant		
Boulder	> 256 mm (10")	15	1	materials (CPOM)	10	
Cobble	64-256 mm (2.5"-10")	35	Muck-Mud	black, very fine organic	_	
Gravel	2-64 mm (0.1"-2.5")	20		(FPOM)	5	
Sand	0.06-2mm (gritty)	10	Mari	grey, shell fragments		
Silt	0.004-0.06 mm	0	1		< 5	
Clay	< 0.004 mm (slick)	0				

STREAM NAME Ch	who Creek LOCATION REF.	2 (EAV-1) (photo#22, benthict
LAT 33.50350 L	ONG 86.00411 Emergent	was tation astronat
SAMPLE# REE-Z	EAVI, - IR NOTES bridge	vegetation upstream of (bedrock overlain by deposits)
INVESTIGATORS	BBI	(The same of the passes)
FORM COMPLETED BY	JCV DATE 10/29/06 TIME 31 5	REASON FOR SURVEY Phylo. Comm.
15 jabs per	sample	
WEATHER CONDITIONS	Now storm (heavy rain) rain (steady rain) showers (intermittent) %cloud cover clear/sunny	INSTREAM FEATURES Water Depth 0-9 ft or m Water Velocity 0.13 ft/sed or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type and record type and	inant species present De Rooted floating De Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 14.9 °C Specific Conductance 0.075 Dissolved Oxygen 10.21	Water Odors One Sewage Petroleum Chemical Sishy Other
	pH 6.86 Turbidity 2.2	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	WQ Instrument Used	Turbidity (if not measured) Clear
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Petroleum Chemical Anaerobic None Other	Deposits Sludge Sawdust Paper fiber Sand Check Control Deposits Other
	Oils ☐ Absent ☐ Slight ☐ Moderate ☐ Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock	underlain	none exposed	Detritus	sticks, wood, coarse plant	
Boulder	> 256 mm (10")	0	materials	materials (CPOM)	40
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")	50		(FPOM)	30
Sand	0.06-2mm (gritty)	45	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	5			_
Clay	< 0.004 mm (slick)	0			

	LLADEGA CREEK	·		
STREAM NAME		LOCATION	sachere	oud 3 RU-1 photo 3
LAT 33. 38386 % L	ONG 086. 09888 N	DEEP	CUS	Downstreen of ex 305
SAMPLE# REFS R	U-1 EVIR	NOTES Mile	e Bosca	the EAV Hods.
INVESTIGATORS MA	elays, dec	:		
FORM COMPLETED BY		DATE 11:00		REASON FOR SURVEY
MUF		TIME ulilog	€Б РМ	Bentic
5 yasses	along been	W BUD	for	RUI & RUIR
WEATHER CONDITIONS	Now		<u>-</u>	INSTREAM FEATURES
		(heavy rain) steady rain)		Water Depth O.8 or m
	☐ showers	(intermittent)		29
		oud cover ar/sunny		Water Velocity 1. The velocity of m/sec (within 1 m of substrate)
	11			(Within 1 in of substrate)
AQUATIC VEGETATION	Indicate the dominant Rooted emergent Floating Algae	☐ Kooted subm	iergent	t species present ☐ Rooted floating ☐ Free floating
WATER QUALITY	Temperature 14.0	°C	У	Vater Odors
(within 1 m of substrate)	Specific Conductance	0.039	8	Normal/None
	Dissolved Oxygen			Fishy Other
	рн 5.45	•	W	/ater Surface Oils Slick □ Sheen □ Globs □ Flecks
	Turbidity 0.80 17	lu	Ř	None Other
	WQ Instrument Used	الا فيمين ما د	u	urbidity (if not measured) Clear □ Slightly turbid □ Turbid Opaque □ Stained □ Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewa Chemical Anae		ım 🖸	eposits Sludge Sawdust Paper fiber Sand Relict shells Other
	Oils SLAbsent □ Slight □	Moderate □ Pr	ofuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
		% Composition in Sampling Reach	Substrate Type	Characteristic % Composition Sampling Are		
Bedrock			Detritus	sticks, wood, coarse plant	10	
Boulder	> 256 mm (10")	10	1	materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	25	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	50		(FPOM)	<5	
Sand	0.06-2mm (gritty)	15	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	C S			< 5	
Clay	< 0.004 mm (slick)	۷,			•	

	TAL	LADE	GA CREGK			<u> </u>		
	m name c uid			LOCA	TION Back	Grou	U/3 64U1	photo 7 carry 3
		ONG 0	86.01920	/	4			
SAMPL	e# Cbf 3 6.	40-1	, thuir	NOTE	s Allicat	ש נפ	ed downs	tream from 11.703
INVEST	IGATORS MH	4 A3 S	DEC		- 1	•		misse
FORM C	COMPLETED BY			DATE	11/1/06		REASON FOR SU	RVFV
MAC	Maria de Caractería de Caracte			TIME	1030 A	PM	Acatric	
15 7	ek /somp	ole f	or thu	()	BEAULE	2		
WEATH CONDIT		N	ow a			-	INSTREAM FEATURES	
			storm (h	eady rai	in)		Water Depth	. 2 (1) or m
		°		id cove: /sunnv			Water Velocity 💁	
		JL	<u> </u>	/ Sullity			(within 1 m of subs	trate)
	QUALITY n of substrate)	Tempe Specifi Dissolv pH	rature 4.2 ° c Conductance c Conductance fed Oxygen 11.8 ° 65 ° 65 ° 65 ° 65 ° 65 ° 65 ° 65 ° 6	c 3.03		W 00 X 00 X 00 X 00 X 00 X 00 X 00 X 00	Petroleum [] Fishy [] /ater Surface Oils	Sewage Chemical Other Clobs Flecks Gured) Urbid Other
SEDIMEI SUBSTRA		Odors P4-Norm Chen Chen Chen Chen Chen Chen Chen Chen	nical Anaer	obic	□ Petroleum □ None te □ Profu		eposits Sludge 🗅 Sawdust Relict shells 💢	☐ Paper fiber ☐ Sand I Other
INC	ORGANIC SUBS		COMPONENTS			ORGAI (does	NIC SUBSTRATE C	COMPONENTS up to 100%)
Substrate Type	Diamete	er	% Composition Sampling Re		Substrate Type		Characteristic	% Composition in Sampling Area
Bedrock					Detritus	sticks :	wood goorge slast	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant	5
Boulder	> 256 mm (10")	5	1	materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic	_
Gravel	2-64 mm (0.1"-2.5")	60	1	(FPOM)	45
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	10			2K
Clay	< 0.004 mm (slick)	<8			

	LADEGA CREEK	<u> </u>		
STREAM NAME CHE	4 11 -A	LOCATION BAL	h seon	A +3 photo # courts
LAT 33. 3838 THE	ong <u>086.07948</u> %			•
Sample# eff & Ba	2-1 (KWI-R)	NOTES SMALL	Back	counter below Rt 803 boilse
INVESTIGATORS 43	s, muc, dec			
FORM COMPLETED BY		DATE 10:00 TIME 11/106	AM PM	REASON FOR SURVEY
Dredge Sample	from small	BULWALL	for (ZWI & BWIR
WEATHER CONDITIONS	Now		-	INSTREAM
Yunus		(heavy rain) steady rain)		Water Depth ft or m
45	☐ showers	(intermittent) oud cover		
		ar/sunny		Water Velocity
AQUATIC VEGETATION	Indicate the dominant Rooted emergent Eloating Algae	t type and record the Rooted submer Attached Algae	rgent	t species present Rooted floating Free floating
WATER QUALITY	Temperature 15.4	• ° C		ater Odors
(within 1 m of substrate)	Specific Conductance	0.04		Normal/None
	Dissolved Oxygen	.83		Fishy Other
	pH 5.57		ū	Slick Sheen Globs Flecks
	Turbidity 32.7	- A. A. A.		urbidity (if not measured)
	WQ Instrument Used	HOKI B4		Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors M-Normal Sew Chemical Ana Other		n 🚨	eposits Sludge 🗆 Sawdust 🔲 Paper fiber 🙇 Sand Relict shells 🗀 Other
	Oils Absent □ Slight □	I Moderate □ Prof	fuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Substrate Characteris Sampling Reach Type				
Bedrock			Detritus	sticks, wood, coarse plant	10%	
Boulder	> 256 mm (10")	0 %	1	materials (CPOM)	10%	
Cobble	64-256 mm (2.5"-10")	10%	Muck-Mud	black, very fine organic	ч	
Gravel	2-64 mm (0.1"-2.5")	40%	1	(FPOM)	L5 %	
Sand	0.06-2mm (gritty)	40%	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	10 %	1		L5%	
Clay	< 0.004 mm (slick)	4520	1			

STREAM NAME CL		LOCATION	UBN	1-1	(photo #26	5. 41 i. 8/	7
LAT 33.59245 L	ONG 85.83146		Small ba	ckwat	er area of	F Channel	+
SAMPLE# UBW	-1 *(UBW-1R)	NOTES	near r	ifflet	±4	- O-CATINET	
INVESTIGATORS	* Collect	ed within	n Syare	ds of	same sedin	nent commen	2
FORM COMPLETED BY	JU	DATE 10/2 TIME 1:1	24 \$ am (PM)	REASC	ON FOR SURVEY	<u> </u>	******
WEATHER CONDITIONS		(heavy rain)	-	INSTR FEATU	RES		
	☐ showers	steady rain) (intermittent)		Water	Depth <u>1-2</u> ft	or m	
		oud cover ar/sunny			Velocity <u>- 0.03</u> (1 m of substrate)	vsec or m/sec	
				- 			
AQUATIC VEGETATION	Indicate the dominant Rooted emergent Floating Algae	type and recor Rooted s	ubmergent	nt species	Rooted floating	I Free floating	<u> </u>
WATER QUALITY (within 1 m of substrate)	Temperature 14 Specific Conductance Dissolved Oxygen 17	0.155	,	Water Od ≧ Normal/ □ Petroleu □ Fishy	None 🚨 Sewag	cal	
	pH <u>7.76</u> Turbidity 132		(Water Sur □ Slick ☑ None	face Oils Sheen Globs Other	☐ Flecks	-
	WQ Instrument Used	U-202		Turbidity Clear Opaque	(if not measured) ☐ Slightly turbid ☐ Stained	☐ Turbid☐ Other	
SEDIMENT/ SUBSTRATE	Odors D Normal Sew Chemical Anac		oleum (Deposits 2 Sludge 2 Relict sh	□ Sawdust □ P ells □ Other_	aper fiber 🛛 Sar	nd
	Oils SPAbsent □ Slight □	Moderate C	1 Profuse				
TYON CANDO OVINO	ED TEE COMMONIENT	. 1					

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
		% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		.0	Detritus	sticks, wood, coarse plant	organie	
Boulder	> 256 mm (10")	0	1	materials (CPOM)	50 leaves	
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	<i>د</i> ۶		(FPOM)		
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	8 5	1			
Clay	< 0.004 mm (slick)	< 5	1			

STREAM NAME Cho		- 2 (photo #18, benth +#2)
LAT 33.57841 L	ONG 85.86131 Backwate	er area across from
SAMPLE# UBW-2	*(UBW-2R) NOTES S/ON	gh access enbrance
INVESTIGATORS	BBL * taken within Si	1ds of 1113111-2
FORM COMPLETED BY	DATE 10/25/0G	REASON FOR SURVEY
J	CV, SME TIME Z. 50 AM (Benthie comm.
WEATHER CONDITIONS	Now storm (heavy rain) rain (steady rain) showers (intermittent)	INSTREAM FEATURES Water Depth 1.1 (ft or m
	\(\frac{15}{\omega}\)\(\text{\text{\$\sigma}}\) \\\(\text{\$\sigma}\) \\\(\text{\$\clear/sunny}\)	Water Velocity O. O3 (fl/sec) or m/sec (within 1 m of substrate)
<u> </u>	<u> </u>	
AQUATIC VEGETATION None	Indicate the dominant type and record the domi ☐ Rooted emergent ☐ Rooted submergent ☐ Floating Algae ☐ Attached Algae	nant species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 2.8 °C Specific Conductance 0.149 Dissolved Oxygen 0.62	Water Odors O Normal/None C Petroleum C Fishy O Other
	pH 7.36 Turbidity 21.1	Water Surface Oils Slick Sheen Globs Flecks None Other
	WQ Instrument Used <u>V22</u>	Turbidity (if not measured) ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Petroleum Chemical Anaerobic None Other	Deposits + Tace ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other + race
	Oils Absent Slight Moderate Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type			Substrate Type	Characteristic % Composition Sampling		
Bedrock		0	Detritus	sticks, wood, coarse plant		
Boulder	> 256 mm (10")	0		materials (CPOM)	40	
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic	7.5	
Gravel	2-64 mm (0.1"-2.5")	<1	1000	(FPOM)	40	
Sand	0.06-2mm (gritty)	5	Магі	grey, shell fragments		
Silt	0.004-0.06 mm	90	1		< 5	
Clay	< 0.004 mm (slick)	45	1			

* Observed great blue heron in backwater, pair of wood ducks

Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

				(photo # 21, benthiz #1)
STREAM NAME CL	occ. Creek	LOCATION	URU-	Z (Slight donstinal)
LAT 33.58 178 L	ONG 85 85 390		Broad	z (Slight depositional) run area downstream
SAMPLE# URU-Z	(URU-ZR)			traightway of Riffle #2
INVESTIGATORS &	BL			
FORM COMPLETED BY	一 ()	DATE 10/2 TIME 1	7	REASON FOR SURVEY Bentlie Community
URU-2 (10	minute)	URU-ZR	C 10 m	Benthia community inute) - 10 yards downstream
WEATHER CONDITIONS	Now	(heavy rain)	-	INSTREAM FEATURES
	🔲 rain (steady rain)		Water Depth 1 ft or m
	<u>95</u> % 80 %cl	(intermittent) oud cover ar/sunny		Water Velocity O.72 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and recor Rooted so Attached	ubmergent	ant species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 12.3 Specific Conductance Dissolved Oxygen 16	0.151		Water Odors
	pH 6.2 Turbidity 7.8			Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other
	WQ Instrument Used	U-22	i makayari	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana		oleum	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils Spl Absent □ Slight □	⊒ Moderate □	Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Diameter Type		% Composition in Sampling Reach	Substrate Type	Characteristic % Compositi Sampling A			
Bedrock		.0	Detritus	sticks, wood, coarse plant	5		
Boulder	> 256 mm (10")	0		materials (CPOM)			
Cobble	64-256 mm (2.5"-10")	<5	Muck-Mud	black, very fine organic	45		
Gravel	2-64 mm (0.1"-2.5")	Zo		(FPOM)			
Sand	0.06-2mm (gritty)	60	Marl	grey, shell fragments			
Silt	0.004-0.06 mm	10			10		
Clay	< 0.004 mm (slick)	10	1				

STREAM NAME Ch	vec. Creek	LOCATION	UEAV-Z Cphoto#17 Lenthic #1]
LAT 33.57858 L	ONG 85.86137	Enti	UEAV-Z [photo#17, benthic #1]
SAMPLE# UEAV-Z	(UEAV-ZR)	NOTES	
INVESTIGATORS	SEL		
FORM COMPLETED BY	JW	DATE 10/23 TIME 3:50	REASON FOR SURVEY Phytophlas comm.
15 Jabs - pe	r sample; rep	licate tak	ken in same location.
WEATHER CONDITIONS	Now storm (h rain (ste showers (i	neavy rain) eady rain) intermittent) id cover /sunny	INSTREAM FEATURES Water Depth & 8 ft or m Water Velocity (tisec) or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant t ☐ Rooted emergent ☐ Floating Algae	type and record Rooted sub Attached A	the dominant species present mergent A Rooted floating
WATER QUALITY (within 1 m of substrate)	Temperature 13.) a Specific Conductance Dissolved Oxygen //.	0.149	Water Odors Normal/None □ Sewage □ Petroleum □ Chemical □ Fishy □ Other
	рН <u>6.84</u> Turbidity <u>18.7</u>		Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	WQ Instrument Used	U-22	Turbidity (if not measured) ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewag Chemical Anaer Other Oils Absent Slight		
	TRATE COMPONENTS dd up to 100%)	NA	ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)
Substrate Diamete	m 9/ Campasiti		

NA INC	ORGANIC SUBSTRATE (should add up to		NA	ORGANIC SUBSTRATE C (does not necessarily add	OMPONENTS up to 100%)	
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			Detritus sticks, wood, coarse plant			
Boulder	> 256 mm (10")			materials (CPOM)		
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")			(FPOM)		
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments		
Silt	0.004-0.06 mm		1			
Clay	< 0.004 mm (slick)		1			

STREAM NAME Ch.	cc. Creek LOCA	TION UEAV	1-2 (photo #19, benthic #1)
LAT 38.57952 L	ONG 85. 86051	The sale	1 a Callianter wood
SAMPLE# UEAV-	(UEAV-IR) NOTE	s acrorio	1-2 (photo #19, benthic #1) hes of ?alliquer weed untely 10-13yds (20 yds between
INVESTIGATORS	384	- FF-XII	Telog. 1 gots (20 gots between
FORM COMPLETED BY	JW DATE TIME	10/25/06 1:37 AM (REASON FOR SURVEY Phytoblus
15 jabs persam	ple		
WEATHER CONDITIONS	Now storm (heavy rain (steady rain (steady rain showers (intermi %cloud cover) clear/sunny	in) ttent) r	INSTREAM FEATURES Water Depth 1.8 ft or m Water Velocity 0.44 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type ar Solution Rooted emergent Floating Algae A	nd record the domi Looted submergent Litached Algae	nant species present A Rooted floating
WATER QUALITY (within 1 m of substrate)	Temperature 12.7 °C Specific Conductance 0.15 Dissolved Oxygen 10.8	<u>Γ</u> &	Water Odors O Normal/None O Petroleum O Fishy O Other
	pH 6,81 Turbidity 7.0		Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	*)- <u>22</u>	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Chemical Anaerobic Other Oils Absent Slight Modera	Petroleum None	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
INORGANIC SUBS	TRATE COMPONENTS id up to 100%)	NA OR	GANIC SUBSTRATE COMPONENTS does not necessarily add up to 100%)

INORGANIC SUBSTRATE COMPONENTS		NA	OMPONENTS up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	Detritus sticks, wood, coarse plant materials (CPOM)	
Boulder	> 256 mm (10")		1		
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-2.5")		1		
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm		1 .		# 1 * * * * * * * * * * * * * * * * * *
Clay	< 0.004 mm (slick)		1		

STREAM NAME Ch	01	T OCH TION	1.0	4 ()) >	
·		LOCATION	URU-	· · · · · · · · · · · · · · · · · · ·	Benthic #1)
LAT 33.59 157 L		Dou	unstream	of Riffle#1	
SAMPLE# URU-1	*/URU-1R)	NOTES			
INVESTIGATORS	BBL * Collec	ted 10 yd	s downst	ream in similar i	holilah
FORM COMPLETED BY	· .	DATE 10/24	106	REASON FOR SURVEY	
	JW	TIME 3:00		Bentley Com	19-10 MH 4
(URU-1-10	minutes worth of	f kicks) (URU-1R	- 10 minutes	worth of kicks
WEATHER CONDITIONS	Now			INSTREAM FEATURES	
	🔲 🖸 rain (s	(heavy rain) steady rain)		Water Depth 1.3	ft or m
		(intermittent) oud cover		Water Velocity 1.0	ft/sec or m/sec
	∑ cle	ar/sunny		(within 1 m of substrate)	
AQUATIC VEGETATION	Indicate the dominant Rooted emergent Floating Algae	t type and record Rooted sub Attached A	mergent	nt species present Rooted floating	☐ Free floating
WATER QUALITY	Temperature 1410	°С.		Water Odors	
(within 1 m of substrate)	Specific Conductance	0.154		Normal/None Sew	rage mical
	Dissolved Oxygen \	1.6	C	☐ Fishy ☐ Oth	er
	pH_6.57		7	Water Surface Oils 2 Slick □ Sheen □ Glo	to Christi
	Turbidity 47.7		Š	None Other	os uriecks
	WQ Instrument Used	V-202-	2	Curbidity (if not measured)	
	& man ament Osea			Clear Slightly turbid Opaque Stained	☐ Turbid ☐ Other
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana Other	age D Petrol erobic D None	eum 🗆	Deposits I Sludge I Sawdust I I Relict shells I Othe (Some)	Paper fiber 🔄 Sand
	Oils ☑ Absent ☐ Slight ☐	Moderate 🔘	Profuse		

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus	sticks, wood, coarse plant	< 5
Boulder	> 256 mm (10")	5	1	materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	45	Muck-Mud	black, very fine organic	0
Gravel	2-64 mm (0.1"-2.5")	40		(FPOM)	
Sand	0.06-2mm (gritty)	40	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	15	1		^c 5
Clay	< 0.004 mm (slick)	45			

STREAM NAME Cho	ec. Creek LOCATION UDE	P-2 (photo #20, benthic#1
LAT 33. 5800 L	ONG 85, 85999	10 1
· · · · · · · · · · · · · · · · · · ·	- Z (UDGP-ZR) NOTES	tional area on northern Shore
	5BL-	Shell &
FORM COMPLETED BY	DATE 10/25 TIME 1220 AM (P	REASON FOR SURVEY
	-JCV INVIE_1220 AM (P	Benthin Survey
WEATHER CONDITIONS	Now	INSTREAM - FEATURES
	storm (heavy rain) rain (steady rain)	Water Depth 1 or m
	showers (intermittent)	
	%0 %cloud cover clear/sunny	Water Velocity 0.31 fysed or m/sec (within 1 m of substrate)
<u> </u>		(() () () () () () () () () (
AQUATIC VEGETATION	Indicate the dominant type and record the domin ☐ Rooted emergent ☐ Rooted submergent ☐ Floating Algae ☐ Attached Algae	nant species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 12.6 °C Specific Conductance 0.150 Dissolved Oxygen 11.19	Water Odors O Normal/None D Petroleum Chemical O Fishy O Other
	pH 6.29 Turbidity 6.3	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	WQ Instrument Used U-22	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Coman (2) W Normal Sewage Petroleum Chemical Anaerobic None	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils Absent Slight Moderate Profuse	
THE POLITIC STIPS		

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		Q	Detritus sticks, wood, coarse plant		
Boulder	> 256 mm (10")	.0 .	1	materials (CPOM)	40
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic	30
Gravel	2-64 mm (0.1"-2.5")	3 <i>5</i>		(FPOM)	
Sand	0.06-2mm (gritty)	40	Marl	grey, shell fragments	10
Silt	0.004-0.06 mm	25			
Clay	< 0.004 mm (slick)	<1	1		

* Turtle at depositional location (painted?)

Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

STREAM NAME Cha	ice. Creek	LOCATION	URI	- 2 (photo # 22 Box 4 (461)
LAT 33.58327 L		, 5	mill oit	-2 (photo # 22, Benthic #1) Fle area upstream of
SAMPLE# URI-2		NOTES	former	ox bows
INVESTIGATORS				
FORM COMPLETED BY	JU	DATE 10/20 TIME 97	AM) PM	Benthe Common ty
URI-2 (8 SW	eeps on left 51	de) UR	I-2R	(8 success right-side)
WEATHER CONDITIONS			•	INSTREAM FEATURES
	rain (s	(heavy rain) steady rain) (intermittent)		Water Depth O. 4 ft or m
• :	90 % D %clo	oud cover ar/sunny	•	Water Velocity 0.74 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant ☐ Rooted emergent ☐ Floating Algae	type and recor Rooted su Attached	ıbmergent	ant species present • Rooted floating • Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 12.2 Specific Conductance Dissolved Oxygen 10	0.155		Water Odors Normal/None
	pH 6.14 Turbidity 9.8		· · · · · · · · · · · · · · · · · · ·	Water Surface Oils Slick Sheen Globs Flecks None Glother
	WQ Instrument Used	V-22		Turbidity (if not measured) Clear
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana	age Petroerobic Non	oleum e	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils ☑ Absent ☐ Slight ☐	Moderate C	l Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus sticks, wood, coarse plant materials (CPOM)	. :	
Boulder	> 256 mm (10")	< 5		materials (CPOM)	<5
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic (FPOM)	25
Gravel	2-64 mm (0.1"-2.5")	40			
Sand	0.06-2mm (gritty)	40	Marl	grey, shell fragments	5
Silt	0.004-0.06 mm	10	1		
Clay	< 0.004 mm (slick)	45	1		

Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1
Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

* Note mottled sculpin observed and caught in kick netting

STREAM NAME Cho	c. Creek LOCATION	1100 1 1 1 1 2 2
LAT 33, 59270NL	ONO SE A 211/2 JA/	URI-1 photo#27 - Benthic#1 Riffle#1 - accessed via canoe
	UNG 33.83110 VV	Riffle#1 - accessed via conve
	(CUKI-1K) NOTES	on Weaver property FP-#2N
INVESTIGATORS	* replicate collected ~ 15	oyds downstream
FORM COMPLETED BY	JCV TIME III	AM PM R. L
URI 1 (5 passes along riffle) L	JRI-1R (5 passes along niffle)
WEATHER CONDITIONS	Now storm (heavy rain)	INSTREAM FEATURES
	rain (steady rain) showers (intermittent)	Water Depth O. 2 ft or m
	%□ %cloud cover	Water Velocity 3.4 ft/sec or m/sec
	□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	(within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type and reco ☐ Rooted emergent ☐ Rooted : ☐ Floating Algae ☐ Attached	Submergent
WATER QUALITY (within 1 m of substrate)	Temperature 13.1 °C Specific Conductance 0.152 Dissolved Oxygen 10.27	Water Odors M Normal/None
	pH <u>6.03</u> Turbidity 78.4	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other
	WQ Instrument Used U-22	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Pet Chemical Anaerobic No	troleum Sludge Sawdust Paper fiber Sand one Relict shells Other
	Oils ☑ Absent ☐ Slight ☐ Moderate	□ Profuse

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus sticks, wood, coarse plant materials (CPOM)		
Boulder	> 256 mm (10")	5		materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic	<u> </u>
Gravel	2-64 mm (0.1"-2.5")	45		(FPOM)	
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	0			45
Clay	< 0.004 mm (slick)	0	1		

STREAM NAME CIA		LOCATION	UDEF	2-1 (photo#24, Benthie#1)
LAT 33.59001 L	ONG 85, 83361	ζ	الماسد ال	deposit off main channel blowdown (rep taken 5 yel down
SAMPLE# UDEP-1	CUDEP-1R7	NOTES	below	blouds no Track les Ell
INVESTIGATORS				blueday Crep taken Syd down
FORM COMPLETED BY	JW	DATE 10/24 TIME 420	106 - AM (PM)	REASON FOR SURVEY Benthic Community
)
WEATHER CONDITIONS	rain (s	heavy rain) teady rain) (intermittent)	-	INSTREAM FEATURES Water Depth 3.4 fb or m
	% %clo	ud cover r/sunny	· · · · · · · · · · · · · · · · · · ·	Water Velocity 0.36 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION NOVIR	Indicate the dominant ☐ Rooted emergent ☐ Floating Algae	type and record Rooted sul Attached	omergent	ant species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 14 Specific Conductance Dissolved Oxygen 11			Water Odors ☑ Normal/None □ Sewage □ Petroleum □ Chemical □ Fishy □ Other
	pH <u>6.23</u> Turbidity O		[Water Surface Oils □ Slick □ Sheen □ Globs □ Flecks □ None □ Other
	WQ Instrument Used	U-22		Turbidity (if not measured) Clear
SEDIMENT/ SUBSTRATE	Odors Normal Sewa Chemical Anae	ige D Petro robic D None	leum (Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils 20 Absent □ Slight □	Moderate D	Profuse	

UDEP-1 3.5"rec. UDEP-1R 3.25"rez.

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		Q	Detritus sticks, materi	sticks, wood, coarse plant	60
Boulder	> 256 mm (10")	0		materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic	20
Gravel	2-64 mm (0.1"-2.5")	25		(FPOM)	
Sand	0.06-2mm (gritty)	40	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	30			5
Clay	< 0.004 mm (slick)	5	1		

STREAM NAME Ch.	Constant	LOCATION	3.00 / A	
			WRM-I	[(photo #11, benfine #1)
LAT 33, 56845 L		: 1	Looks like	i old oxbow that was
		NOTES	cut of	. (
INVESTIGATORS	33L	·		
FORM COMPLETED BY		DATE 10/2 TIME 3:0	14/06 0 AM PM	REASON FOR SURVEY Benthic Comm.
p	Ng gairtíneach a chairtíneach a chai		* *	
WEATHER CONDITIONS	rain (ste showers (i 65 % % % % % % % % % % % % % % % % % % %	heavy rain) leady rain) (intermittent) ud cover r/sunny		INSTREAM FEATURES Water Depth 1.4 (ft) or m Water Velocity 0.03 (ft/sec) or m/sec (within 1 m of substrate)
			*	
AQUATIC VEGETATION	Indicate the dominant t Rooted emergent Floating Algae	type and recor Rooted st Attached	ubmergent	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 14.8 o Specific Conductance 6 Dissolved Oxygen 11.6	0.169	2	Water Odors 2 Normal/None
	pH 6.93 Turbidity 69.3			Water Surface Oils Slick Sheen Globs Flecks None Other
	WQ Instrument Used _	<u>U-ZZ</u>		Turbidity (if not measured) I Clear Slightly turbid I Turbid Opaque Stained I Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewag Chemical Anaer	ge 🖸 Petr robic 🗘 Non	roleum 🗀	Deposits I Sludge Sawdust
	Oils ☑ Absent □ Slight □ N	Moderate [☐ Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0.	Detritus	sticks, wood, coarse plant	20
Boulder	> 256 mm (10")	<i>O</i> .		materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	< \$	Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")	20		(FPOM)	10
Sand	0.06-2mm (gritty)	30	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	45			- 10
Clay	< 0.004 mm (slick)	< 5	1		

STREAM NAME Cho	Cook LOCA	TION MOU	5 /)) 11 5 1 20
LAT 33.56240 L			Z (photo#8, benthic#1)
SAMPLE# MRV- 2		e Downst	ream of bridge; past offle
INVESTIGATORS	BBL NOIS	3	
FORM COMPLETED BY	DATE	10/27 1115 AM PM	REASON FOR SURVEY
* 10 min su	een effort repli	ente collecte	ed
WEATHER CONDITIONS	Now		INSTREAM FEATURES
	storm (heavy r rain (steady ra showers (intermi	in)	Water Depth 1.2 ft or m
	% %cloud cove	er	Water Velocity Z (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type ar Rooted emergent Floating Algae	nd record the domina Rooted submergent Attached Algae	int species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 14.5°C Specific Conductance 0.17 Dissolved Oxygen 10. Z	<u>-</u> i-	Water Odors Normal/None
	pH <u>6. 4</u> Turbidity <u>22.</u> 7	er i de la companya de la companya de la companya de la companya de la companya de la companya de la companya	Water Surface Oils □ Slick □ Sheen □ Globs □ Flecks ☑ None □ Other
	WQ Instrument Used	-22	Turbidity (if not measured) ☐ Clear
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Chemical Anaerobic Other	☐ Petroleum	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils Absent OSlight OModer	ate 🔲 Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus	sticks, wood, coarse plant	< 5
Boulder	> 256 mm (10")	5		materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	20	Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")	40		(FPOM)	< 5
Sand	0.06-2mm (gritty)	ર છ	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	5	1		10
Clay	< 0.004 mm (slick)				

STREAM NAME Cha	oce Creek LOCATION MEAL	1-7 (photo # 10 Lo. 4) #1)
LAT 33- 56807 L	oce Creek LOCATION MEAU ONG 85.94642 Botton	side of ich id polari
SAMPLE# MEAV-	2 (MEAV-ZR) NOTES MBW.	-1.
INVESTIGATORS		
FORM COMPLETED BY	JW TIME 4:00 AM E	REASON FOR SURVEY
15 jabs pe	- Sample.	
WEATHER CONDITIONS	Now storm (heavy ram)	INSTREAM FEATURES
	rain (steady rain) showers (intermittent) %2 %2 %cloud cover clear/sunny	Water Depth O. Z (ft) or m Water Velocity O. D. (Vsec) or m/sec (within 1 m of substrate)
<u> </u>		
AQUATIC VEGETATION	Indicate the dominant type and record the domin Rooted emergent	nant species present Rooted floating
WATER QUALITY (within 1 m of substrate)	Temperature 14,5 °C Specific Conductance 0,170 Dissolved Oxygen 12,0 5	Water Odors ☑ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
	pH <u>6.93</u> Turbidity <u>7</u> 5	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	WQ Instrument Used U-ZZ	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
sediment/ substrate NA	Odors TNormal Sewage Petroleum Chemical Anaerobic None Other	Deposits Sludge Sawdust Paper fiber Sand Relict shells Other
	Absent Slight Moderate Profuse	

INORGANIC SUBSTRATE COMPONENTS NA (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		0.	Detritus	sticks, wood, coarse plant	50	
Boulder	> 256 mm (10")	0		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	<5		(FPOM)	30	
Sand	0.06-2mm (gritty)	50	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	40		1		10
Clay	< 0.004 mm (slick)	2 \$				

STREAM NAME Ch.	u. Creek LOCATION MRIIN-	1 (photo#13; bonthic#1)
LAT 33 57075 L	ONG GC BUGG	1 (photo T15, benthic T1)
·	1 1000 1141.000101	of riffle and emergent
SAMPLE# M PUN -	1 (MRUW-IR) NOTES vegetati	on island
FORM COMPLETED BY	DATE 16/26/06 AM (F	REASON FOR SURVEY Benthic Comm
WEATHER CONDITIONS	Now	INSTREAM FEATURES
	storm (heavy rain) rain (steady rain) showers (intermittent)	Water Depth 1.3 (ft) or m
	85% % %cloud cover clear/sunny	Water Velocity 0.70 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type and record the dominant D Rooted submergent D Roted Submergent D Floating Algae D Attached Algae	inant species present ☐ Rooted floating ☐ Free floating
WATER QUALITY	Temperature 13.6 "C	Water Odors
(within 1 m of substrate)	Specific Conductance 0.171 Dissolved Oxygen 10.74	□ Normal/None □ Sewage □ Chemical □ Fishy □ Other
	pH 6.88	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
	Turbidity 3.8	None Other
	WQ Instrument Used U-ZZ	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors ☑ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None ☐ Other	Deposits Sludge Sawdust Paper fiber A Sand Relict shells Other
	Oils ☐ Absent ☐ Slight ☐ Moderate ☐ Profuse	

INC	INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		0	Detritus	sticks, wood, coarse plant	<5	
Boulder	> 256 mm (10")	45	1	materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	40	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	30		(FPOM)	< <i>5</i>	
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	45			5	
Clay	< 0.004 mm (slick)	۷ ا	1			

Compression Co			
	occ. Creck	LOCATION MEAU	-1 (photo#14, benth: #1)
LAT 33.56968 L		Two strips	e of EAV on failout of
SAMPLE# MGAV-1	- (MEAV-17)	NOTES FIFE	sample left/right
INVESTIGATORS	BBL		
FORM COMPLETED BY		DATE 10/26/06	REASON FOR SURVEY
	JO	TIME 1055 AM PM	Phytoph Community
CISjubs persa	nples)	.:	The second of
WEATHER CONDITIONS	Now		INSTREAM FEATURES
	☐ rain (s	(heavy rain) steady rain) (intermittent)	Water Depth
	95 % Sq %clo	oud cover ar/sunny	Water Velocity ft/see or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant ☐ Rooted emergent ☐ Floating Algae	t type and record the domin Rooted submergent Attached Algae	ant species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 13.5 Specific Conductance Dissolved Oxygen 10	0.173	Water Odors M Normal/None
	pH <u>7.01</u> Turbidity 6.8		Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other
	WQ Instrument Used	V-ZZ	Turbidity (if not measured) Clear
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana		Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils A Absent O Slight O	Moderate □ Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		0	Detritus	sticks, wood, coarse plant	40	
Boulder	> 256 mm (10")	0		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	<i>5</i> Ø		(FPOM)	30	
Sand	0.06-2mm (gritty)	40	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	< S			20	
Clay	< 0.004 mm (slick)	45	1			

			1	: NO PHOTO #6	
STREAM NAME CL	occ. Creek	LOCATION	MDEP-7	2/photo#7	benthic #1)
LAT 33.56875 L		· Ur	stream	C(photo#7, from pnt-i	h along
SAMPLE# MDEP-		NOTES ,	rorth	shore	<u> </u>
INVESTIGATORS	BBZ	·:			
FORM COMPLETED BY	JW	DATE 10/2 TIME 1:10	7/06 _ AM (PM)	REASON FOR SURV Benthic	** · ·
WEATHER CONDITIONS	Now			INSTREAM FEATURES	
	rain (s	(heavy rain) steady rain) (intermittent)		Water Depth	
		oud cover ar/sunny		(within 1 m of substrate	3 ft/sec or m/sec
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and record Rooted su Attached	bmergent	nt species present Rooted floating	g □ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 14.6 Specific Conductance Dissolved Oxygen	0.157	, , , , , , , , , , , , , , , , , , ,	☑ Petroleum 🔲 🤇	Sewage Chemical Other
	pH <u>6.47</u> Turbidity 2			Water Surface Oils Slick Sheen C None Other	Globs 🖸 Flecks
	WQ Instrument Used	U-ZZ		Turbidity (if not measur ☐ Clear ※ Slightly turb ☐ Opaque ☐ Stained	red) pid D Turbid D Other
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana Other		leum (Deposits □ Sludge □ Sawdust □ Relict shells □ (☐ Paper fiber ☐ Sand Other
	Oils ☑ Absent ☐ Slight ☐	I Moderate □	Profuse		

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		.0	Detritus	sticks, wood, coarse plant materials (CPOM)	30	
Boulder	> 256 mm (10")	0	1			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic	2 -	
Gravel	2-64 mm (0.1"-2.5")	< 5]	(FPOM)	30	
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	75	1		15	
Clay	< 0.004 mm (slick)	د ۶	1			

STREAM	I NAME CL	occ (Creek	LOCATION	M	e I- 2	(-11	# 0	D 11	* ++ A
LAT 3	3.56810 L			. 0	~~		- (photo	7,	Denthi	<u>رست</u>
SAMPLE	# MRI-Z	MR		NOTES /<	ittle at e	on le	ft side	, f 18	land	
	GATORS	<u>BBL</u>								
<u> </u>	OMPLETED BY			DATE <u> 0/2</u> TIME <u> </u>	7 2 @	PM RE	ASON FOR SU Be n+1		Comm:	
# 5	sneeps	per	sample		:			:		
WEATH CONDIT		•	rain (ste showers (i clou	eavy rain) eady rain) ntermittent) id cover /sunny		FE. Wa	STREAM ATURES ater Depth tter Velocity thin 1 m of subs	3 4 ft trate)		sec
r						· .				
AQUATION VEGETA		1/00	te the dominant t ed emergent ting Algae	ype and recor Rooted su Attached	ıbmergei	minant spe it	cies present Rooted float	ing 🖸	Free floating	
1"	QUALITY n of substrate)	Specifi	rature <u>14.5</u> ° c Conductance <u>C</u> red Oxygen <u>9</u> .2	0.165		Nor	oleum (Sewage Chemic Other_	e cal	
		рH_ <u>Е</u>	6,30 ity 4,0			O Slici Non	e Other		☐ Flecks	
		WQ In	strument Used _	W-22		U Clea	lity (if not meas r □ Slightly t que □ Stained	nrhid	☐ Turbid ☐ Other	
	SEDIMENT/ SUBSTRATE Odors Normal Sewage Chemical Anaerobic Other Oils			obic 🖸 Non	B	— C Ren	ts ge Q Sawdust et shells Q	☐ Pa I Other_	aper fiber C	3 Sand
		U Abse	nt OSlight O	vioderate 🗆	Profuse	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·			
INO	RGANIC SUBS (should ac		COMPONENTS 100%)		(ORGANIC (does not	SUBSTRATE (OMPO	NENTS 10%)	
Substrate	Diamete	r	% Composition	on in Subs	trate	Char	acteristic	0/	Composition	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		6	Detritus	sticks, wood, coarse plant	<5
Boulder	> 256 mm (10")	< \$	1	materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	70	Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")	60	1000	(FPOM)	5
Sand	0.06-2mm (gritty)	15	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	<5			5
Clay	< 0.004 mm (slick)	0	1		

STREAM NAME CL	CE CEEK LOCATION MDE	06 11 1 11 2
LAT 33.57059 I		P-1 (photo#12) benthic #1)
SAMPLE ANDCA	Finer ber	od downsfream of EAV#1
SAMPLE# MDEP-1	(MDEP-1R) NOTES	
INVESTIGATORS	366	
FORM COMPLETED BY		REASON FOR SURVEY
		Benthic Comm.
* Replicate	taken 5ft downstream	
WEATHER CONDITIONS	Now	INSTREAM - FEATURES
	storm (heavy rain) rain (steady rain) showers (intermittent)	Water Depth 1.3 cor m
	Showers (intermittent) (Spookle	Water Velocity 0.07 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION Nane	Indicate the dominant type and record the domi Rooted emergent Rooted submergent Hoating Algae Attached Algae	nant species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature /3.9 °C Specific Conductance 0.171 Dissolved Oxygen 10.82	Water Odors Normal/None Sewage Petroleum Chemical Fishy Other
	pH <u>6.99</u> Turbidity <u>7</u> .9	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other
	WQ Instrument Used <u>U-ZZ</u>	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Petroleum Chemical Anaerobic None Other	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils ☑ Absent □ Slight □ Moderate □ Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus	sticks, wood, coarse plant	20
Boulder	> 256 mm (10")	0	1	materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic	11
Gravel	2-64 mm (0.1"-2.5")	fine 5		(FPOM)	40
Sand	0.06-2mm (gritty)	60	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	35	1		20
Clay	< 0.004 mm (slick)	0	1		20

			(L) (R)
STREAM NAME	va. Creek I	OCATION MRI	-1 Cphotos#16,15, benthic#1
LAT 33.56944 L	ONG 85.94401	Split riff	le (looking Lownsfream)
SAMPLE# MRIJ	(MRI-1R) N	IOTES Left righ	+ side
INVESTIGATORS	382		
FORM COMPLETED BY		DATE 10/26 IME 1000 MM PM	REASON FOR SURVEY Benthic Commi
* Work head	of riffle	.:	
WEATHER CONDITIONS	Now storm (he	avy rain)	INSTREAM FEATURES
	rain (stea	termittent)	Water Depth 0.9 ft or m Water Velocity 1.53 ft/sec or m/sec (within 1 m of substrate)
	-		
AQUATIC VEGETATION	Indicate the dominant ty ☐ Rooted emergent ☐ Floating Algae	pe and record the domin: Rooted submergent Attached Algae	ant species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 13.4 °C Specific Conductance C Dissolved Oxygen 10.1	7,17 <i>5</i>	Water Odors O Normal/None O Petroleum O Chemical Fishy O Other
	pH <u>6.9Z</u> Turbidity <u>7.7</u>		Water Surface Oils Slick Sheen Globs Flecks None Gother
	WQ Instrument Used	V-ZZ	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Sr Normal Sewage Chemical Anaero Other		Deposits Sludge Sawdust Paper fiber Sand Relict shells Other
	Oils PAbsent Slight M	oderate	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		0	Detritus	sticks, wood, coarse plant	<i>د</i> ج	
Boulder	> 256 mm (10")	30		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	30	1	(FPOM)	< }	
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	<1	1		10	
Clay	< 0.004 mm (slick)	O	1		· · · · · · · · · · · · · · · · · · ·	

STREAM NAME Cho.	cc Creek	LOCATION	1 (1)	7 / 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
LAT 33.56779 L			LEH A-	2 (photo \$25, benthic #2)
SAMPLE# LEAV-2		NOTES A	long inn	er bend downstream of LDEPZ
INVESTIGATORS	BBL_	<u> </u>		
FORM COMPLETED BY		DATE 10/2	9/06	REASON FOR SURVEY
	JCV	TIME	AM PM	Phyto comm.
S jabs 1	per sample		.:	
WEATHER CONDITIONS	Now _		•	INSTREAM FEATURES
	rain (s	(heavy rain) steady rain) (intermittent)		Water Depth 1.1 ft or m
	%□ %cl	oud cover ar/sunny		Water Velocity O.Z. t/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant Represent Floating Algae	t type and recor Rooted su Attached	ubmergent	int species present A Rooted floating
WATER QUALITY (within 1 m of substrate)	Temperature 14.7 Specific Conductance Dissolved Oxygen 17	0.109		Water Odors Normal/None
	pH <u>8.0Z</u> Turbidity <u>69.3</u>			Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other
	WQ Instrument Used	V-2 <u>7</u>	·	Turbidity (if not measured) ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana Other	age Petre	oleum (Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils Absent Slight	Moderate) Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	40	
Boulder	> 256 mm (10")	0	1			
Cobble	64-256 mm (2.5"-10")	6	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	< 5		(FPOM)	30	
Sand	0.06-2mm (gritty)	35	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	60			< S	
Clay	< 0.004 mm (slick)	4 \$	1			

STREAM NAME Cho.	us Creek LOCATION / EAL	V-1 (photo #5, bentine)
LAT 33.56042 L		in of backuator entrand
SAMPLE# LEAV-1	700.134.60	or backuater entrande
INVESTIGATORS	334	
FORM COMPLETED BY	DATE 10 /28/06	REASON FOR SURVEY
	JCV TIME TIME AM PA	Phyto. Community
	3 40 12	1 1 1912 Community
WEATHER	Now	INSTREAM
CONDITIONS		FEATURES
	storm (heavy rain) rain (steady rain)	Water Depth 1.8 ft or m
	showers (intermittent) % % % % % % % % % % % % % % % % % % %	Water Velocity 0.03 ft/sec or m/sec
	Section Cover	(within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type and record the domin ☐ Rooted emergent ☐ Floating Algae ☐ Attached Algae	ant species present Rooted floating Free floating
WATER QUALITY	Temperature 15.4 °C	Water Odors
(within 1 m of substrate)	Specific Conductance 0.087	
	Dissolved Oxygen _ 9 6 3	☐ Fishy ☐ Other
	рн_5.68	Water Surface Oils Slick Sheen Globs Flecks
	Turbidity 276	None Other
	WQ Instrument Used U-ZZ	Turbidity (if not measured) ☐ Clear ☐ Slightly turbid 🖄 Turbid
		☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other
SEDIMENT/	Odors	Deposits
SUBSTRATE	☐ Normal ☐ Sewage ☐ Petroleum ☐ Chemical ☐ Anaerobic ☐ None	☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
$\mathcal{N}A$	O Other	
	Oils ☐ Absent ☐ Slight ☐ Moderate ☐ Profuse	
	TRATE COMPONENTS ORG	GANIC SUBSTRATE COMPONENTS

INORGANIC SUBSTRATE COMPONENTS 人人 (should add up to 100%)		NA	ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant	
Boulder	> 256 mm (10")		1	materials (CPOM)	
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")]	(FPOM)	
Sand	0.06-2mm (gritty)		Marl	grey, shell fragments	
Silt	0.004-0.06 mm				
Clay	< 0.004 mm (slick)				

STREAM NAME CIAOC	c. Creek LOC	ATION LRU-	1 (photo #2 benthic 1)
LAT 33.56 ZOT LON	1G 86.01363	Downstre	um from riffle series
SAMPLE# LRU-1/L	RU-1R) NOT	ES Channel	braids
INVESTIGATORS 6	336		
FORM COMPLETED BY	JCV TIME	235	REASON FOR SURVEY Benthic Comm.
5 sweeps per	sample, replica	ited taken	10 yds downstreym
WEATHER CONDITIONS	Now storm (heavy		INSTREAM FEATURES
	rain (steady i	rain)	Water Depth O. 9 Cor m
	%D %cloud cov	/er	Water Velocity 2.4 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION NA	Indicate the dominant type and Rooted emergent In Floating Algae	and record the domin Rooted submergent Attached Algae	ant species present • Rooted floating • Free floating
(within 1 m of substrate)	Temperature \S\8 C Specific Conductance 0.0 Dissolved Oxygen 10.14		Water Odors Normal/None
	oH <u>5.94</u> Furbidity 348		Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	WQ Instrument Used	-22	Turbidity (if not measured) Clear C
SUBSTRATE	Odors Normal Sewage Chemical Anaerobic Other	☐ Petroleum ☐ None	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Dils Í Absent □ Slight □ Mode	rate 🗆 Profuse	

INC	PRGANIC SUBSTRATE (should add up to			ORGANIC SUBSTRATE ((does not necessarily add	COMPONENTS lup to 100%)	
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		0	Detritus	sticks, wood, coarse plant		
Boulder	> 256 mm (10")	<5		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	35	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	35		(FPOM)		
Sand	0.06-2mm (gritty)	30	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	< 5				
Clay	< 0.004 mm (slick)	O	,			

COMPRANCE CI	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
STREAM NAME Che	<u> </u>	-2 Cohoto # 27, benthic #4)
LAT 33. 56298 L	ONG 86.01469	can of LRU-1
SAMPLE# LPU-2	(LRU-2R) NOTES DOWNS FOR	an it us
INVESTIGATORS	BBL	
FORM COMPLETED BY	DATE 10/29/06 TIME 9:30 AM P	REASON FOR SURVEY
	1 9:30 C	Benthiz Comm.
	1	
WEATHER CONDITIONS	Now	INSTREAM FEATURES
	storm (heavy rain) rain (steady rain)	Water Depth 1.3 (ft) or m
	showers (intermittent) % % % cloud cover	Water Velocity 2.95 ft/sec or m/sec
	clear/sunny	(within 1 m of substrate)
<u> </u>		
AOUATIC	Indicate the dominant type and record the domi	
VEGETATION NA	Rooted emergent Rooted submergent Floating Algae Attached Algae	nant species present ☐ Rooted floating ☐ Free floating
WATER QUALITY	Temperature 13.8 °C	Water Odors
(within 1 m of substrate)	Specific Conductance 0: 111	Normal/None
	1	☐ Petroleum ☐ Chemical ☐ Fishy ☐ Other
	Dissolved Oxygen <u>10.26</u> pH <u>7.24</u>	Water Surface Oils
	pH_T.27 Turbidity_69.7	Slick Sheen Globs Flecks None Other
	1, ~~	Turbidity (if not measured)
	WQ Instrument Used	☐ Clear
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Petroleum Chemical Anaerobic None Other	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils Absent Slight Moderate Profuse	trace

INC	INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		. 0	Detritus	sticks, wood, coarse plant	:	
Boulder	> 256 mm (10")	<5		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	sm 60	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	25		(FPOM)		
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	۷,5	1		trace	
Clay	< 0.004 mm (slick)	0	1			

	sec Creek "	LOCATION	LBW-1	(photo # 4, benthic 1)
LAT 33.56074 L	ONG 086.01231	B	ack water	across from
SAMPLE# LBW-1	(LBW-1R)	NOTES	oxton	across from
INVESTIGATORS	BBL			
FORM COMPLETED BY	JCV	DATE 0 29 TIME 124 (AM (PM)	REASON FOR SURVEY Benthic Survey
WEATHER CONDITIONS	Now		-	INSTREAM FEATURES
	rain (s	heavy rain) teady rain) (intermittent)		Water Depth O, S ft or m
	%□ %clo	ud cover r/sunny		Water Velocity O. 03 tysec or m/sec (within 1 m of substrate)
		•		
AQUATIC VEGETATION NA	Indicate the dominant ☐ Rooted emergent ☐ Floating Algae	type and record Rooted su Attached	bmergent	nt species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 15.3 Specific Conductance Dissolved Oxygen 8.	0.093	À C	Water Odors Normal/None
	pH _G.31 Turbidity _ 235			Water Surface Oils → Slick □ Sheen □ Globs □ Flecks □ None □ Other
	WQ Instrument Used	U-22	[Turbidity (if not measured) Clear Slightly turbid Clopaque Stained Opaque
SEDIMENT/ SUBSTRATE	Odors Organic Normal Sewa Chemical Anae	ige 🔾 Petro	oleum C	Deposits I Sludge I Sawdust I Paper fiber Sand Relict shelis I Other
	Oils ☐ Absent ☐ Slight ☐	Moderate	Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		0	Detritus	sticks, wood, coarse plant	30
Boulder	> 256 mm (10")	0		materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic	30
Gravel	2-64 mm (0.1"-2.5")	- 45		(FPOM)	
Sand	0.06-2mm (gritty)	30	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	60			10
Clay	< 0.004 mm (slick)	< 5	1		10

			the contract of the contract o
STREAM NAME C	occ. Creek LOCATIO	N LBW-Z	(photo # 23, benthic # 2)
LAT 33.56090 L	ONG 86.01837	Backwala	- area from small trib.
SAMPLE# LBW-2	(LBW-2-R) NOTES	- Copposite !	trea from small Tho.
INVESTIGATORS	//		
FORM COMPLETED BY	DATE TIME	0 AM (PM)	REASON FOR SURVEY Bentlic Comm
WEATHER CONDITIONS	Now storm (heavy rain) rain (steady rain) showers (intermittent %Cloud cover clear/sunny)	INSTREAM FEATURES Water Depth O.9 ft or m Water Velocity O.21 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type and re ☐ Rooted emergent ☐ Roote ☐ Floating Algae ☐ Attac	cord the dominar d submergent hed Algae	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 14.0 ° C Specific Conductance 0.19-7 Dissolved Oxygen 11.71	- -	Water Odors TNormal/None
	pH <u>6.57</u> Turbidity 35.6		Vater Surface Oils] Slick □ Sheen □ Globs □ Flecks TNone □ Other
	WQ Instrument Used <u></u> ∪ − 2		Curbidity (if not measured) Clear
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Chemical Anaerobic Other	Petroleum C	Deposits I Sludge
	Oils Absent O Slight O Moderate	☐ Profuse	

INC	INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock		. 0	Detritus	sticks, wood, coarse plant	60		
Boulder	> 256 mm (10")	υ		materials (CPOM)			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic	20		
Gravel	2-64 mm (0.1"-2.5")	10		(FPOM)			
Sand	0.06-2mm (gritty)	30	Marl	grey, shell fragments			
Silt	0.004-0.06 mm	60			10		
Clay	< 0.004 mm (slick)	0					

7				
	· · · · · · · · · · · · · · · · · · ·	OCATION	LDEP-	1 (photo#1 Benthic1)
LAT 33.56056 L			lown stren	in edge of aquatic veg.
SAMPLE# LDEP - 1	L (LDEP 1R)	OTES	island	d's
INVESTIGATORS	38L			
FORM COMPLETED BY	JCV !	OATE 10 28 IME 3 5	₹06 = AM PM	REASON FOR SURVEY Benthic macro comm.
WEATHER CONDITIONS	Now storm (he			INSTREAM FEATURES Water Depth 1 5 (ft) or m
	showers (in clear)	l cover		Water Velocity 0.29 ft/sec or m/sec (within 1 m of substrate)
F				
AQUATIC VEGETATION None	Indicate the dominant ty ☐ Rooted emergent ☐ Floating Algae	pe and record Rooted su Attached	bmergent	nt species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 15.9 ° Conductance Conductance Resolved Oxygen 9.8	.094). J	Water Odors ⊇ Normal/None □ Sewage □ Petroleum □ Chemical □ Fishy □ Other
	pH <u>6.63</u> Turbidity 287			Water Surface Oils I Slick
	WQ Instrument Used	U-22		Turbidity (if not measured) Clear Slightly turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewag Chemical Anaero Other		leum (Deposits I Sludge I Sawdust I Paper fiber I Sand Relict shells I Other
	Oils PAbsent OSlight OM	1oderate □	Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		.0	Detritus	sticks, wood, coarse plant	11.5	
Boulder	> 256 mm (10")	0		materials (CPOM)	40	
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic	30	
Gravel	2-64 mm (0.1"-2.5")	<u>د</u> ۶		(FPOM)		
Sand	0.06-2mm (gritty)	5	Marl	grey, shell fragments	10	
Silt	0.004-0.06 mm	85				
Clay	< 0.004 mm (slick)	≤ 5	1			

		,		
STREAM NAME CL.		LOCATION L	-DEP -	2 Uphoto #26, benthic #2
LAT 33, 56 312 L	ONG 86:01498	Vou	instier	n of blowdown
SAMPLE# LDEP-	2 (LDEP-2R)	NOTES al	ong on	ter bend.
INVESTIGATORS	BBL			
FORM COMPLETED BY	JUV	DATE 10/29 TIME 1030	С М РМ	REASON FOR SURVEY Benthic Survey
			, .	
WEATHER CONDITIONS		(heavy rain) steady rain)		INSTREAM FEATURES Water Depth 1.1 (ft) or m
	showers %clo	(intermittent) oud cover ar/sunny		Water Velocity <u>0.08</u> ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant ☐ Rooted emergent ☐ Floating Algae	type and record t Rooted subn Attached Al	nergent	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 14 Specific Conductance Dissolved Oxygen 10	0.110		Water Odors Normal/None
	pH 7.56 Turbidity 41.6		. (Water Surface Oils I Slick
	WQ Instrument Used	V-ZZ	Ε	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Clear Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana Other		um 🕻	Deposits I Sludge I Sawdust I Paper fiber I Sand I Relict shells I Other
	Oils ☑ Absent ☐ Slight ☐	I Moderate □ P	rofuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		0	Detritus	sticks, wood, coarse plant		
Boulder	> 256 mm (10")	0]	materials (CPOM)	40	
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic	40	
Gravel	2-64 mm (0.1"-2.5")	< >		(FPOM)		
Sand	0.06-2mm (gritty)	15	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	8 0			5	
Clay	< 0.004 mm (slick)	45				

STREAM NAME Ch	occ. Creek	LOCATION	LRI-	(photo #3, benthic #1)
LAT 33.56131 L	ONG 86.0126Z		Ciffle	downstream of
SAMPLE# LRI-1	(LRI-1R)	NOTES	backu	vater
INVESTIGATORS	BBL	:		V
FORM COMPLETED BY	JCV	DATE 102 TIME	3 06 AM ₹M	REASON FOR SURVEY Benthic Comm.
5 sweeps	per sample		×.	
WEATHER CONDITIONS	Now	(heavy rain)	<u>-</u>	INSTREAM FEATURES
	🖸 rain (s	steady rain) (intermittent)		Water Depth 1, 4 ft or m
	%□ %cl	oud cover ar/sunny		Water Velocity 3.77 (t/sec) or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan ☐ Rooted emergent ☐ Floating Algae	LI Rooted s	ubmergent	int species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 15.6 Specific Conductance Dissolved Oxygen	0.086		Water Odors Normal/None
	pH <u>5.89</u> Turbidity <u>287</u>		,	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	WQ Instrument Used	U-2.	_	Turbidity (if not measured) Clear Slightly turbid Opaque Stained Turbid Other
SEDIMENT/ SUBSTRATE	Odors M Normal Sew Chemical Ana Other	age Pet	roleum	Deposits □ Sludge □ Sawdust □ Paper fiber □ Sand □ Relict shells □ Other
	Oils Absent OSlight O	Moderate	☐ Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		0	Detritus	sticks, wood, coarse plant	۷ ۶	
Boulder	> 256 mm (10")	5	1	materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic	۷5	
Gravel	2-64 mm (0.1"-2.5")	45		(FPOM)		
Sand	0.06-2mm (gritty)	2 0	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	< 6	1		10	
Clay	< 0.004 mm (slick)		1			

STREAM NAME ()	0 1	LOCATION LAT	- /	()) ! 0!! !
Cha	cc. Creek	LOCATION LKT.	- 2 ((photo \$24, benthic \$2)
LAT 33.56 193 L		Kight	314	ie of island downstream
SAMPLE# LRI-Z		NOTES OF E	AV -	2.
INVESTIGATORS	品厂			
FORM COMPLETED BY		DATE 10/29/06		REASON FOR SURVEY
	JW	TIME 1200 AM	(PM)	Benthic comm.
WEATHER CONDITIONS	Now			INSTREAM FEATURES
	🗅 rain ((heavy rain) steady rain) (intermittent)		Water Depth 1.2 (ft) or m
	%□ %cl	oud cover		Water Velocity 2.63 ft/sec or m/sec
	cle	ar/sunny		(within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan ☐ Rooted emergent ☐ Floating Algae	t type and record the do Rooted submerger Attached Algae	minant nt	t species present ☐ Rooted floating ☐ Free floating
WATER QUALITY	Temperature 14.4	_a C	У	/ater Odors
(within 1 m of substrate)	Specific Conductance	0.110		Normal/None
	Dissolved Oxygen]	1.70		Fishy Other
	pH 7.82		W	ater Surface Oils Slick □ Sheen □ Globs □ Flecks
	Turbidity		Ā	None Other
	WQ Instrument Used	U-7.7	T	urbidity (if not measured) Clear Slightly turbid
	3		ă	Clear Slightly turbid U Turbid Opaque U Stained U Other
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana			eposits Sludge Sawdust Paper fiber Sand Relict shells Other
	Oils Absent Slight	I Moderate ☐ Profuse		

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		D	Detritus	sticks, wood, coarse plant	:	
Boulder	> 256 mm (10")	45]	materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	10	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	60		(FPOM)		
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	5				
Clay	< 0.004 mm (slick)					

ARCADIS BBL

Appendix D

Physical Characteristics/Water Quality Field Data Sheets

Spring 2007

STREAM NAME Ch	locco, Creek	LOCATION	Upper	EDR - Riffle #1
LAT 33. 59270 LO	ONG 85, 83116		Picture	- # 100-0145 (Kick)
SAMPLE# URI-1	(-1R)	NOTES		100-0146 (Blandrat
INVESTIGATORS				· · · · · · · · · · · · · · · · · · ·
FORM COMPLETED BY	JCV	DATE 5/1 TIME /5	4/07 +5 AM (FM)	REASON FOR SURVEY Benthic / Mollus/2
WEATHER CONDITIONS	Now	0		INSTREAM FEATURES
	🔾 rain ((heavy rain) (steady rain)		Water Depth 1.8 ft or m
	%□ _ %cl	s (intermittent) loud cover ear/sunny		Water Velocity 3.3 (ft/sec) or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominar ☐ Rooted emergent ☐ Floating Algae	t type and reco	submergent	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature Z4	·	(Water Odors Normal/None Petroleum Fishy Sewage Chemical (Treated)
	Dissolved Oxygen	9.95		
	pH 7.37 Turbidity 25			Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	WQ Instrument Used	1 <u>U-22</u>	. (Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Ser Chemical An	wage 🔾 Pe aerobic 🗷 No	troleum (Deposits □ Sludge: □ Sawdust: □ Paper fiber: □ San □ Relict shells: □ Other
	Oils			

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		-	Detritus	sticks, wood, coarse plant		
Boulder	> 256 mm (10")	5		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	40		(FPOM)	-coccose	
Sand	0.06-2mm (gritty)	25	Marl	grey, shell fragments		
Silt	0.004-0.06 mm] .		2 ۶	
Clay	< 0.004 mm (slick)		1			

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

Photo#

Mollusk - Asiatic Clam size: min: 0.3 cm n= 56

100-0149

STREAM NAME Choc	eo. Creek LOCATION Uppe	- EDR - Run #1 # 100-0148
LAT 33, 59257 LC	DNG 85.83113 photo 9	# 100-0148
SAMPLE# URU-1	(URU-1R) NOTES	
	/	
FORM COMPLETED BY	$\int \mathcal{O} \qquad \qquad \int \frac{\text{DATE}}{\text{TIME}} \frac{5/14/97}{1710} \text{ AM } \mathbb{C}$	REASON FOR SURVEY Bentlic
WEATHER CONDITIONS	Now	INSTREAM - FEATURES
	storm (heavy rain) rain (steady rain)	Water Depth 2.3 (ft or m
	showers (intermittent) % % % cloud cover clear/sunny	Water Velocity 1.36 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type and record type and t	inant species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 24.0 °C Specific Conductance 0.128 Dissolved Oxygen 9.94	Water Odors O Normal/None O Petroleum O Fishy O Sewage O Chemical O Chemical O Chemical O Chemical O Chemical
	pH_8.05 Turbidity_38	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other.
	WQ Instrument Used	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors ONOrmal OSewage OPetroleum Chemical OAnaerobic ONone Other	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils Ols Moderate Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			Detritus	sticks, wood, coarse plant	5	
Boulder	> 256 mm (10")	. 5		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	+r < S	Muck-Mud	black, very fine organic (FPOM)		
Gravel	2-64 mm (0.1"-2.5")	45		(FFOM)		
Sand	0.06-2mm (gritty)	3 2	Marl	grey, shell fragments	< <	
Silt	0.004-0.06 mm	15				
Clay	< 0.004 mm (slick)	tres			<u> </u>	

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

	a Creek	LOCATION	Upper E	DR - Back	water #1
LAT 33. 59243 L	ONG 85, 83146	. /	Picture	DR - Back - 100-01	47
SAMPLE#UBW-1	(-1R)	NOTES		:	
INVESTIGATORS	JCV, 6MG	· · · · · · · · · · · · · · · · · · ·			
FORM COMPLETED BY	JOV	DATE S/14 TIME /S3	D AM PM	REASON FOR SU Bent	
WEATHER CONDITIONS	Now storm	(heavy rain)		INSTREAM FEATURES	5
	☐ rain (☐ showers %☐ %cl	steady rain) (intermittent) oud cover ear/sunny		Water Depth 1. Water Velocity (within 1 m of subs	Olo (vsec) or m/sec
AQUATIC					
VĚGETATION	Rooted emergent (e	Rooted si Attached	d the dominar ubmergent Algae	nt species present ☐ Rooted floa	ting
	Rooted emergent (e) Floating Algae Temperature 24. S Specific Conductance	Ose C Rooted si C Attached	ubmergent Algae	☐ Rooted floa Water Odors ☐ Normal/None ☐ Petroleum	ting
VEGETATION WATER QUALITY	Rooted emergent (e) Floating Algae Temperature 24.5 Specific Conductance Dissolved Oxygen 2 pH 7.81	Ose C Rooted si C Attached	ubmergent Algae	Rooted floa Water Odors Normal/None	☐ Sewage ☐ Chemical ☐ Other ☐ Globs ☐ Flecks
VEGETATION WATER QUALITY	Rooted emergent (e) Rooted emergent (e) Floating Algae Temperature 24.5 Specific Conductance Dissolved Oxygen	Rooted si Attached	ubmergent Algae	Water Odors Normal/None Petroleum Fishy Water Surface Oils Slick Sheen	Sewage Chemical Other Globs Flecks
VEGETATION WATER QUALITY	Rooted emergent (e) Floating Algae Temperature 24.5 Specific Conductance Dissolved Oxygen 9 pH 7.8 Turbidity 33 WQ Instrument Used	Rooted si Attached	ubmergent Algae	Water Odors Normal/None Petroleum Fishy Water Surface Oils Slick Sheen None Other Clear Slightly Opaque Stained	Sewage Chemical Other Globs Flecks sured) turbid Turbid Other

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		~.	Detritus	sticks, wood, coarse plant		
Boulder	> 256 mm (10")]	materials (CPOM)	40	
Cobble	64-256 mm (2.5"-10")	-	Muck-Mud	black, very fine organic	5-10	
Gravel	2-64 mm (0.1"-2.5")	45]	(FPOM)		
Sand	0.06-2mm (gritty)	1 \$	Mari	grey, shell fragments		
Silt	0.004-0.06 mm	80				
Clay	< 0.004 mm (slick)					

	. ' <u> </u>					
	STREAM NAME CLoc		LOCATION	Vijer	Kend - Depositional # 1 = 100-0150	
	LAT 33. 59001 LO	NG 85.8330)		Photo !	100-0150	
	SAMPLE# UDEP-1	(-1R)	NOTES	,		
	INVESTIGATORS JC	V	,			
	FORM COMPLETED BY	CV	DATE 5// TIME 17	4/07 40 AM PN	REASON FOR SURVEY Benthic	
٠				w.,		
	WEATHER CONDITIONS	Now		-	INSTREAM - FEATURES -	
•		rain (s	(heavy rain) steady rain)		Water Depth 2 2 ft or m	
١		%□ %clo	(intermittent)		Water Velocity 0.38 ft/sec or m/s	sec
١		∠d cle	ar/sunny	·	(within 1 m of substrate)	
·						
	AQUATIC VEGETATION TO NOT	Indicate the dominant Rooted emergent O Floating Algae	t type and reco	ord the doming submergent d Algae	nant species present Rooted floating Free floating	
	WATER QUALITY (within 1 m of substrate)	Temperature 23.9			Water Odors ☐ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical	
		Specific Conductance			☐ Fishy ☐ Other	
		pH 8.1	<u>(• T]</u>		Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other	
	6.1	Turbidity 16. Z	*.	., -	/	
		WQ Instrument Used	<u>V-Z7</u>	<u>ン</u>	Turbidity (if not measured) ☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other	
	SEDIMENT/ SUBSTRATE	Odors Normal Sev Chemical Ana	vage DP aerobic DN	etroleum one	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Relict shells ☐ Other_	☐ Sand
		Oils Absent Cl Slight	☐ Moderate	☐ Profuse		·-···
1				~~	ACANIC CUIDCED ATTE COMPONENTS	
	INORGANIC SUBS	TRATE COMPONEN	18		RGANIC SUBSTRATE COMPONENTS	

INC	RGANIC SUBSTRATE (should add up to		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Diameter Type		% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)			
Boulder	> 256 mm (10")	_		materials (CPOM)	50		
Cobble	64-256 mm (2.5"-10")	_	Muck-Mud	black, very fine organic (FPOM)			
Gravel	2-64 mm (0.1"-2.5")	٤ 5		(FPOM)	2 \$		
Sand	0.06-2mm (gritty)	3 5	Marl	grey, shell fragments			
Silt	0.004-0.06 mm 3 S]		5-10		
Clay	< 0.004 mm (slick)	S					

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

		· · · · · · · · · · · · · · · · · · ·				
STREAM NAME CL		NOTES Photo# 101-199				
LAT 33. 58327 LO	ONG 85 85305	Photo#	101.100			
SAMPLE# URI -Z ,-	ZR.	NOTES				
INVESTIGATORS /	1BBZ					
FORM COMPLETED BY		DATE 5/17/07	REASON FOR SURVEY			
J		TIME AM I	Benthic			
WEATHER	Now		INSTREAM -			
CONDITIONS	☐ storm	(heavy rain)	FEATURES			
	□ rain (steady rain)	Water Depth 1.0 ft or m			
	%□ %cl	(intermittent) oud cover	Water Velocity 0.58 ft/sec or m/sec			
	cle	ar/sunny	(within 1 m of substrate)			
AQUATIC VEGETATION	Indicate the dominan ☐ Rooted emergent ☐ Floating Algae	t type and record the dom Rooted submergent Attached Algae	inant species present ☐ Rooted floating ☐ Free floating			
WATER QUALITY	Temperature 20.4	_	Water Odors			
(within 1 m of substrate)	Specific Conductance	0.129	☐ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical			
	Dissolved Oxygen	_	☐ Fishy ☐ Other			
	рн 8.24	<u> </u>	Water Surface Oils			
	Turbidity 23		O Slick O Sheen O Globs O Flecks None O Other			
	3		Turbidity (if not measured)			
	WQ Instrument Used	1_0-22	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other			
SEDIMENT/ SUBSTRATE		vage Detroleum	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other			
	Other					
	Oils D'Absent D Slight	☐ Moderate ☐ Profuse				
	7					
	STRATE COMPONEN	TS OI	RGANIC SUBSTRATE COMPONENTS			

INC	PRGANIC SUBSTRATE (should add up to		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Diameter Type		% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock			Detritus	sticks, wood, coarse plant	د ج		
Boulder	> 256 mm (10")	25		materials (CPOM)			
Cobble	64-256 mm (2.5"-10")	S	Muck-Mud	black, very fine organic	< s		
Gravel	2-64 mm (0.1"-2.5")	35		(FPOM)			
Sand	0.06-2mm (gritty)	45	Marl	grey, shell fragments			
Silt 0.004-0.06 mm		10					
Clay	< 0.004 mm (slick)	< 5]				

STREAM NAME	occ. Creek	LOCATION	Upper	Keech - Run # Z		
LAT 33.58178 L	ONG 85.85390	Ω)	1 4- 1	Reach - Run # Z		
SAMPLE# URU-Z	(-2P)	NOTES	ioto H	01-700		
INVESTIGATORS	ABBL					
FORM COMPLETED BY	JW	DATE S/17 TIME 925	AM DM	REASON FOR SURVEY Benthic		
WEATHER CONDITIONS	Now □ storm	(heavy rain)		INSTREAM FEATURES		
	🔲 🗅 rain (steady rain) (intermittent)		Water Depth 15 ft or m		
	%□ %cl	oud cover ar/sunny		Water Velocity O. 21 ft/sec of m/sec (within 1 m of substrate)		
AQUATIC VEGETATION	Indicate the dominan ☐ Rooted emergent ☐ Floating Algae	t type and record Rooted sul Attached A	bmergent	nt species present Rooted floating Free floating		
WATER QUALITY (within 1 m of substrate)	Temperature 20,5 Specific Conductance	. 130	7	Water Odors A Normal/None		
	Dissolved Oxygen 1 pH 8.16 Turbidity 33			Water Surface Oils Oslick Sheen Globs Flecks None Glother		
	WQ Instrument Used		/ n	Turbidity (if not measured) I Clear D Stightly turbid D Turbid D Opaque D Stained D Other		
SEDIMENT/ SUBSTRATE				Deposits I Sludge Sawdust Paper fiber Sand Cher		
	Oils Absent O Slight C	Moderate 🗅	Profuse			
	INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)					
	0,0					

INC	RGANIC SUBSTRATE (should add up to		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type			Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock		-	Detritus	sticks, wood, coarse plant	5		
Boulder	> 256 mm (10")	-]	materials (CPOM)			
Cobble	64-256 mm (2.5"-10")	< 5	Muck-Mud	black, very fine organic			
Gravel	2-64 mm (0.1"-2.5")	25		(FPOM)	25		
Sand 0.06-2mm (gritty)		5 \$	Mari	grey, shell fragments			
Silt	0.004-0.06 mm		1		5-10		
Clay	< 0.004 mm (slick)	10	1				

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

				·····				
	NAME Cho			LOCAT	TION JOO	ner Reac	L - EAVA	1
	57952 L				Photot	+ 11	1 - 207	
SAMPLE	# VEAV-1	6-1	R)	NOTES	INVO	τ. ιυ	1 101-	
INVESTI	GATORS A	BBL						
FORM C	OMPLETED BY	J	\ \	DATE_ TIME_	5/17/07 1100	м) РМ	REASON FOR SUR	VEY
WEATHER Now CONDITIONS						INSTREAM FEATURES	-	
	**	1		(heavy ra: steady rai:		- 1	Water Depth 2	2 ft) or m
		%	.□_ %cli	(intermit oud cover ar/sunny			1.0	19 ft/sec or mi/sec
		·						
AQUATION VEGETA		Indicat U Root U Float	e the dominanted ed emergent ing Algae	t type and C Re	d record the d ooted submerg ttached Algae	ent -	species present □ Rooted floatii	ng 🗅 Free floating
1.	WATER QUALITY (within 1 m of substrate) Temperature 21.5 0 Specific Conductance Dissolved Oxygen 10. pH 8.13			0.130	<u>)</u>	w:	Petroleum 🗆	Sewage Chemical Other Globs □ Flecks
			ity <u>17</u> strument Used	<u>V-</u>	22_	Tu O (rbidity (if not meas Clear	ured) urbid D Turbid D Other
SEDIME! SUBSTRA		Odors D Norn D Chen D Other	nical 🔝 🚨 Ana	rage erobic	☐ Petroleum ☐ None		posits Sludge □ Sawdust Relict shells □	☐ Paper fiber ☐ Sand Other
		Oiks O Abse	nt 🗆 Slight 🔾	1 Modera	ite 🔾 Profu	ise		
					r"			
NAINC	ORGANIC SUBS (should a			rs 			IIC SUBSTRATE C not necessarily add	
Substrate Type	Substrate Diameter % Composit Type Sampling R			Substrate Type	¢	Characteristic	% Composition in Sampling Area	
Bedrock	Bedrock				Detritus	sticks, w	ood, coarse plant	
Boulder > 256 mm (10")				material	s (CPOM)			
Cobble 64-256 mm (2.5"-10")			Muck-Mud		ery fine organic			
Gravel	2-64 mm (0.1"-	2.5")				(FPOM)		
Sand	0.06-2mm (gritt	y)			Marl	grey, sh	ell fragments	
Silt	0.004-0.06 mm] .			
Clay	< 0.004 mm (slick)					1		

STREAM	I NAME CL	reek	LOCAT	OCATION Upper Reach - EAV#Z					
LAT 33	LAT 33,57858 LONG 85 86 3 7				01 1 # 101 707				
SAMPLE				NOTES	OTES PARTO 101 - 205				
INVEST	GATORS								
FORM C	OMPLETED BY	JC	\cup	DATE_ TIME_	5/17/07 1/35- (A)	а) РМ	REASON FOR SUR Bentle	VEY	

WEATH		N	ow .				INSTREAM FEATURES	-	
				(heavy ra			Water Depth 1.7	• (A) and	
ľ			rain (s	steady rai (intermit					
ľ				oud cover ar/sunny	•	•		10 ft/sec or m/sec	
			G CIC	airsuilliy	· · · · · · · · · · · · · · · · · · ·	· ·	(within 1 m of substr	ate)	
r							· .		
AQUATI VEGETA		U Root	e the dominant ed emergent ing Algae	U R	d record the dooted submerg ttached Algae	ominan ent	nt species present Rooted floatin	ng 🔾 Free floating	
I .	QUALITY	Tempe	rature 21,7	_" C .			Water Odors		
(within 1 n	n of substrate)	Specific Conductance 0 (3)				C	☐ Normal/None ☐ Sewage ☐ Chemical ☐ Fishy ☐ Other ☐ Chemical		
		Dissolv	Dissolved Oxygen 11.22						
		рН_ 5		Water Surface Oils					
		i ·	•		☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other				
		Ì	dity 31.			1	Turbidity (if not measured)		
		WQ Instrument Used			-20		Clear DSlightly turbid DTurbid Dpaque DStained DOther		
			<u> </u>			· · · · · · · · · · · · · · · · · · ·		- 011101	
SEDIME! SUBSTRA		Odors Norn Chen	nical 🛛 Ana	age erobic	O Petroleum O None		Deposits □ Sludge □ Sawdust □ Relict shells □	☐ Paper fiber ☐ Sand Other	
		Oils							
			nt 🗆 Slight 🔾	1 Modera	te 🖸 Profu	se .			
NA	RGANIC SUBS			rs		ORGA (doe	NIC SUBSTRATE C	OMPONENTS up to 100%)	
Substrate Type	Diamete	er	% Composi Sampling I		Substrate Type		Characteristic	% Composition in Sampling Area	
Bedrock	Bedrock				Detritus	sticks,	wood, coarse plant	:	
Boulder	Boulder > 256 mm (10")					materi	als (CPOM)		
Cobble	64-256 mm (2.5	"-10")			Muck-Mud		very fine organic		
Gravel	2-64 mm (0.1"-	2.5")					FPOM)		
Sand	0.06-2mm (gritt	у)		,	Marl	grey, s	shell fragments		
Silt	0.004-0.06 mm				1				

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

< 0.004 mm (slick)

CTDEANGNAME CO	L C L LYGG	11.07.03.1	2
STREAM NAME Che		ATION Upper	Reach - Backwater # Z
LAT 33. 57891 L		Photo	# Peach - Backwater # Z
SAMPLE# UBW-Z	(-ZR) NOT	ES	10, 201
INVESTIGATORS	ABAL		
FORM COMPLETED BY	DAT	E 5/17/07	REASON FOR SURVEY
	TCU TIM	E <u> </u>	(PM) Benthic
WEATHER CONDITIONS	Now	-	INSTREAM - FEATURES
	storm (heavy	rain)	Water Depth 1.1 ft or m
	showers (intern		Water Velocity 0.05 ft/sec or (m/sec)
	clear/sunr		(within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type ☐ Rooted emergent ☐ Floating Algae ☐	and record the doi Rooted submergen Attached Algae	minant species present It
WATER QUALITY	Temperature 22.4 °C.		Water Odors
(within 1 m of substrate)	Specific Conductance 6135	\$	☐ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical
	Dissolved Oxygen 11.13		☐ Fishy ☐ Other
	pH 2.28	•	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
	Turbidity 45		None Other
		7 >	Turbidity (if not measured)
	WQ Instrument Used		☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other
SEDIMENT/	Odors		Deposits
SUBSTRATE		☐ Petroleum ☐ None	☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils		
	Absent Slight Mod	erate 🖸 Profuse	
	STRATE COMPONENTS dd up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)
		T	

INC	PRGANIC SUBSTRATE (should add up to		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock		-	Detritus	sticks, wood, coarse plant	UD		
Boulder	> 256 mm (10")			materials (CPOM)			
Cobble	64-256 mm (2.5"-10")	-	Muck-Mud	black, very fine organic			
Gravel	2-64 mm (0.1"-2.5")	< 5		(FPOM)	30		
Sand	0.06-2mm (gritty)	5	Marl	grey, shell fragments			
Silt	0.004-0.06 mm	8.5			· 5		
Clay	< 0.004 mm (slick)	< S .	1		•		

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

STREAM	STREAM NAME Chose Creek				TON UDA	0/ Y	Leuch - De	DOSITION	#2
LAT 33	LAT 33. 58007 LONG 85.85999				o H	Λ.	leach - Do	T	
SAMPLE#	WEP 2	EIR)	NOTES 1 AOTO 17			101-205			
INVESTIC	GATORS		J						
FORM CO	MPLETED BY	J	\vee	DATE_ TIME_	5/17/07 1305 ^	1 (PM)	REASON FOR SUF Benth		
					W -				
☐ rain (s ☐ showers ————————————————————————————————————			(heavy rain steady rain (intermittoud cover ar/sunny	n) tent)	-	INSTREAM FEATURES Water Depth	13 ft/sec of	m/seg	
<u> </u>							(**************************************		
AQUATIC VEGETATION Indicate the dominan Control Rooted emergent Displaying Algae				U Ro	d record the dooted submerg	ominan ent	t species present Rooted floati	ing 🗅 Free flo	oating
WATER ((within 1 m	PUALITY of substrate)	Specific Dissolve pH	rature 22.7 Conductance ed Oxygen 1	0.12=	7-	v	I Petroleum C I Fishy C Vater Surface Oils	Sewage Chemical Other	cks
			ity <u>18</u> strument Used		1-22		urbidity (if not meas Clear Slightly t Opaque O Stained	sured) urbid 🔾 Tur 🗘 Oth	bid er
				erobic	Petroleum None		eposits Sludge	□ Paper fib □ Other	er 🖸 Sand
INO	INORGANIC SUBSTRATE COMPONEN (should add up to 100%)			rs		ORGA (doe	NIC SUBSTRATE (s not necessarily add	COMPONENTS l up to 100%)	3
Substrate Diameter % Compos Type Sampling			Substrate Type		Characteristic		osition in ng Area		
Bedrock	Bedrock		_		Detritus		wood, coarse plant	/.	7
Boulder	> 256 mm (10")		,			materi	als (CPOM)	4	
Cobble Gravel	64-256 mm (2.5"-10") 2-64 mm (0.1"-2.5") 3 <			 	Muck-Mud	black, (FPOM	very fine organic f)	2	\$

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

35

30 4 s

Sand

Silt

Clay

0.06-2mm (gritty)

< 0.004 mm (slick)

0.004-0.06 mm

Marl

grey, shell fragments

STREAM NAME Ch	LCC Creek LOCATION MIN	Reach - Runt 2
LAT 33 56240 L	ONG 85.94236 Plata	# 101-194
SAMPLE# MRU-Z	(-2R) NOTES	101 177
INVESTIGATORS		
FORM COMPLETED BY	JCV DATE 5/16/07 TIME 920 AM P	REASON FOR SURVEY Benthic
WEATHER CONDITIONS	Now storm (heavy rain) rain (steady rain) showers (intermittent) 10 % %cloud cover clear/sunny	INSTREAM FEATURES Water Depth ft or m Water Velocity / ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant type and record the domi ☐ Rooted emergent ☐ Rooted submergent ☐ Floating Algae ☐ Attached Algae	nant species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 21,9 °C Specific Conductance 0.14)	Water Odors □ Normal/None □ Sewage □ Petroleum □ Chemical □ Fishy □ Other
	Dissolved Oxygen 10.17 pH 8.47 Turbidity 18.3	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	WQ Instrument Used V-ZZ	Turbidity (if not measured) Clear Clightly turbid Clear Clother Opaque Clear Clightly turbid Clear Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewage Petroleum Chemical Anaerobic None Other Oils Absent Slight Moderate Profuse	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Original College Colle	RGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock		.	Detritus	sticks, wood, coarse plant	د ۶		
Boulder	> 256 mm (10")	۷5		materials (CPOM)			
Cobble	64-256 mm (2.5"-10")	25	Muck-Mud	black, very fine organic	< 5		
Gravel	2-64 mm (0.1"-2.5")	40		(FPOM)			
Sand	0.06-2mm (gritty)	25	Marl	grey, shell fragments	5-10		
Silt	0.004-0.06 mm	5					
Clay	< 0.004 mm (slick)						

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

STREAM NAME CLO	LOCATION	MRI-Z	2	
LAT 33.56810 L		No PLO	b	
SAMPLE# MPJ-7	NOTES	prev	to vious fell	
INVESTIGATORS	ABBL	7	· · · · · · · · · · · · · · · · · · ·	
FORM COMPLETED BY		DATE 5 16	· /	REASON FOR SURVEY
	JW	TIME (UÓ	4 AM PM	Benthic
WEATHER CONDITIONS	Now		· · · · · · · · · · · · · · · · · · ·	INSTREAM - FEATURES -
	☐ rain ((heavy rain) steady rain) (intermittent)		Water Depth <u>0.5</u> ft or m
	80 %2r %cl	oud cover ar/sunny	•	Water Velocity 1.27 (Vseo or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and reco Rooted s Attached	rd the dominar ubmergent I Algae	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 21.6 Specific Conductance	0.169		Water Odors 2 Normal/None
	Dissolved Oxygen pH _ 8 · 2 \ Turbidity _ 1 Ч	0.32		Water Surface Oils Slick Sheen Globs Flecks None Other
	WQ Instrument Used	U-Z	<u> </u>	Turbidity (if not measured) ☐ Clear Ø Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana	vage DPet aerobic DNo	roleum [Deposits □ Sludge □ Sawdust □ Paper fiber □ Sand □ Relict shells □ Other
	Oils Absent O Slight O	☐ Moderate	☐ Profuse	
INORGANIC SUBS	STRATE COMPONENT	rs	ORGA	ANIC SUBSTRATE COMPONENTS

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)				ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach		Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			_	Detritus	sticks, wood, coarse plant	4 \$	
Boulder	> 256 mm (10")	trace	< S.		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	5, m	20	Muck-Mud	black, very fine organic	۷ ۶	
Gravel	2-64 mm (0.1"-2.5")	f, m	55		(FPOM)		
Sand	0.06-2mm (gritty)	f, c	20	Mari	grey, shell fragments	5	
Silt .	0.004-0.06 mm	+~	< 5] .			
Clay	< 0.004 mm (slick)						

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Appendix A-I: Habitat Assessment and Physicochemical Characterization Field Data Sheets

STREAM NAME Chi	LOCATION	MEAV.	• 7	
	ONG 85.94642			
SAMPLE# MEAU-2		NOTES	No photo	previous full
INVESTIGATORS /	38し	:		
FORM COMPLETED BY	JCV !	DATE 5 16 TIME 1040	07 - M PM	REASON FOR SURVEY Phyto.
WEATHER CONDITIONS	rain (ste	eavy rain) ady rain) ntermittent) d cover		INSTREAM FEATURES Water Depth O. 2 ft or m Water Velocity O. 0 Z ft/sec or m/sec
	C] clear/	sunny		(within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominant to Rooted emergent D Floating Algae	ype and record Rooted su Attached	l the dominan bmergent Algae	at species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 21. 5 ° Specific Conductance Dissolved Oxygen 10.	0.176	V	Vater Odors Yormal/None
	pH <u>8.34</u> Turbidity <u>20</u>			Slick Sheen Globs Flecks None Gother
	WQ Instrument Used _	リーン	2 / 1 - C	Gurbidity (if not measured) I Clear A Slightly turbid Turbid I Opaque C Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sewag Chemical Anaer Other	ge Petro	oleum C	Deposits I Sludge Sawdust Paper fiber Sand Cher
	Oils Absent OSlight O	Moderate □	Profuse	
INORGANIC SUBS	STRATE COMPONENTS		ORGA	NIC SUBSTRATE COMPONENTS

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Diameter Type		% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			Detritus	sticks, wood, coarse plant	45	
Boulder	> 256 mm (10")			materials (CPOM)		
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic	3 \$	
Gravel	2-64 mm (0.1"-2.5")	trace fine < 5		(FPOM)		
Sand	0.06-2mm (gritty)	50	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	3.5			5-10	
Clay	< 0.004 mm (slick)	5			,	

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

			· · · · · ·		
STREAM NAME Chocc. Cree	LOCAT		BW -	1	
LAT 33.56845 LONG 85.94	1642	·	la nl	.4.	
SAMPLE# MBW-1 -1R	NOTES	/	reviou	choto	
INVESTIGATORS ABEL			· · · · · · · · · · · · · · · · · · ·		
FORM COMPLETED BY	DATE	5/16/07 1100 0		REASON FOR SURVEY	
JCV	TIME_	1100 0	7 PM	Benthic	
		4			
WEATHER CONDITIONS Now	storm (heavy rai			INSTREAM FEATURES	
	rain (steady rain showers (intermit	1) ent)		Water Depth 1.3 ft or m	
35 %	showers (intermite %cloud cover clear/sunny			Water Velocity -0.01 ft/sec or m/sec	
	clear/sunny	· · · · · · · · · · · · · · · · · · ·		(within 1 m of substrate)	
<u></u>			· · · · · · · · · · · · · · · · · · ·		
AQUATIC Indicate the Control Rooted er	e dominant type and nergent	I record the do ooted submerge tached Algae	ominant : ent	species present Rooted floating Free floating	
(within 1 m of substrate) Specific Co	re <u>21. </u>	Z.	01	ater Odors Normal/None	
pH <u>B . Z</u> Turbidity	6		CD/S	ater Surface Oils Slick	
	nent Used	- 22_	Tu O'(rbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other	
SEDIMENT/ SUBSTRATE Odors Normal Chemical Oother	☐ Sewage ☐ Anaerobic	☐ Petroleum ☐ None		posits Sludge 🗅 Sawdust 🔲 Paper fiber 🚨 Sand Relict shells 🔲 Other	
Oils Absent C	l Slight	e 🗆 Profus	se		
The second state of the se	4D 0 14 14 14 14 14 14 14 14 14 14 14 14 14				
INORGANIC SUBSTRATE CON (should add up to 100%			ORGAN (does	IIC SUBSTRATE COMPONENTS not necessarily add up to 100%)	
G-1-4-4-1 Di4-1 0	Composition in	Sub-state			

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			Detritus	sticks, wood, coarse plant	15	
Boulder	> 256 mm (10")	_		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	trace f 65	Muck-Mud	black, very fine organic	20	
Gravel	2-64 mm (0.1"-2.5")	P 15		(FPOM)		
Sand	0.06-2mm (gritty)	f,m 35	Marl	grey, shell fragments	5-10	
Silt	0.004-0.06 mm	45				
Clay	< 0.004 mm (slick)	tive LS	•		•	

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

STREAM NAME Ch	Cook	LOCATION	MDEP-2	
		BOCHHON	- INDEL	
LAT 33.56875 L		No	Kroto	
	2,-2P	NOTES	previous	s tall
INVESTIGATORS	ABOL	1 1		
FORM COMPLETED BY	5CV	DATE <u>5/16/</u> TIME H35	07 _ AM) PM	REASON FOR SURVEY Benthic
			× .	
WEATHER CONDITIONS	Now □ storm	(heavy rain)	-	INSTREAM FEATURES
	🔲 🗅 rain (steady rain)		Water Depth 3.8 ft or m
	<i>60</i> %⊋ %cl	(intermittent) oud cover ar/sunny		Water Velocity 0.30 (Within 1 m of substrate)
<u> </u>				(Within Fin of Substitute)
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and recor Control Rooted su Attached	hmergent	at species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 216 Specific Conductance Dissolved Oxygen 1	0.162	کر	Vater Odors PNormal/None
	pH 8.17 Turbidity 17	<u> </u>		Vater Surface Oils I Slick
	WQ Instrument Used	U-27	, '1 - C	Turbidity (if not measured) I Clear Slightly turbid I Turbid I Opaque I Stained I Other
SEDIMENT/ SUBSTRATE	Odors Normal Sew Chemical Ana	vage D Petraerobic D Non	oleum 🗆	Deposits I Sludge Sawdust Paper fiber Sand Relict shells Other
	Oils Absent Slight	Moderate C) Profuse	
INORGANIC SUBS	TRATE COMPONEN	rs	ORGA	NIC SUBSTRATE COMPONENTS

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			Detritus	sticks, wood, coarse plant	2 \$	
Boulder	> 256 mm (10")	_]	materials (CPOM)		
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	trace f <5]	(FPOM)	3 5	
Sand	0.06-2mm (gritty)	f,m 25	Marl	grey, shell fragments	_ 5	
Silt	0.004-0.06 mm	- 65			20	
Clay	< 0.004 mm (slick)	trace 65	1			

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STREAM NAME Choc	e. Creelz	LOCATION MRI-1		
LAT 33, 56944 L		Dho	to # 101-191	
SAMPLE# MRI-	L,-1R	NOTES	previ	ous full
INVESTIGATORS /	48BL	•		
FORM COMPLETED BY	JOV	DATE 5/16/ TIME /255	OF AM AM	REASON FOR SURVEY Benthol
WEATHER CONDITIONS	☐ rain () ☐ showers 60 %☐ %cl	(heavy rain) steady rain) (intermittent) oud cover ar/sunny		INSTREAM FEATURES Water Depth O. 8 ft or m Water Velocity 1. 5 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and record Rooted su Attached	bmergent	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 21.4 Specific Conductance	0-166		Water Odors Mormal/None
	Dissolved Oxygen 10.12 pH 8.10 Turbidity 6.8			Water Surface Oils Slick Sheen Globs Flecks None Other
	WQ Instrument Used	<u>v-2</u>		Furbidity (if not measured) 2 Clear
SEDIMENT/ SUBSTRATE	Odors DNormal Sew Chemical Ana	vage Petro	oleum (Deposits □ Sludge □ Sawdust □ Paper fiber □ Sand □ Relict shells □ Other
	Oils O Absent O Slight	☐ Moderate □) Profuse	
INORGANIC SUBS	rs	ORGA	ANIC SUBSTRATE COMPONENTS	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic % Composition in Sampling Area		
Bedrock			Detritus	sticks, wood, coarse plant		
Boulder	> 256 mm (10")	30		materials (CPOM)	trace	
Cobble	64-256 mm (2.5"-10")	35	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	25] • • • •	(FPOM)	trace	
Sand	0.06-2mm (gritty)	10	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	trace]		5-10	
Clay	< 0.004 mm (slick)					

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	6 1	T :: : - : - : - : - : - : - : - : -		
STREAM NAME ()	LOCATION	MEAV-	1	
LAT 33.56968 L		Δı . +-		
SAMPLE# MEAV-1	,-1R	NOTES	Photo +	101-192 previous full
INVESTIGATORS	ABBL			
FORM COMPLETED BY	JW	DATE She /2 TIME /3/0	AM (M)	REASON FOR SURVEY
WEATHER CONDITIONS	Now		•	INSTREAM FEATURES
	So % % cl	(heavy rain) steady rain) s (intermittent)		Water Depth o ff or m
	<u>50</u> %2 %cl □ cle	oud cover ar/sunny	•	Water Velocity / O ft/see or m/sec (within 1 m of substrate)
<u> </u>				
AQUATIC VEGETATION	Indicate the dominan ☑ Rooted emergent ☐ Floating Algae	t type and recor Rooted st Attached	d the dominan ibmergent Algae	t species present Rooted floating
WATER QUALITY (within 1 m of substrate)	Temperature 21.5 Specific Conductance	0.189	ع ا	Vater Odors Vormal/None
	Dissolved Oxygen! pH	<u>v-1+</u>		Vater Surface Oils 1 Slick
	WQ Instrument Used	V-ZZ	Æ	Turbidity (if not measured) TClear
SEDIMENT/ SUBSTRATE	Odors Normal Sev Chemical Ana	vage 🗅 Petr aerobic 🗅 Non	oleum 🗆	Deposits I Sludge: □ Sawdust □ Paper fiber □ Sand I Relict shells □ Other
	Oils D'Absent D Slight	☐ Moderate □) Profuse	
INORGANIC SUBS	STRATE COMPONEN	TS	ORGA	NIC SUBSTRATE COMPONENTS

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			Detritus	sticks, wood, coarse plant	3≤	
Boulder	> 256 mm (10")			materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	5 mell < 5	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	f.m 50	1 2 2	(FPOM)	35	
Sand	0.06-2mm (gritty)	f,m 40	Marl	grey, shell fragments	7 .	
Silt	0.004-0.06 mm	trace			28	
Clay	< 0.004 mm (slick)	trace				

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CERTAL CHANCE ()	a 1.	TOGATION	
STREAM NAME Choc		LOCATION MDEF	7-1
	ONG_85.94489	Pho-	b#101-193
SAMPLE# MDEP-1	,-1R	NOTES pre	vions fall location
INVESTIGATORS	ABBL		
FORM COMPLETED BY		DATE 5/16/07	REASON FOR SURVEY
	コレノ	TIME /440 AM (B)	Benthiz
WEATHER CONDITIONS	Now		INSTREAM - FEATURES
	🔲 rain ((heavy rain) steady rain) s (intermittent)	Water Depth 1.2 fb or m
	%□ %cl	oud cover ear/sunny	Water Velocity 0.06 ft/sec or m/sec (within 1 m of substrate)
<u> </u>			
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	it type and record the domin Control Rooted submergent Control Attached Algae	ant species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 21.8 Specific Conductance Dissolved Oxygen	0-166	Water Odors Normal/None Sewage Petroleum Chemical Sishy Other
	pH 8.22 Turbidity 11		Water Surface Oils Slick Sheen Globs Flecks None Other
	WQ Instrument Used	U-22	Turbidity (if not measured) □ Clear □ Slightly turbid □ Turbid □ Opaque □ Stained □ Other
SEDIMENT/ SUBSTRATE		wage 🔾 Petroleum aerobic 🗘 None	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Ojls ☑ Absent ☐ Slight 〔	☐ Moderate ☐ Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		. —	Detritus	sticks, wood, coarse plant		
Boulder	> 256 mm (10")	_		materials (CPOM)	20	
Cobble	64-256 mm (2.5"-10")	_	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	trace fine <5		(FPOM)	35	
Sand	0.06-2mm (gritty)	65	Mari	grey, shell fragments		
Silt	0.004-0.06 mm	30			25	
Clay	< 0.004 mm (slick)	_]			

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Computation of	<i>a</i> ,			
STREAM NAME CLOC	LOCATION MBU	w - Z		
LAT 33. 56549 LO	Photo 101		195	
SAMPLE# MBW-Z	, - ZR	NOTES	·	
INVESTIGATORS	ABBL			
FORM COMPLETED BY		DATE 5/16/07- TIME 1545 AM	и 🙉	REASON FOR SURVEY Benthic
WEATHER CONDITIONS	Now □ storm	(heavy rain)		INSTREAM FEATURES
	rain (steady rain) (intermittent)		Water Depth 0.4 (ft) or m
		oud cover ar/sunny		Water Velocity
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and record the d Rooted submerg Attached Algae	lominant ent	t species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 22. 6 Specific Conductance Dissolved Oxygen	0.183	(a)	Ater Odors Normal/None
	pH 813		a	/ater Surface Oils Slick
	WQ Instrument Used	<u>v=ZZ</u>	u	urbidity (if not measured) Clear Slightly turbid
SEDIMENT/ SUBSTRATE	Odors Normal Sev Chemical Ana	vage D Petroleum aerobic D None		eposits Sludge □ Sawdust □ Paper fiber □ Sand Relict shells □ Other_
	Oils Absent 🗆 Slight (□ Moderate □ Profu	ıse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		-	Detritus	sticks, wood, coarse plant	20	
Boulder	> 256 mm (10")			materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	_	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	P 45	1	(FPOM)	35	
Sand	0.06-2mm (gritty)	f,m 30	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	60]		trace	
Clay	< 0.004 mm (slick)	trace 25				

STREAM	INAME 22.	occ.	Creek	LOCAT	ION LOW	er Re	each - EAI	141	
	. 56042 L				PLO	to -	each - EAI	20	
SAMPLE	# LEAV-1	-1R		NOTES		. :			
INVESTI	GATORS								
FORM C	ompleted by	W		DATE_ TIME_	5/15/07 0830	а) РМ	REASON FOR SUR Beath		
	15 jab sweeps /sample								
WEATH) CONDIT		Now storm (heavy rain) rain (steady rain) showers (intermittent) %Cloud cover clear/sunny					INSTREAM FEATURES Water Depth 2 Water Velocity - 0 (within 1 m of substr	.0 ≤ ft/sec or m/sec	
			•						
AQUATIO VEGETA	C TION	Indicat Root Float	e the dominan ed emergent ing Algae	t type and O Ro O A	d record the dooted submerg	ominant ent	t species present Rooted floating	ng 🗅 Free floating	
•	QUALITY n of substrate)	Temperature Z3.2 °C				goo woo ro	Petroleum 🗆	ured)	
SEDIMEI SUBSTRA		☐ Normal ☐ Sewage ☐ Petroleum					eposits Sludge □ Sawdust Relict shells □	☐ Paper fiber ☐ Sand Other	
M4 INC	RGANIC SUBS (should a	TRATE	COMPONENT 100%)	TS		ORGA (doe:	NIC SUBSTRATE C s not necessarily add	OMPONENTS up to 100%)	
Substrate Type	Diamete	er	% Compos Sampling		Substrate Type		Characteristic	% Composition in Sampling Area	
Bedrock					Detritus	sticks,	wood, coarse plant als (CPOM)		
Boulder	> 256 mm (10"))				ilialei 18	ua (CEOIMI)		
Cobble	64-256 mm (2.5	i"-10")			Muck-Mud	black, (FPOM	very fine organic		
	1				I .	L LLOW	·	l '	

Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1
Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

Gravel

Sand

Silt

2-64 mm (0.1"-2.5") 0.06-2mm (gritty)

0.004-0.06 mm < 0.004 mm (slick) Marl

grey, shell fragments

STREAM NAME C		LOCATION Lower /	Reach - deposition #1
LAT 33. 560 % L	ONG 86. 01204	Photo #	(00-017)
SAMPLE# LDEP-1	(-1R)	NOTES	·
INVESTIGATORS A	readis BBL		
FORM COMPLETED BY		DATE 5/15/07 TIME AM PM	REASON FOR SURVEY
	JUV	930	Benthic
WEATHER CONDITIONS	Now		INSTREAM FEATURES
CONDITIONS		(heavy rain)	Water Depth 19 (ft) or m
	☐ showers	steady rain) (intermittent)	
		oud cover ar/sunny	Water Velocity 0. 20 ft/sec or m/sec
			(within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and record the domin Rooted submergent Attached Algae	ant species present Rooted floating Free floating
WATER QUALITY	Temperature 23.0	°C.	Water Odors
(within 1 m of substrate)	Specific Conductance	0.139	☐ Normal/None ☐ Sewage ☐ Chemical ☐ Other
	Dissolved Oxygen	10.18	
	pH 8,4		Water Surface Oils Slick Sheen Globs Flecks
••.	Turbidity 37		☑ None ☐ Other
	WQ Instrument Used	<u> </u>	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Clear Clear Other
SEDIMENT/ SUBSTRATE	Odors Normal Sev Chemical Ana	vage 🔾 Petroleum aerobic 🗘 None	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils Absent D Slight	☐ Moderate ☐ Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		<i>(</i> -	Detritus	sticks, wood, coarse plant	40
Boulder	> 256 mm (10")]	materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	25	Muck-Mud	black, very fine organic	2.5
Gravel	2-64 mm (0.1"-2.5")	5		(FPOM)	30
Sand	0.06-2mm (gritty)	5	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	80]		VO
Clay	< 0.004 mm (slick)	5			

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STREAM NAME Ch	vu Creek	LOCATION	Lower	Reach - Riffle #1
LAT 33. S6121 L SAMPLE# L PT-1		NOTES	Photo #	Reach - Riffle #1 100 - 168
INVESTIGATORS	Arcadis BBL			
FORM COMPLETED BY		DATE 5//5 TIME //	\$ 07 S AM PM	REASON FOR SURVEY Benthic
	,			
WEATHER CONDITIONS	rain () showers% O %cl	(heavy rain) steady rain) (intermittent) oud cover		INSTREAM FEATURES Water Depth 1.6 (ft) or m Water Velocity 2.79 (t/sec) or m/sec
	cie	ar/sunny	·	(within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan ☐ Rooted emergent ☐ Floating Algae	☐ Rooted si	ubmergent	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 23. 4 Specific Conductance Dissolved Oxygen	0.139		Water Odors O Normal/None O Chemical O Fishy O Other
	pH <u>8.34</u> Turbidity 12		· · · · · · · · · · · · · · · · · · ·	Water Surface Oils □ Slick □ Sheen □ Globs □ Flecks □ None □ Other
	WQ Instrument Used	<u> </u>	<u>-</u>	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors O Normal Sew Chemical Ana Other	vage Petr aerobic Nor	oleum	Deposits □ Sludge □ Sawdust □ Paper fiber □ Sand □ Relict shells □ Other
	Oils DA Absent D Slight D	☐ Moderate (☐ Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		7	Detritus	sticks, wood, coarse plant	< 5	
Boulder	> 256 mm (10")	5		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	40		(FPOM)	< \$	
Sand	0.06-2mm (gritty)	25	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	۷ ج			10	
Clay	< 0.004 mm (slick)	<u></u>	1			

Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

STREAM NAME CLO	LOCATION Lower Rend - Backwater#1 Photo # 101-169					
LAT 33.56074 L	ONG 86. 01231	Photo # 101-169				
SAMPLE# LDEP -	1 (-1R)	NOTES				
INVESTIGATORS	Arcadis BBL					
FORM COMPLETED BY	/	DATE 5//		REASON FOR		
	JEV	/Z	AM PM] Ber	thic	
	,					
WEATHER CONDITIONS	Now		•	INSTREAM FEATURES	-	
CONDITIONS		(heavy rain)			120	
		steady rain) (intermittent)		1	1.2 (ft) or m	
		oud cover ar/sunny		Water Velocity (within 1 m of s	0.14 ft/sec or m/sec	
				(within 1 in of s	lostrate)	
AOUATIC	Indicate the deminer					
VEGETATION	Indicate the dominan Rooted emergent Floating Algae	Rooted D Attache	submergent	Rooted fl	oating	
				· ·		
(within 1 m of substrate)	Temperature 24.2		ح ک	Water Odors 2 Normal/None	☐ Sewage	
(William I in or substrate)	Specific Conductance		Ç	☐ Petroleum ☐ Fishy	Chemical Other	
	Dissolved Oxygen 1	1.65	•	Water Surface Oil		
	pH 8.58				☐ Globs ☐ Flecks	
	Turbidity 150		_ 1	Furbidity (i¬ n	neasured)	
	WQ Instrument Used	<i>V-2.</i>	<u>-</u> :	Clear 2 Slight Opaque C Staine	ly turbid	
SEDIMENT/	Odors					
SUBSTRATE	□ Normal □ Sew	vage DPe terobic DNe	troleum [Deposits I Sludge Sawd I Relict shells	ust	
	Oils Absent Slight	☐ Moderate	☐ Profuse			
I INORGANIC SURS	STRĂTE COMPONEN	18 1	ORGA	AINIC SHRSTRAT	TE COMPONENTS	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		₹.	Detritus	sticks, wood, coarse plant	30	
Boulder	> 256 mm (10")			materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	-	Muck-Mud	black, very fine organic	٠	
Gravel	2-64 mm (0.1"-2.5")	tr <5]	(FPOM)	3 \$	
Sand	0.06-2mm (gritty)	35	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	55			5-10	
Clay	< 0.004 mm (slick)	<u> </u>	1			

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		· · · · · · · · · · · · · · · · · · ·		
STREAM NAME CL		LOCATION	Lower	Reach - Run #1
LAT 33. 56 20 7 L		7	20 to #	= 101-0166
SAMPLE# LRU-	1 (-1R)	NOTES		
INVESTIGATORS	ABBL	: :-		
FORM COMPLETED BY	Jev	DATE <u>\$//\$/</u> TIME / 3 30	M PM	REASON FOR SURVEY Benthic
			.:	
WEATHER CONDITIONS	Now	(heavy rain)		INSTREAM FEATURES
	storm rain (steady rain)		Water Depthft or m
	%cl	oud cover ar/sunny		Water Velocity 1, 75 (ft/sec) or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and record Rooted sub Attached A	mergent	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature <u>Z4</u> Specific Conductance Dissolved Oxygen	0.140	- {	Water Odors I Normal/None
	pH _8.5 Turbidity _14		(Water Surface Oils □ Slick □ Sheen □ Globs □ Flecks ☑ None □ Other
	WQ Instrument Used	_ U-ZZ	. (Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sev Chemical Ana	vage D Petrol aerobic D None	eum [Deposits □ Sludge □ Sawdust □ Paper fiber □ Sand □ Relict shells □ Other
	Oils ☑ Absent ☐ Slight 〔	☐ Moderate ☐	Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		- .	Detritus	sticks, wood, coarse plant	
Boulder	> 256 mm (10")	< 5		materials (CPOM)	
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")	46	1	(FPOM)	
Sand	0.06-2mm (gritty)	30	Marl	grey, shell fragments	-
Silt	0.004-0.06 mm	25] .		· · · _ ·
Clay	< 0.004 mm (slick)		· ·		

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STREAM NAME Choo		LOCATION	Lower A	Reach - Run#Z
LAT 33. 56 298 L	ONG 86.01469		01:1-4	4 0.77
SAMPLE# LRV-2	(- EZR)	NOTES	1 NOTO	100 - 01 + +
INVESTIGATORS	ABBL			
FORM COMPLETED BY	JW	DATE <u>5/15/</u> TIME <u>1415</u>	AM (PM)	REASON FOR SURVEY Benthic
			4	
WEATHER CONDITIONS	Now		•	INSTREAM FEATURES
	rain ((heavy rain) steady rain)		Water Depth O. 6 ft or m
	4 <i>5%</i> 0 %cl	(intermittent) oud cover ar/sunny	•	Water Velocity 1/21 (Nisec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and recor C) Rooted su C) Attached	ubmergent	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 24.5 Specific Conductance Dissolved Oxygen	0.140		Water Odors Normal/None Sewage Petroleum Chemical Fishy Other
	pH <u>8.47</u> Turbidity /2		(Water Surface Oils □ Slick □ Sheen □ Globs □ Flecks □ None □ Other
	WQ Instrument Used	_ レ-ZZ	- (Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Chemical Ana	vage 🔾 Petr aerobic 🗘 Nor	oleum (Deposits Sludge Sawdust Paper fiber Sand Cher
	Oils OAbsent OSlight (☐ Moderate □	2 Profuse	
	STRÄTE COMPONEN	rs		ANIC SUBSTRATE COMPONENTS

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		- .	Detritus	sticks, wood, coarse plant		
Boulder	> 256 mm (10")	+1 <5		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	sm 50	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	30]	(FPOM)		
Sand	0.06-2mm (gritty)	2 (Marl	grey, shell fragments		
Silt	0.004-0.06 mm	<5			trace	
Clay	< 0.004 mm (slick)		1			

STREAM NAME Chica Creek LOCATION Lower Reach - Depos Floral # 2 LAT 33,56372 LONG 86-01498 SAMPLE# LDEP-2 (2R) NOTES FORM COMPLETED BY TOW DATE 51504 TIME Benthic Now CONDITIONS Now CONDITIONS Now CONDITIONS Now CONDITIONS Now Condition In a feet and record the dominant species present clear/sunny clear/sunny AQUATIC VEGETATION Indicate the dominant type and record the dominant species present Rooted emergent Rooted submergent Rooted floating Free floating WATER QUALITY (within 1 m of substrate) WATER QUALITY (within 1 m of substrate) WATER QUALITY (within 1 m of substrate) WATER QUALITY (within 1 m of substrate) WATER QUALITY (within 1 m of substrate) SEDIMENT/ Odors WO Instrument Used V-22 Urbidity (fl not measured) Chemical Fishy Obaque Stained Other WATER Glory (fl not measured) Chemical	STREAM NAME Chi	Carle	LOCATION	10000	Paul D. 1. 1215
INVESTIGATORS FORM COMPLETED BY DATE			Document	Lower	reach - Depositional # 2
INVESTIGATORS FORM COMPLETED BY DATE	 	~~~	MOTTE	Photo #	F 100 178
DATE Storm (heavy rain) rain (steady rain) showers (intermittent) Swater Velocity O.14 ft/sec or m/sec (within 1 m of substrate) Free floating Free floating Free floating Free floating Sewage Petroleum Chemical Chemical Shick Sheen Globs Flecks Showers Shick Sheen Globs Flecks Showers Shick Sheen Globs Flecks Showers Shick Sheen Globs Flecks Showers Shick Sheen Globs Flecks Showers Shick Sheen Globs Turbid Chemical Chemical Chemical Anaerobic None Sludge Sawdust Paper fiber Sand Chemical Chemic			NOTES		
Now Storm (heavy rain) S				 	
Storm (heavy rain) rain (steady rain) showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Store or m/sec (within 1 m of substrate) Showers (intermittent) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (inte	FORM COMPLETED BY		DATE 5/1 TIME 73/1	5/04 3 AM (M)	REASON FOR SURVEY Benthic
Storm (heavy rain) rain (steady rain) showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Showers (intermittent) Store or m/sec (within 1 m of substrate) Showers (intermittent) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (within 1 m of substrate) Showers (intermittent) Showers (inte					
Tain (steady rain) Showers (intermittent) Water Depth O.14 ft/sec or m/sec					
AQUATIC VEGETATION		🗀 rain (steady rain)		Water Depth O. H (ft) or m
Rooted emergent		47 %2 %cl	oud cover	•	
Rooted emergent					
(within 1 m of substrate) Specific Conductance O. 15		Rooted emergent	☐ Rooted:	submergent	nt species present ☐ Rooted floating ☐ Free floating
Dissolved Oxygen 10.9 pH 8.5 Turbidity 120 WQ Instrument Used		· · · · · · · · · · · · · · · · · · ·		· /	□ Normal/None □ Sewage
PH S Slick Sheen Globs Flecks None Other		1 -		i	O Fishy O Other
Turbidity		pH_8/5			□ Slick □ Sheen □ Globs □ Flecks
SUBSTRATE Anaerobic Petroleum Sludge Sawdust Paper fiber Sand Relict shells Other Oils				<u> -</u>	Turbidity (if not measured) Clear Slightly turbid Turbid
Oils		☑ Normal ☐ Sev ☐ Chemical ☐ Ans	vage DPe aerobic DNo	troleum	☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand
		Oils	☐ Moderate	☐ Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant	30
Boulder	> 256 mm (10")	<i>-</i>		materials (CPOM)	
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")	f < 5		(FPOM)	40
Sand	0.06-2mm (gritty)	0S: 4	Marl	grey, shell fragments	
Silt	0.004-0.06 mm	70] .		5-)0
Clay	< 0.004 mm (slick)	+ <5]		

STREAM NAME CL.	ec. Creek	LOCATION Lowe/	Rench - EAV#Z
SAMPLE# LEAV	ONG 86.01653 -Z (-ZR)	NOTES Photo#	100 - 179
INVESTIGATORS	ABBL		
FORM COMPLETED BY	JCV	DATE \$1507 TIME 1546 AM (PR	REASON FOR SURVEY Bentlic
WEATHER CONDITIONS	☐ rain (☐ showers <u>40 %</u> ☐ %cl	(heavy rain) steady rain) (intermittent) oud cover ar/sunny	INSTREAM FEATURES Water Depth 1.5 ft or m Water Velocity 0.67 ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and record the domin Rooted submergent Attached Algae	nant species present Rooted floating Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 24. Specific Conductance Dissolved Oxygen	0.140	Water Odors Normal/None Chemical Fishy Other
	pH 8 58 Turbidity 12		Water Surface Oils Slick Sheen Globs Flecks None Other
	WQ Instrument Used	1_ V-ZZ	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sev Chemical And	wage Petroleum aerobic None	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils □ Absent □ Slight	☐ Moderate ☐ Profuse	
THOROLANG SYLD	TER COMPONEN	mc on	CANIC CURETRATE COMPONENTS

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)		ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock		-	Detritus	sticks, wood, coarse plant	30
Boulder	> 256 mm (10")]	materials (CPOM)	
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic	
Gravel	2-64 mm (0.1"-2.5")		1	(FPOM)	30
Sand	0.06-2mm (gritty)		Mari	grey, shell fragments	
Silt	0.004-0.06 mm] .		5
Clay	< 0.004 mm (slick)				

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STREAM NAME Cho		LOCATION	Lower,	Reach - Riffle#2	
LAT 33.56193 L	ONG 86: 01693		LOCATION Lower Reach - Riffle#2 Photo # 100-181		
SAMPLE# L PI-	z (-zr)	NOTES	NOTES		
INVESTIGATORS		·			
FORM COMPLETED BY	- Parl	DATE 5/15/ TIME 16 20	07	REASON FOR SURVEY	
	Jev	1620	AM PM	Benthic	
WEATHER CONDITIONS	Now			INSTREAM FEATURES	
	🔲 rain ((heavy rain) steady rain)		Water Depth 12 ft or m	
	30 %□ %cl	(intermittent) oud cover		Water Velocity 2.47 ft/sec or m/sec	
	Cle	ar/sunny		(within 1 m of substrate)	
AQUATIC VEGETATION	1	☐ Rooted su ☐ Attached	t the dominar bmergent Algae	at species present Rooted floating Free floating	
WATER QUALITY (within 1 m of substrate)	Temperature 24.6 Specific Conductance	0.123	7	Vater Odors I Normal/None	
	Dissolved Oxygen / pH 8/55 Turbidity /0.8			Water Surface Oils Slick Sheen Globs Flecks None Other	
	WQ Instrument Used	1 U-22		Curbidity (if not measured) I Clear Slightly turbid I Turbid I Opaque I Stained I Other	
SEDIMENT/ SUBSTRATE	Odors Normal Sev Chemical An	wage Petro aerobic None	oleum (Deposits I Sludge Sawdust	
	Oils Absent OSlight	☐ Moderate ☐	Profuse		
	STRATE COMPONEN dd up to 100%)	TS		ANIC SUBSTRATE COMPONENTS es not necessarily add up to 100%)	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		يحبني	Detritus	sticks, wood, coarse plant	_	
Boulder	> 256 mm (10")			materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	15	Muck-Mud	black, very fine organic	,	
Gravel	2-64 mm (0.1"-2.5")	. 60		(FPOM)		
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	5				
Clay	< 0.004 mm (slick)		Ī .			

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STREAM NAME CL	Carel.	LOCATION Los	1-12-	
		LOCATION Lot	- Nes	rch - Backwater#Z
LAT 33. 56090 L		Phol	10 # 1	00 - 182
SAMPLE# LBW-2		NOTES		
INVESTIGATORS	ABOL			
FORM COMPLETED BY	-T/1	DATE S/15/07		REASON FOR SURVEY
	JCV	1650	AM PM	Benthic
WEATHER CONDITIONS	Now			INSTREAM FEATURES
	rain (s	(heavy rain) steady rain)		Water Depth 2 / ft or m
	20 % cl	(intermittent) oud cover		Water Velocity 0.09 ft/sec or m/sec
	O cle	ar/sunny		(within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominan ☐ Rooted emergent ☐ Floating Algae	type and record the Control Rooted submer Control Attached Algae	dominant rgent e	species present ☐ Rooted floating ☐ Free floating
WATER QUALITY	Temperature 24,5	_" C		ater Odors
(within 1 m of substrate)	Specific Conductance	0.156	Q I	Normal/None 🖸 Sewage Petroleum 🗘 Chemical
	Dissolved Oxygen/	1.57		Fishy 🖸 Other
	рн 9.0		W ₂	ater Surface Oils Slick Sheen Globs Flecks
	Turbidity 109		ān	None Other
	WQ Instrument Used	V-ZZ		rbidity (if not measured) Clear
SEDIMENT/ SUBSTRATE	Odors O Normal O Sew Chemical O Ana	age 🔾 Petroleum erobic 🗘 None	n 🗷	posits Sludge Sawdust
	Oils Absent 🗆 Slight 🔾	Moderate Pro	fuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		.	Detritus	sticks, wood, coarse plant	SO	
Boulder	> 256 mm (10")]	materials (CPOM)		
Cobble	64-256 mm (2.5"-10")		Muck-Mud	black, very fine organic	30	
Gravel	2-64 mm (0.1"-2.5")	5		(FPOM)		
Sand	0.06-2mm (gritty)	35	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	60				
Clay	< 0.004 mm (slick)	_	1		5-10	

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r		T	0.4.4.4	
STREAM NAME CLOC		LOCATION	KEF 1	EAV-1
LAT 33.59811 LO	ONG 85.77973			
SAMPLE# REF1 EA	v-1,-IR	NOTES	previo	ons full location
INVESTIGATORS	ABBL			
FORM COMPLETED BY	JUV	DATE <u>\$/16/</u> TIME <u>17.5</u>	0-7 ≤ am eM	REASON FOR SURVEY Benthic - Phyto Comm.
				Trigital Committee
WEATHER CONDITIONS	Now		·	INSTREAM - FEATURES
	🔲 rain ((heavy rain) steady rain)		Water Depth / 3 ft or m
	%□_ %cl	(intermittent) oud cover ar/sunny		Water Velocity 0.18 (Use) or m/sec
	<u> </u>	ai/suility		(within 1 m of substrate)
,		·		
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	t type and record Rooted su Attached	l the domina bmergent Algae	ant species present A Rooted floating • Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 21.1 Specific Conductance	_		Water Odors Normal/None
	Dissolved Oxygen	4		
	pH 8.19			Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	Turbidity 15 WQ Instrument Used	1 U-ZZ	_	Turbidity (if not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Sevent An Other	wage	oleum	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils Absent Slight	□ Moderate □) Profuse	
INORGANIC SUBS	STRATE COMPONEN	TS	ORG	ANIC SUBSTRATE COMPONENTS

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock			Detritus	sticks, wood, coarse plant	4 \$	
Boulder	> 256 mm (10")			materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	-	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	15	1 2 2 2	(FPOM)	25	
Sand	0.06-2mm (gritty)	45	Marl	grey, shell fragments	_	
Silt	0.004-0.06 mm	3 S] .			
Clay	< 0.004 mm (slick)	trace 45				

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STREAM NAME CLOC	LOCATION	REF1	RU-1		
LAT 33.59805 LO	ONG 85-77914				
SAMPLE# REF1 R	1-1,-1R	NOTES	previou	is fall location	
INVESTIGATORS A	BBL		/		
FORM COMPLETED BY	JCV	DATE 5/16 TIME 18/6	,/07 2 am pm	REASON FOR SURVEY Benth. 2	
WEATHER CONDITIONS	rain ((heavy rain) steady rain)		INSTREAM FEATURES Water Depth 2.9 (ft) or m	
	showers (intermittent) %Cloud cover clear/sunny			Water Velocity 0.53 frosec or m/sec (within 1 m of substrate)	
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae	it type and recor Rooted so Attached	d the domina ubmergent Algae	nt species present ☐ Rooted floating ☐ Free floating	
WATER QUALITY (within 1 m of substrate)	Temperature 21.8 Specific Conductance Dissolved Oxygen	0.099	-	Water Odors Normal/None Sewage Petroleum Chemical Fishy Other	
	pH 8.24 Turbidity 30		*	Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other	
	WQ Instrument Used	1 <u>U-ZZ</u>		Turbidity (if not measured) Clear Slightly turbid Turbid Opaque O Stained Other	
SEDIMENT/ SUBSTRATE	Odors Normal Sev Chemical An Other	wage Petr aerobic Nor	oleum	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other	
	Oils ☑ Absent ☐ Slight	☐ Moderate 〔	☐ Profuse		

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		0	Detritus	sticks, wood, coarse plant	10	
Boulder	> 256 mm (10")	10		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	4 S	Muck-Mud	black, very fine organic	15	
Gravel	2-64 mm (0.1"-2.5")	25]	(FPOM)		
Sand	0.06-2mm (gritty)	f, m 60	Mari	grey, shell fragments	<i>< 5</i>	
Silt	0.004-0.06 mm	<5				
Clay	< 0.004 mm (slick)	_]			

Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic

Macroinvertebrates, and Fish, Second Edition - Form 1

STREAM NAME CLO	LOCATION	REF1	R I -1	
LAT 33.59645 LO	ONG 25:77653			
SAMPLE# REF1 R	I-1,-1R	NOTES	previ	ons full location
INVESTIGATORS	ABBL			
FORM COMPLETED BY		DATE 5/16/03 TIME 1845	7 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	REASON FOR SURVEY
	JCV	11ML 78-73	AM PM	Benthiz
WEATHER CONDITIONS	Now			INSTREAM FEATURES
	🔲 rain ((heavy rain) steady rain) s (intermittent)		Water Depth 1.0 ft or m
	%□ %cl	oud cover		Water Velocity 1.45 fl/sec or m/sec
	cle	ar/sunny		(within 1 m of substrate)
<u></u>	<u></u>	·	<u> </u>	
AQUATIC VEGETATION	Indicate the dominar Rooted emergent Floating Algae	t type and record to Rooted subm Attached Al	the dominal mergent lgae	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY	Temperature Z1.	L o C		Water Odors
(within 1 m of substrate)	Specific Conductance	0.102	1	O'Normal/None O'Sewage O'Petroleum O'Chemical
	Dissolved Oxygen	11.83		☐ Fishy ☐ Other
	pH 8.32		. (Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
	Turbidity 20			☑ None ☐ Other
	WQ Instrument Used	1 V-22		Turbidity (if not measured) Clear Sightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Ser Chemical An	wage 🔾 Petrolo aerobic 🗘 None	eum	Deposits □ Sludge □ Sawdust □ Paper fiber □ Sand □ Relict shells □ Other
	Oils Absent Slight	□ Moderate □ I	Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		0	Detritus	sticks, wood, coarse plant	<i>C</i>	
Boulder	> 256 mm (10")	15		materials (CPOM)		
Cobble	64-256 mm (2.5"-10")	15	Muck-Mud	black, very fine organic		
Gravel	2-64 mm (0.1"-2.5")	50		(FPOM)	5	
Sand	0.06-2mm (gritty)	20	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	c]		trace	
Clay	< 0.004 mm (slick)		1			

Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic

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STREAM NAME Cho	c. Creek	LOCATION	REF#	1 - DEP#2
LAT 33.59833 LO	NG -85,77944		~\ .	
SAMPLE# REFA D	EP-1, -1R	NOTES	Photo #	102-213
INVESTIGATORS			k	
FORM COMPLETED BY	JUV	DATE 5/1-	7/07 10 AM PM	REASON FOR SURVEY
			V*	
WEATHER CONDITIONS	☐ rain (☐ showers	(heavy rain) steady rain) s (intermittent) oud cover ar/sunny		INSTREAM FEATURES Water Depth 2.9 ft or m Water Velocity 0.0 Z ft/sec or m/sec (within 1 m of substrate)
AQUATIC VEGETATION	Indicate the dominar Rooted emergent Floating Algae	t type and reco	submergent	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature Z1.6 Specific Conductance Dissolved Oxygen 1	0.091		Water Odors Normal/None
	pH 8,42 Turbidity 25	1		Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☑ None ☐ Other
	WQ Instrument Used	1 <u> </u>	Transport .	Turbidity (If not measured) Clear Slightly turbid Turbid Opaque Stained Other
SEDIMENT/ SUBSTRATE	Odors Normal Se Chemical An Other	wage DPe aerobic DNe	troleum	Deposits ☐ Sludge ☐ Sawdust ☐ Paper fiber ☐ Sand ☐ Relict shells ☐ Other
	Oils Absent Slight	☐ Moderate	☐ Profuse	
	<u> </u>			
INORGANIC SUBS	STRATE COMPONEN	TS		ANIC SUBSTRATE COMPONENTS

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock		.0	Detritus	sticks, wood, coarse plant	25		
Boulder	> 256 mm (10")	0		materials (CPOM)			
Cobble	64-256 mm (2.5"-10")	0	Muck-Mud	black, very fine organic			
Gravel	2-64 mm (0.1"-2.5")	Z 5		(FPOM)	< 5		
Sand	0.06-2mm (gritty)	50	Marl	grey, shell fragments			
Silt	0.004-0.06 mm	20			10		
Clay	< 0.004 mm (slick)	٠, ۶					

STREAM NAME Che	who Creek	LOCATION	Reference	#2	- EAV#1	
LAT 33, 50350 LO	NG 86.00411	•	O 1 1 3 .			
SAMPLE# REF-Z	EAV-1,-1R	NOTES F	Noto# /	101-206		
INVESTIGATORS	ABU					
FORM COMPLETED BY	JU	DATE 5//* TIME	MOT AM PM	REASON	for survey Beathin	
			<u></u>	1		
WEATHER CONDITIONS	☐ rain (☐ showers %☐ %ci	(heavy rain) steady rain) s (intermittent) oud cover ear/sunny		Water Ve		
AQUATIC VEGETATION	Indicate the dominar ☐ Rooted emergent ☐ Floating Algae	it type and reco	rd the domina submergent d Algae	nt species p	resent ooted floating	
WATER QUALITY (within 1 m of substrate)	Temperature 21.0 Specific Conductance Dissolved Oxygen	e 0.095	/	Water Odoi ☑ Normal/N ☐ Petroleum ☐ Fishy	one Sewage Chemical Other	
	pH 9.26 Turbidity 7.8				ace Oils I Sheen	
	WQ Instrument Use)	Turbidity (i Clear C Opaque C	f not measured) I Slightly turbid	
SEDIMENT/ SUBSTRATE	☐ Chemical ☐ Ar ☐ Other	wage Peraerobic N	etroleum one	Deposits □ Sludge □ ☑ Relict she	☐ Sawdust ☐ Paper fiber ☐ Sand Ills ☐ Other	
	Absent O Slight	☐ Moderate	☐ Profuse			
	STRATE COMPONEN	(TS			STRATE COMPONENTS ssarily add up to 100%)	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area	
Bedrock		nut exposed	Detritus	sticks, wood, coarse plant materials (CPOM)	35	
Boulder	> 256 mm (10")			Itiateriais (Cr ON)		
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic (FPOM)	35	
Gravel	2-64 mm (0.1"-2.5")	45		(FFOM)		
Sand	0.06-2mm (gritty)	50	Marl	grey, shell fragments		
Silt	0.004-0.06 mm	۶			< 5	
Clay	< 0.004 mm (slick)					

STREAM	NAME CLE	IAME Cheata Cieck LOCATION Reference # Z - Rin #1					
LAT 33	LAT 33 50378 LONG 86.00445 Photo # 101-207						
	# REFOZ			NOTES	-noto:	101 20:	
INVESTI	GATORS	A 88	L				
FORM CO	OMPLETED BY	JU	/	DATE _	<u> 5/17/</u> 07 1940 AM	REASON FOR S	SURVEY Hic
WEATHER CONDITIONS Storm (heavy rain (steady rain showers (intermit %) %cloud cover clear/sunny					ı) ent)	E .	0.15 ft/sec or m/sec
AQUATIC VEGETATION Indicate the dominant type and record the dominant species present Rooted submergent Rooted floating Free floating Attached Algae							
WATER ((within 1 m	QUALITY n of substrate)	Specific Dissolve pH	ature 21.2 Conductance ed Oxygen 14 1.4 ity 8.0 strument Used	0.04 4.5		☐ None ☐ Other	□ Globs □ Flecks
SEDIMEN SUBSTRA		Oils	nal □ Sew nical □ Ana nt □ Slight □	:	· ·	□ Relict shells	ust 🔲 Paper fiber 🔲 Sand
INORGANIC SUBSTRATE COMPONENTS (should add up to 100%) ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)							
Substrate Type	Diamet	er	% Composi Sampling		Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			20		Detritus	sticks, wood, coarse plan	
Boulder	> 256 mm (10")	20			materials (CPOM)	5-10
Cobble	64-256 mm (2	5"-10")	30		Muck-Mud	black, very fine organic (FPOM)	
Gravel	2-64 mm (0.1"-	2.5")	20			(2.500)	5
Sand	0.06-2mm (grit	ty)	10		Marl .	grey, shell fragments	
Silt	0 004-0 06 mm				1		trais

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Appendix A-1: Habitat Assessment and Physicochemical Characterization Field Data Sheets

< 0.004 mm (slick)

STREAM NAME Chea	na Creek	LOCATION Ref	= 7	- Rifflett
	RI-1,-1R	NOTES Photo	# 1	01 - 208
INVESTIGATORS	ABBL'			
FORM COMPLETED BY	5cV	DATE SIGNOT AM	EM)	REASON FOR SURVEY Bently
WEATHER CONDITIONS	☐ rain (☐ showers %☐ %cl	(heavy rain) steady rain) (intermittent) oud cover ear/sunny		INSTREAM FEATURES Water Depth
	· · · · · · · · · · · · · · · · · · ·			
AQUATIC VEGETATION	Indicate the dominan ☐ Rooted emergent ☐ Floating Algae	t type and record the don Rooted submergent Attached Algae	ninant t	t species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 21.4 Specific Conductance Dissolved Oxygen 1	0.095	70	/ater Odors Normal/None
	pH <u>9.45</u> Turbidity 12		_ Q	/ater Surface Oils Slick □ Sheen □ Globs □ Flecks None □ Other
	WQ Instrument Used	1 <u>U-Z></u>	T 0	urbidity (if not measured) Clear □ Slightly turbid □ Turbid Opaque □ Stained □ Other
SEDIMENT/ SUBSTRATE	Odors Normal Sev Chemical Ana	wage		eposits Sludge Sawdust Paper fiber Sand Relict shells Other
	Oils Absent OSlight (□ Moderate □ Profuse		
				·

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock		10	Detritus	sticks, wood, coarse plant	5		
Boulder	> 256 mm (10")	20		materials (CPOM)			
Cobble	64-256 mm (2.5"-10")	30	Muck-Mud	black, very fine organic	< 5		
Gravel	2-64 mm (0.1"-2.5")	25] .	(FPOM)			
Sand	0.06-2mm (gritty)	15	Mari	grey, shell fragments			
Silt	0.004-0.06 mm		1		< S		
Clay	< 0.004 mm (slick)						

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STREAM NAME	Adeac Creek	LOCATION	Ref #	3 - DEP#1
LAT 33.38176 LO			Di	\$ 120 200
SAMPLE# REF3	DEP-1,-1R	NOTES	Thota	# 102-212
INVESTIGATORS	ABBL		7	
FORM COMPLETED BY	JeV	DATE 5// TIME 17	1/64 Z/) AM (M)	REASON FOR SURVEY Benthic
		· · · · · · · · · · · · · · · · · · ·	v.:	
WEATHER CONDITIONS	Now		-	INSTREAM FEATURES
	rain ((heavy rain) steady rain)		Water Depth 7 6 ft or m
	%□, %cl	s (intermittent) loud cover ear/sunny	•	Water Velocity
AQUATIC VEGETATION	Indicate the dominan Rooted emergent Floating Algae		submergent	nt species present ☐ Rooted floating ☐ Free floating
WATER QUALITY (within 1 m of substrate)	Temperature 23. 4	L°C • 0.029	. /	Water Odors O Normal/None O Petroleum O Chemical O Fishy O Other
	Dissolved Oxygen	0.61		Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks ☐ None ☐ Other
	Turbidity 12 WQ Instrument Used	d	<u> </u>	Turbidity (if not measured) Clear Slightly turbid
SEDIMENT/ SUBSTRATE	Odors Normal Se Chemical An	wage 🔾 Pe naerobic 🗘 No	etroleum one	Deposits Sludge Sawdust Paper fiber Sand Relict shells Other
	Oils □ Absent □ Slight	☐ Moderate	☐ Profuse	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)			
Substrate Type	Diameter	Diameter % Composition in Sampling Reach		Characteristic	% Composition in Sampling Area	
Bedrock		0	Detritus	sticks, wood, coarse plant materials (CPOM)	סו	
Boulder	> 256 mm (10")	0		Ittateriais (Cr Oivr)	,,,	
Cobble	64-256 mm (2.5"-10")	۷ ۶	Muck-Mud	black, very fine organic (FPOM)	10	
Gravel	2-64 mm (0.1"-2.5")	10		(ITOM)		
Sand	0.06-2mm (gritty)	60	Mari	grey, shell fragments	< S	
Silt	0.004-0.06 mm	7				
Clay	< 0.004 mm (slick)					

Rapid Bioassessment Protocols For Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates, and Fish, Second Edition - Form 1

STREAM NAME To	ladean (teck LOCATION Reference					e #3 - Ex	1V#1	
LAT 33. 38356 L	ONG <u>86.</u>							
SAMPLE# REF 3	EAV-1	,-12 NO	TES	holo	#	101-204		
INVESTIGATORS ABBL								
FORM COMPLETED BY		DA		7/07	_	REASON FOR SUR		
	JO	V 1111	AE	π	₩	Ben 1	Phyto.	
			, 0					
WEATHER	Now					INSTREAM	<u>-</u>	
CONDITIONS		storm (heav	v rain)			FEATURES		
		rain (stead	y rain)			Water Depth	(ft) or m	
		showers (inte %cloud o			· .	Water Velocity 0.	10 ft/sec or m/sec	
		clear/su	nny	i		(within 1 m of substr		
AQUATIC VEGETATION	Rooted	Indicate the dominant type and record the dominant species present ☐ Rooted emergent ☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Floating Algae ☐ Attached Algae						
WATER QUALITY	Temperat	ure 23.6 °C				Water Odors		
(within 1 m of substrate)	Specific C	onductance Ø	<u>020.</u>	☐ Normal/None ☐ Sewage ☐ Petroleum ☐ Chemical				
	H	Oxygen 10.9			5	2 Fishy	Other	
		169				Water Surface Oils Slick Sheen Globs Flecks		
	II	4.9				None Other		
		ument Used	U-22		· Æ	Turbidity (if not meass 2 Clear D Slightly tu D Opaque D Stained	ured) irbid	
SEDIMENT/ SUBSTRATE	Odors Normal	☐ Sewage	□ Pe	troleum	.]	Deposits Disludge Disawdust	☐ Paper fiber ☐ Sand	
	al ☐ Anaerob			į	Relict shells	Other		
	Oils						•	
	derate	🗆 Profu	ie		· .			
INORGANIC SUB (should :				ORGA (do	ANIC SUBSTRATE C es not necessarily add	OMPONENTS up to 100%)		
Substrate Diame Type	ter	% Composition Sampling Read		ostrate Type		Characteristic	% Composition in Sampling Area	

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)				
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area		
Bedrock		-	Detritus	sticks, wood, coarse plant			
Boulder	> 256 mm (10")	<i>e</i> s		materials (CPOM)	5-10		
Cobble	64-256 mm (2.5"-10")	5	Muck-Mud	black, very fine organic	45		
Gravel	2-64 mm (0.1"-2.5")	5.5		(FPOM)			
Sand	0.06-2mm (gritty)	0.06-2mm (gritty) 2 S		grey, shell fragments			
Silt	0.004-0.06 mm	10			< S		
Clay	< 0.004 mm (slick)	< S					

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STREAM	NAME TAL	wileya		LOCATI	ON RU	253	- BW#	
LAT 33	AT 33. 3838 FLONG 86.07948							
SAMPLE#	REF 3	BW-1,-1R NOTES Plate 101-210						
INVESTIC	INVESTIGATORS ABBL							
FORM CO	MPLETED BY	JC	V	DATE		PM F	REASON FOR SURV Benthiz	
WEATHE		(storm rain (showers cl cl	(heavy rain steady rain (intermitte oud cover ar/sunny)	I	NSTREAM FEATURES Water Depth	04 ft/sec or m/sec
								· · · · · · · · · · · · · · · · · · ·
AQUATIO VEGETA	IC ATION Indicate the dominant type and record the dominant species present Rooted emergent Rooted submergent Rooted floating Free floating Attached Algae							
WATER ((within 1 m	QUALITY 1 of substrate)	Temperature 25.9 °C Specific Conductance 0.029 Dissolved Oxygen 10.98 pH 2.77 Water Odors Normal/None Sewage Petroleum Chemical Fishy Other Water Surface Oils Slick Sheen Globs Flecks None Other					Chemical Other	
		Turbidi WQ Ins	ty 7.2 trument Used	ı <u>V</u> -	22_	Tu:	rbidity (if not measu Clear	red)
SEDIMEN SUBSTRA		Odors O Norm Chem Other	ical 🛛 An		☐ Petroleum ☐ None	Z	posits Sludge 🗅 Sawdust Relict shells 🕒	☐ Paper fiber ☐ Sand Other
		Oils Abset	nt 🗆 Slight	☐ Moderat	te 🛭 Profu	se		
		7						
INC	RGANIC SUBS (should a			TS	•		IC SUBSTRATE C not necessarily add	
Substrate Type	Diamet	Diameter % Composition in Sampling Reach			Substrate Type	C	haracteristic	% Composition in Sampling Area
Bedrock			-		Detritus	sticks, w	ood, coarse plant s (CPOM)	5 - 177
Boulder	> 256 mm (10")	. —			Haterial	s (Cr OWI)	5-10
Cobble	64-256 mm (2.	5"-10")	10		Muck-Mud	black, v	ery fine organic	· · s
Gravel	2-64 mm (0.1"-	2.5")	3 \$		* 2.4	((OWL)	
Sand	0.06-2mm (grit	ty)	45		Marl	grey, sh	ell fragments	
Silt	0.004-0.06 mm		10					< \$
100	< 0.004 (a)	tials) C C				I		l

140/200000	LOCATION REF#3 - Run #1
LAT 33. 38385LONG 86.07888	NOTES Photo # 101-211
	NOTES 101-21
INVESTIGATORS ABBL	
	DATE 5/17/07 REASON FOR SURVEY
JeV	TIME
WEATHER Now	INSTREAM FEATURES
🔲 🖸 rain (st	teady rain) Water Depth ft or m
%□ %cloù	ud cover Water Velocity ft/sec or fn/sec
clear	r/sunny (within 1 m of substrate)
AQUATIC Indicate the dominant	type and record the dominant species present
AQUATIC VEGETATION ☐ Rooted emergent ☐ Floating Algae	☐ Rooted submergent ☐ Rooted floating ☐ Free floating ☐ Attached Algae
WATER QUALITY Temperature 23.6	°C Water Odors
(within 1 m of substrate) Specific Conductance_	
Dissolved Oxygen 10	
pH 8.7(Water Surface Oils ☐ Slick ☐ Sheen ☐ Globs ☐ Flecks
Turbidity 43	None O Other
	Turbidity (if not measured)
WQ Instrument Used	☐ Clear ☐ Slightly turbid ☐ Turbid ☐ Opaque ☐ Stained ☐ Other
SEDIMENT/ Odors	Deposits
SUBSTRATE Normal Sewa	rage 🔾 Petroleum 🗘 Śludge 🗘 Sawdust 🗘 Paper fiber 🗘 Sand
☐ Chemical ☐ Anae	etopic d'hotte d'hettet stietts d'Other
Oils	
☐ Absent ☐ Slight ☐	☐ Moderate ☐ Profuse
The company of the control of the co	TS ORGANIC SUBSTRATE COMPONENTS
INORGANIC SUBSTRATE COMPONENT	ORGANIC SUBSTRATE COMPONENTS

INORGANIC SUBSTRATE COMPONENTS (should add up to 100%)			ORGANIC SUBSTRATE COMPONENTS (does not necessarily add up to 100%)		
Substrate Type	Diameter	% Composition in Sampling Reach	Substrate Type	Characteristic	% Composition in Sampling Area
Bedrock			Detritus	sticks, wood, coarse plant materials (CPOM)	5-10
Boulder	> 256 mm (10")	. 1 🗲 .			
Cobble	64-256 mm (2.5"-10")	20	Muck-Mud	black, very fine organic (FPOM)	4 \$
Gravel	2-64 mm (0.1"-2.5")	50			
Sand	0.06-2mm (gritty)	15	Marl	grey, shell fragments	۶
Silt	0.004-0.06 mm	tr es			
Clay	< 0.004 mm (slick)	tr cs			

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