



PROGRAMMATIC  
SAFE HARBOR  
AGREEMENT AND



CANDIDATE CONSERVATION AGREEMENT  
WITH ASSURANCES

For the Arkansas Fatmucket, Pink Mucket, Spectaclecase, Rabbitsfoot, Harperella  
and Twenty other  
Aquatic Species of Greatest Conservation Need in the upper Saline, Caddo, and  
Ouachita River (Headwaters) Watersheds, Arkansas.



Between The Arkansas Game & Fish Commission, The Nature  
Conservancy's Arkansas Field Office, Natural Resources Conservation  
Service, and The U.S. Fish and Wildlife Service



PROGRAMMATIC SAFE HARBOR AGREEMENT  
AND  
PROGRAMMATIC CANDIDATE CONSERVATION AGREEMENT

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## 1.0 Introduction

This agreement (“Agreement”) is part of an application for an Enhancement of Survival Permit (“Permit”) associated with a programmatic Safe Harbor Agreement (SHA) and an application for a Permit associated with a programmatic Candidate Conservation Agreement with Assurances (“CCAA”). This Agreement is between The Nature Conservancy (“TNC”), U.S. Fish and Wildlife Service (“FWS”), Arkansas Game & Fish Commission (“AGFC”), and U.S. Natural Resource Conservation Service (“NRCS”) (collectively the “Parties” or the “Authorizing Parties”). This Agreement shall be effective and binding on the date last signed below (“effective date”).

This Agreement consists of two distinct program components, e.g., Safe Harbor and Candidate Conservation with Assurances, and covers the twenty-five species (collectively referred to as the “Covered Species”) listed in Table 1, below, and described in Appendix 1 to this Agreement. The five (5) species covered under the Safe Harbor component of this Agreement are the Federally-listed endangered Arkansas fatmucket (*Lampsilis powellii*), pink mucket (*Lampsilis abrupta*), spectaclecase (*Cumberlandia monodonta*) and Harperella (*Ptilimnium nodosum*) and the proposed threatened rabbitsfoot (*Quadrula cylindrica cylindrica*) (collectively referred to as the “SHA Covered Species”). Twenty (20) of Arkansas’s “Species of Greatest Conservation Need” (“SGCN”) are covered under the Candidate Conservation with Assurances component of this Agreement and collectively referred to herein as the “CCAA Covered Species.”

By entering into this Agreement, the Parties are utilizing the FWS’s Safe Harbor and Candidate Conservation Programs to further the conservation of the Nation’s fish, wildlife, and plants. Both components of this Agreement and their associated Permits target non-federal lands in the Upper Saline, Caddo, and Ouachita River watersheds (Appendix 2, Figures 1 – 2) (collectively the “Covered Watersheds” or “Covered Area”), whose owners are willing to engage in voluntary management activities (*i.e.*, conservation measures) to benefit the Covered Species. The management activities implemented in accordance with this Agreement are designed to benefit all of the Covered Species.

**SHA Tracking Number: TE [permit number assigned by FWS]**

**CCAA Tracking Number: TE [permit number assigned by FWS]**

**Agreement Implementation and Administration:** The Parties will implement and administer this Agreement, including the enrollment of non-federal landowners through Property Owner Management Agreements (“POMA”).

**Agreement Duration:** The duration of this Agreement is thirty (30) years from its effective date. The duration of the Permit issued in association with this Agreement will be thirty-five (35) years. The duration of each Property Owner Management Agreement entered into under this

Agreement and the associated Certificate of Inclusion will be for a minimum of ten (10) years or for the duration of this Agreement, whichever is longer.

**This Agreement covers the following property:** All eligible non-federal lands within the Covered Watersheds in Saline, Grant, Garland, Hot Spring, Clark, Pike, Montgomery, and Polk Counties in west central Arkansas.

Once enrolled under the procedures outlined herein, a property will be referred to as an “Enrolled Property” (collectively as the “Enrolled Properties”).

**Table 1.** Covered Species: Federally-listed Endangered Species and State-listed Species of Greatest Conservation Need in the upper Saline, Caddo, and Ouachita Headwaters watersheds.

| Species of Greatest Conservation Need (SGCN) - Upper Saline, Caddo, and Ouachita Headwaters Watersheds |                                       |                     |                     |              |             |                                 |
|--|---------------------------------------|---------------------|---------------------|--------------|-------------|---------------------------------|
| Species, Common Name   | Scientific Name                       | Status              | Ouachita Headwaters | Upper Saline | Caddo River | Species Type                    |
| Kiamichi shiner  | <i>Notropis ortenburgeri</i>          | G3, S2              |                     |              | √           | F<br>i<br>s<br>h                |
| Longnose darter  | <i>Percina nasuta</i>                 | G3, S2              |                     |              | √           |                                 |
| Ouachita madtom  | <i>Noturus lachneri</i>               | G2, S2              | √                   | √            |             |                                 |
| Crystal darter   | <i>Crystallaria asprella</i>          | G3, S2?             |                     | √            | √           |                                 |
| Paleback darter  | <i>Etheostoma pallididorsum</i>       | G2, S2              | √                   |              | √           |                                 |
| Peppered shiner  | <i>Notropis perpallidus</i>           | G3, S2              | √                   |              | √           |                                 |
| Caddo madtom   | <i>Noturus taylori</i>                | G1, S1?             | √                   |              | √           |                                 |
| Ouachita darter  | <i>Percina sp. nov.</i>               | G2?, S?             | √                   |              |             |                                 |
| Stargazing darter  | <i>Percina uranidea</i>               | G3, S3              | √                   | √            |             |                                 |
| Arkansas agapetus caddisfly  | <i>Agapetus medicus</i>               | G?, S?              | √                   | √            |             |                                 |
| Elktoe   | <i>Alasmidonta marginata</i>          | G4, S3              | √                   | √            | √           | M<br>u<br>s<br>s<br>e<br>l<br>s |
| Western fanshell   | <i>Cyprogenia aberti</i>              | G2, S2              | √                   | √            | √           |                                 |
| Southern pocketbook  | <i>Lampsilis ornata</i>               | G5, S1              |                     | √            | √           |                                 |
| Arkansas fatmucket   | <i>Lampsilis powelli</i>              | Endangered          | √                   | √            | √           |                                 |
| Purple lilliput  | <i>Toxolasma lividus</i>              | G2, S2              | √                   | √            | √           |                                 |
| Ouachita kidneyshell   | <i>Ptychobranhus occidentalis</i>     | G3G4, S3            | √                   |              | √           |                                 |
| Spectaclecase pearlymussel   | <i>Cumberlandia Monodonta</i>         | Endangered          |                     |              | √           |                                 |
| Southern hickorynut  | <i>Obovaria jacksoniana</i>           | G1G2, S2            |                     | √            | √           |                                 |
| Rabbitsfoot  | <i>Quadrula cylindrica cylindrica</i> | Proposed Threatened |                     |              | √           |                                 |
| Black sandshell  | <i>Ligumia recta</i>                  | G5, S2              | √                   | √            | √           |                                 |
| Pink mucket  | <i>Lampsilis abrupta</i>              | Endangered          |                     | √            |             |                                 |
| Pyramid pigtoe   | <i>Pleurobema rubrum</i>              | G2, S2              | √                   | √            |             |                                 |
| Harparella   | <i>Ptilimnium nodosum</i>             | Endangered          | √                   |              |             |                                 |
| Irons Fork burrowing crayfish  | <i>Procambarus reimeri</i>            | G1, S1              | √                   |              |             | Crayfish                        |
| Ouachita burrowing crayfish  | <i>Fallicambarus harpi</i>            | G1, S1              | √                   |              |             |                                 |

## **2.0 Authority and Purpose**

### **2.1 Authority**

The FWS's authority to enter into this Agreement is Sections 2, 7, and 10 of the ESA and the Fish and Wildlife Coordination Act, 16 U.S.C. Sections 661-666(c). This Agreement also is entered into in accordance with the FWS's "Final Safe Harbor Policy" (64 *Federal Register* 32717) and "CCAA Final Policy" (64 *Federal Register* 32726) as well as with the FWS's implementing regulations at 50 C.F.R. §§ 17.22(c), 17.32(c), 17.22(d), and 17.32(d)).

Section 2 of the ESA states that encouraging parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs is a key to safeguarding the nation's heritage in fish, wildlife, and plants. Section 7 of the ESA requires the FWS to review programs that it administers and to utilize such programs in furtherance of the purposes of the ESA. Section 10(a)(1) of the ESA authorizes the FWS to issue Enhancement of Survival permits.

### **2.2 Purpose**

The purpose of this Agreement is for the implementation of management activities for the Covered Species in the upper Saline, Caddo, and Ouachita River watersheds that occur in the following counties in west central Arkansas: Saline, Grant, Garland, Hot Spring, Clark, Pike, Montgomery, and Polk. The management activities will be implemented by the Parties and by Cooperators, and will generally consist of stream, riparian zone, and watershed protection and restoration (e.g., stream channel stabilization, fencing, re-forestation, alternative watering for livestock), augmentation, reintroduction, and management of habitat.

The purpose of the programmatic aspect of this Agreement is to ensure that all non-federal landowners that enroll under the SHA or CCAA are subject to consistent biological performance standards. The Parties have an interest in using existing programs and partnerships throughout the Covered Watersheds to advance the purposes of this Agreement and to provide financial and technical assistance (where available and subject to Section 18.0 below) to interested landowners who are willing to conduct voluntary management activities to benefit the Covered Species, water quality, and general habitat conditions. Additionally, this Agreement is intended to facilitate collaboration between the Parties and Cooperators in the implementation of management activities for Covered Species.

### **3.0 Conservation Goals and Objectives**

The conservation goals of this Agreement are to protect, enhance, and expand habitat availability and to reduce sediment and pollutant runoff. The attainment of these conservation goals and objectives is expected to enhance water quality and allow for subsequent natural population expansion or, if necessary, augmentation or reintroduction of the Covered Species in the Covered Watersheds. Under this Agreement, Cooperators adjacent to stream channels within the Covered Watersheds will make habitat available to the Covered Species and assist with habitat conservation for a minimum period of ten (10) years or for the remainder of the 30-year Agreement, whichever is the longer duration. For example, a Cooperator enrolling under this Agreement in Year 1 will be enrolled for a period of 30 years. Whereas, a Cooperator enrolling under this Agreement in Year 25 will be enrolled for a period of 10 years, which is the remainder of the period covered by the Permits (35 year permit duration). Unless the Agreement and Permit durations are extended, no Cooperators will be enrolled in the Agreement between Years 26 – 30. Cooperators within the Covered Watersheds, but not adjacent to a stream channel will manage their property in a manner which utilizes best management practices to reduce sediment and pollutant runoff. Such management will enhance water quality and habitat (water and stream bed) for the Covered Species. Cooperators will take inventory of their Enrolled Property and protect wet seepages and springs that may provide habitat for the terrestrial burrowing crayfish.

### **4.0 Regulatory Standards for Safe Harbor Agreements and Candidate Conservation Agreements with Assurances**

#### **4.1 Safe Harbor Program Standard and Goals**

Prior to entering into a SHA or, as also pertains to this Agreement, enrolling a property under the Safe Harbor component of this Agreement via a Property Owner Management Agreement (“POMA”), the FWS must determine that the effect of the implementation of the proposed voluntary management activities for a Covered Species would produce a net conservation benefit to the species. The net conservation benefit, which is the SHA standard, must contribute, directly or indirectly, to the recovery of the Covered Species. This contribution towards recovery may vary and may not be permanent. Moreover, the benefits to the Covered Species will depend on the nature of the management activities, including where and for how long they are implemented.

The Parties reasonably expect that the implementation of the management activities prescribed by this Agreement to result in a net conservation benefit to the SHA Covered Species through the protection, enhancement, and restoration of in stream habitat, improved water quality, reduced erosion and sedimentation, improved riparian habitat, and improved land use practices on the Enrolled Properties during the duration of the Agreement. For as long as management activities

are carried out on the Enrolled Properties or the habitat created pursuant to the SHA persists, there will be net conservation benefits to the SHA Covered Species.

#### 4.2 CCAA Program Standard and Goals

Prior to entering into a CCAA or, as also pertains to this Agreement, enrolling a property under the CCAA component of this Agreement via POMAs, the FWS must determine that the management activities and the expected benefits of entering into this Agreement and associated POMAs would meet the CCAA standard, *i.e.*, preclude or remove the need to list the CCAA Covered Species were it assumed that similar management activities were being implemented on other necessary properties.

The conservation benefits that are expected to occur to the CCAA Covered Species from implementation of the prescribed management activities are enhancement and restoration of in stream and riparian habitat. These benefits are expected to contribute to an increase in and reestablishment of the CCAA Covered Species populations within the Covered Watersheds. In addition, conservation of the Covered Species would be enhanced by improving and encouraging cooperative management efforts between the Parties and Cooperators who own and/or control most of the species' habitats within the Covered Watersheds. If the level of habitat improvement or protection expected under this Agreement were accomplished throughout the Covered Watersheds, the FWS expects that the need to list the CCAA Covered Species would likely be precluded or removed.

#### 5.0 Lands Eligible for Enrollment under this Agreement

The 439,792 acres of the upper Saline River watershed, the 412,556 acres of the Ouachita River watershed, and the 235,010 acres of the Caddo River watershed support a diversity of stream habitats that may be suitable for the Covered Species. This Agreement focuses, however, on those non-federal lands adjacent to streams and upland areas that may contribute sediment and pollutant runoff and, where appropriate, wet pastures and road side ditches identified as ideal habitat for the two burrowing crayfish species. The Parties reasonably expect that the Covered Species will occupy the properties adjacent to the streams in these watersheds upon implementation of the management activities undertaken pursuant to this Agreement and the associated POMAs. The Parties do not expect the Covered Species to occur on enrolled properties that are nonadjacent to the perennial streams; however, the Parties do expect that implementation of the management activities set forth herein on such properties will beneficially affect all Covered Species. As more detailed geospatial data is collected for each of the Covered Species, *i.e.*, stream reach specific locations, additional priority lands likely will be identified for the species.

The factors that will be considered in determining whether a Landowner's property is eligible for enrollment under this Agreement are the existence of riparian habitat (width, length, type of vegetation, fenced or not fenced) on the property, the current or recommended land use practices (best management practices), and the presence/absence of other existing agreements on the property. Because the amount of occupied suitable habitat (instream area) or the number of

individuals (population estimate  $\pm$  standard error) of the Covered Species could fluctuate naturally or through no fault of the Landowner/Cooperator, these factors will not be used in determining the “baseline conditions” of a property for enrollment under the Safe Harbor component of this Agreement or in determining the “existing circumstances” of a property for enrollment under the Candidate Conservation with Assurances component of this Agreement. The Parties expect that, through the implementation of management activities that protect, enhance, or restore riparian habitat and stream banks and of best management practices on enrolled properties, in stream habitat will be protected, enhanced, or restored throughout the duration of this Agreement.

## **6.0 Determining “Baseline Conditions” and “Existing Circumstances”**

Each POMA entered into under the Safe Harbor component of this Agreement must describe the “baseline conditions,” as defined in the FWS’s Final Safe Harbor Policy, existing on the enrolled property at the time the POMA is executed. Similarly, each POMA entered into under the Candidate Conservation component of this Agreement must describe the “existing characteristics,” as described in the FWS’s Final Policy for CCAAs, existing on the enrolled property at the time the POMA is executed (See Attachments 1 and 2). The “baseline conditions” of a property enrolled under the Safe Harbor component of this Agreement and the “existing circumstances” of a property enrolled under the Candidate Conservation with Assurances component will be based on riparian habitat (width, length, type of vegetation, degree of canopy and ground cover, fenced or not fenced), current or recommended land use practices (best management practices), and existing agreements on the property. The extent of bare ground and exposed erodible soils adjacent to riparian zones also will be used in determining existing circumstances and baseline conditions since such habitats may significantly affect sediment transport into streams. The amount of occupied suitable habitat or number of individuals (populations estimate  $\pm$  standard error) may fluctuate naturally or through no fault of the Cooperator and, therefore, will not be used to establish existing circumstances or baseline conditions. Due to the inherent variability that occurs naturally over time within stream channels, instream habitat will not be used to describe existing circumstances or baseline conditions on a property.

### **6.1 Adjustments to “Existing Circumstances” and “Baseline Conditions”**

In spite of management and protection efforts, there may be circumstances that are unforeseen and/or beyond the Cooperator’s control (e.g., *force majeure* events such as tornados, rainstorms, severe drought, fires, or insect/disease epidemics), where habitat that gave rise to the Cooperator’s baseline responsibilities or that was included as part of the existing circumstances ceases to exist on the enrolled property or becomes degraded and unsuitable for continued occupation by the Covered Species, or where the Covered Species is extirpated from the enrolled property. These events may reduce the Covered Species’ numbers or habitat below the existing circumstances or those conditions necessary to meet the net conservation benefit. When such occur, the Cooperator will not be held responsible for the loss, provided such occurrence is not the result of the actions or inactions of the Cooperator or the Cooperator’s agent(s). The Cooperator may request, in writing, that the Parties adjust the existing circumstances and/or

reduce the baseline conditions of the enrolled property. The Parties may agree to the requested adjustment or reduction and revise the management activities of the Cooperator's POMA, as appropriate, to reflect the new circumstances, in accordance with Section 8.3, below, to reflect the adjustment. A condition for seeking such an adjustment is that the Cooperator must agree to grant access to the Parties to enter upon the enrolled property to investigate whether the request should be granted.

## **7.0 Property Owner Management Agreements and Certificates of Inclusion**

For twenty-five years from the effective date of this Agreement, and provided the respective standards of Sections 4.1 and 4.2, above, are satisfied, the Parties may enroll eligible non-federal Landowners in the Safe Harbor and/or Candidate Conservation with Assurances components of this Agreement through Property Owner Management Agreements ("POMAs"). Upon entering into a POMA, a Cooperator shall be issued a Certificate of Inclusion ("Certificate" or "Certificates") by the AGFC or FWS. The rights and obligations under this Agreement and any associated POMA shall run with the ownership of the enrolled properties.

### **7.1 Enrollment Procedures**

To enroll a property under this Agreement, one or more of the Parties and the non-federal landowner must enter into a POMA (Attachments 1 and 2), wherein the landowner agrees to, among other things, implement specified conservation strategies and measures on the property (see Section 8.2, below). Upon entering into a POMA, the non-federal landowner will become a "Cooperator" under this Agreement.

A Landowner wishing to enroll a property under this Agreement must do the following:

1. meet and discuss the terms and conditions of this Agreement with one or more of the Parties;
2. with the assistance of one or more of the Parties, develop a POMA (Attachments 1 and 2) in accordance with this Agreement; and
3. sign the POMA.

A POMA shall become effective and binding on the date of the last signature of the parties thereto. Upon entering into a POMA, the Cooperator will be issued a Certificate of Inclusion that provides authorization to take the Covered Species as well as the regulatory assurances set forth in Part 10.0, below (See Attachments 4 and 5).

## 7.2 Content of the Property Owner Management Agreement (POMA)

Attachments 1 and 2 to this Agreement are template POMAs for the Safe Harbor Program and the CCAA Program, respectively, that outlines the required minimal content for a POMA. Each Party to this Agreement agrees to utilize the applicable template or templates to enroll eligible non-federal landowners. Each POMA shall include a detailed description of the baseline conditions (Safe Harbor) and existing circumstances (Candidate Conservation) of the lands and/or waters on the enrolled property, including but not limited to, those characteristics that sustain any current, permanent, or seasonal use by the Covered Species. The description will include quantitative descriptions, when possible, of the vegetation type, major plant species and their percent cover, soil type(s) and their moisture regimes, hydrology of the area, and any other relevant characteristics. A thorough qualitative description could be provided, however, where no quantitative data exist. A POMA also will list the management activities and management activities (Safe Harbor and Candidate Conservation) the Landowner agrees to implement as well as, where appropriate, the matters that would constitute changed circumstances and the measures the Cooperator would undertake were such circumstances to occur. In addition, if the baseline conditions or existing characteristics of the enrolled property help support populations of the Covered Species on other lands or waters (outside the enrolled property), these characteristics must be described in the POMA. Each POMA also will include a map of the enrolled property as well as the acreage of the property, a description of stream and riparian habitat types, and the best management practices then implemented on the property and/or any recommended best management practices (see also Section 8.2, below).

## 8.0 Agreement Implementation

### 8.1 Phased Implementation

The Parties will implement this Agreement in two phases, e.g., Phase I and Phase II, which may occur concurrently.

#### **Phase I:**

Phase I is the initial 12-24 month period following Permit issuance when basic information is gathered with respect to habitats, land ownership, and the Covered Species' distribution within the Covered Area. The TNC, AGFC, and FWS will be responsible for gathering information concerning the manner in which the Covered Species' distribution and anticipated habitat use correspond to individual properties within the Covered Area. The Parties anticipate that fieldwork may be required to obtain this information. The TNS, AGFC, and FWS, subject to Section 18.0 of this Agreement, will engage in efforts to secure funding for these activities and individually undertake the activities as may be needed. Information gathered during Phase I will be used to support Phase II.

## **Phase II:**

Phase II is the long-term thirty-year period during which this Agreement will be implemented. In addition to implementing and administering this Agreement, the Parties will provide funding, when available and authorized to support implementation of management activities, under the various ESA Programs, Partners for Fish and Wildlife Program, Farm Bill Programs, Stream Team Program, and other state and private resources.

### **8.2 Conservation Strategy/Measures**

A Cooperator may be required to implement one or more of the following management activities on its enrolled property:

1. Provide limited access to streams and riparian areas for livestock through:
  - a. Fencing;
  - b. Development of alternative watering sources;
  - c. Development and implementation of nutrient management plans; and
  - d. Implementation of prescribed grazing systems.
  
2. Protect, enhance, or restore terrestrial habitats through:
  - a. Habitat easements;
  - b. Stream buffer establishment;
  - c. Stream buffer maintenance;
  - d. Installation and maintenance of erosion and pollutant control measures;
  - e. Foregoing detrimental land use practices;
  - f. Drainage repair and maintenance on rural gravel roads; and
  - g. Pasture and road site ditch seep protection/enhancement for burrowing crayfish.
  
3. Protection, enhancement or restoration of aquatic habitats through:
  - a. Stream easements;
  - b. Installation of in-stream habitat features;
  - c. Stream channel restoration;
  - d. Stream bank stabilization; and
  - e. Road and livestock crossing stabilization.
  
4. Species augmentation and/or reintroduction

Should the Parties identify new threats or additional management activities that are critical to the conservation of the Covered Species, they may, with the concurrence of all, modify this Agreement to include such measures and allow Cooperators enrolling after such modification to choose to implement the additional management activities on their enrolled properties. Subject to

Section 13.1 and 13.2, below, and with the written approval of the Parties, previously enrolled Cooperators would be allowed to amend their POMAs in accordance with Section 13.2, below, to include the additional measures.

### 8.3 Maintaining Existing Circumstances and/or Baseline Responsibilities

To maintain existing circumstances and/or baseline conditions on an enrolled property, a Cooperator may be required to implement one or more of the following, which will be determined by the initial coordination between one or more of the Parties and the Cooperator and outlined in the Cooperator's POMA. The Cooperator's responsibilities may include the following:

1. Maintaining existing riparian habitat within 50 – 100 feet, depending on slope, of perennial and intermittent stream banks and 30 feet of ephemeral stream banks;
2. Ensuring that riparian vegetation remains intact during and after vegetation management activities, such as harvesting, prescribed burning, road or fire line construction, and pesticide application;
3. Ensuring that movement of fish and other aquatic organisms in streams are not obstructed by construction of new road crossings, culverts, or other human-caused obstructions;
4. Refraining from undertaking activities that adversely affect hydrologic function (i.e., stream flow, pasture and road side ditch seeps, water quality, physical habitat);
5. Maintaining existing fences in a state sufficient to prevent livestock access to riparian areas and streams except at designated water access locations;
6. Adhering to the then existing Arkansas Forestry Commission's recommended best management practices for water quality protection; and
7. Complying with the terms and conditions of any existing easements or conservation agreements on the enrolled property.

### 8.4 Conflicts between the SHA and CCAA Standards

Note that some conflicts may occur between the baseline concept of Safe Harbor and the existing circumstances concept of Candidate Conservation with Assurances. This may be especially relevant where a Cooperator desires to terminate a POMA and Certificate to exercise his regulatory assurances.

Because the CCAA and SHA regulatory standards differ, circumstances may exist where a Cooperator's return to baseline conditions could place the Cooperator at risk in concurrently

achieving and/or maintaining the CCAA standard for that same enrolled property. Consequently, each POMA executed under either or both the SHA and CCAA components of this Agreement will clearly articulate any potential conflicts that may exist between the applicable assurances and conservation standards. The Parties to this Agreement will work together quickly and effectively to resolve such situations to benefit the Covered Species and, to the extent possible, to the Cooperator.

## **9.0 Incidental Take**

In consideration of the level of incidental take authorized by the Permit, the Parties expect that the goals of this Agreement will be met. Incidental take events are likely to occur sporadically, both geographically and temporally, but it is not expected to nullify and eliminate the cumulative accrued net conservation benefit(s) to the SHA Covered Species and accrued conservation benefit(s) to the CCAA Covered Species that are expected to occur from implementation of this Agreement and the associated POMAs.

## **10.0 Regulatory Assurances**

Through this Agreement and the associated Permit, the FWS provides the Safe Harbor regulatory assurances at 50 C.F.R. §§ 17.22(c)(5) and 17.32(c)(5) and the CCAA regulatory assurances at 50 C.F.R. §§ 17.22(d)(5) and 17.32(d)(5) to the non-federal parties to this Agreement, the Arkansas Game & Fish Commission and The Nature Conservancy. AGFC and TNC, in turn, will pass the assurances to the Landowners enrolling under this Agreement via the Landowners' respective POMA and Certificate of Inclusion. Neither the FWS nor NRCS can receive the SHA or CCAA regulatory assurances, but as Parties to this Agreement, they may pass the assurances to Landowners enrolling under this Agreement in the same manner as AGFC and TNC. The regulatory assurances shall be incorporated verbatim in each POMA and Certificate. The regulatory assurances provided through Safe Harbor are set forth in Attachment 4; the regulatory assurances through Candidate Conservation are set forth in Attachment 5, hereto.

### **10.1 Safe Harbor Assurances**

Under the terms of this Agreement, a Cooperator will be authorized to make use of their enrolled property in any manner that does not result in reducing the population and/or quantity and quality of habitat for the Arkansas fatmucket, pink mucket, spectaclecase, rabbitsfoot and Harperella below the baseline conditions set forth in the Cooperator's POMA. The Cooperator's Certificate will authorize take incidental to otherwise lawful activities on the enrolled property from the time the POMA becomes effective until expiration of the Certificate. Such activities may include, but are not limited to: driving vehicles, building or fence construction, grazing of livestock, gardening, forestry, hunting, farming, mowing, or cultivation of agricultural crops. A Cooperator may continue current land-use practices, undertake new practices, or make any other lawful use of the enrolled property, even if such use results in incidental take of the SHA Covered Species or the loss and/or degradation of habitat above the Cooperator's baseline responsibilities provided that each of the following qualifications and conditions is met:

1. The Cooperator is in total compliance with his/her POMA;
2. The Cooperator has maintained his/her Arkansas fatmucket, pink mucket, spectaclecase, rabbitsfoot and harperella baseline conditions as specified in the POMA;
3. The Cooperator will only engage in take that is incidental to otherwise lawful activities; and,
4. The Cooperator will not undertake any activity that could result in incidental take of the SHA Covered Species until the Cooperator has provided each of the Parties to this Agreement at least sixty (60) days written notice of the Cooperator's intention to conduct such activity.

The preceding qualifications and conditions will be included in each POMA.

Notwithstanding the minimum 60-day notice requirement in number 4 above, the Cooperator should provide as much advance notification to the Parties as possible. All Parties and/or their agents shall give a coordinated and concerted effort to respond to said written notice. Should the Parties fail to respond to the Cooperator within the 60-day time frame, and provided that each of the preceding qualifications and conditions of 1-4 above has been satisfied, the Cooperator may proceed with the proposed activity.

Attachment 4 to this Agreement provides the template for each Cooperator's Safe Harbor Assurances and shall be incorporated in each POMA.

## 10.2 CCAA Assurances

Should a CCAA Covered Species become listed under the ESA as threatened or endangered, a Cooperator is authorized to use of his/her enrolled property in any manner that does not result in reducing the population and/or quantity and quality of habitat of the CCAA Covered Species below the conservation goals of the CCAA. The Permit associated with this Agreement and the resulting Certificate will authorize take of a Covered Species resulting from lawful activities within the enrolled properties, from the time the POMA and Certificate are signed until expiration. Such activities may include, but are not limited to: driving vehicles, building or fence construction, grazing of livestock, gardening, forestry, hunting, farming, mowing, or cultivation of agricultural crops.

In consideration of the level of incidental take authorized by the Permit, the Parties expect that the goals of this Agreement will be met. Incidental take is only applicable once the species become listed under the ESA. Even if a Covered Species becomes federally protected under the ESA, the extent of incidental take events will likely occur sporadically, both geographically and temporally, but it is not expected to nullify and eliminate the cumulative accrued conservation benefit(s) to the Covered Species produced from implementation of this Agreement and the associated POMAs.

Attachment 5 to this Agreement provides the template for each Cooperator's CCAA assurances and shall be attached and incorporated into each POMA and Certificate.

## **11.0 Monitoring, Reporting and Adaptive Management**

### 11.1 Compliance Monitoring

The Parties and/or their agents may visit an enrolled property to ensure compliance with this Agreement and the Cooperator's POMA and Certificate as well as to provide technical assistance, as necessary.

### 11.2 Biological Monitoring

#### 11.2.1 Monitoring Program for the SHA Component

When the Parties to this Agreement or a Cooperator report the presence of a member of a SHA Covered Species on an enrolled property, or where the species is otherwise known to be present, the FWS and AGFC have the option of assessing the status and abundance of the species on the enrolled property prior to the Cooperator's implementation of the management activities set forth in the Cooperator's POMA. In addition to the aforementioned status and abundance monitoring, select priority sites (as appropriate based on stream size) in each watershed will be sampled by the Parties at least once every five (5) to seven (7) years to monitor the species population and/or habitat trends and to ascertain the success of any implemented management activities.

Select priority sites in each watershed have been sampled by the Parties and partners historically. The information gathered from these samplings has been assembled by TNC, and the Parties have met to review the information and to identify data gaps and priority reaches. This information has been used to develop a unified monitoring plan, which incorporates all current monitoring conducted by partners in the watersheds, identifies additional priority stream reaches, potential partners, and potential funding sources. Because habitat and/or physical assessments of the streams in the Covered Watersheds are of great importance to understanding available viable habitat versus habitat utilized, all available historical data from such assessments has been incorporated in the plan.

Routine water quality monitoring occurs at selected locations in the Covered Watersheds by the Arkansas Department of Environmental Quality ("ADEQ"), U.S. Forest Service ("USFS"), and U.S. Geological Survey. The Parties will utilize the existing water quality monitoring stations established by the ADEQ within the Covered Watersheds as indicators of overall aquatic health. Currently, the ADEQ operates thirteen (13) water quality monitoring stations in the upper Saline River watershed, two stations in the Caddo River watershed, and nine stations in the Ouachita River (Headwaters) watershed. The Parties, with assistance from other State and Federal agencies when available, will seek to expand water quality monitoring efforts where necessary to ascertain the success of any implemented management activities.

### 11.2.2 Monitoring Program for the CCAA Component

When Parties to this Agreement or a Cooperator report the presence of a CCAA Covered Species on an enrolled property or where a Covered Species is otherwise known to be present, FWS, AGFC, TNC or an accredited partner such as the USFS or a local university will, contingent upon available funding, monitor the stream reach for the species by sampling the enrolled property. The sampling will be conducted as specified above for the SHA component.

### 11.3 Five Year Status Reports

The Parties and the Cooperators must assist in the compilation of a status report on the implementation of this Agreement and all POMAs. A status report will be submitted to the FWS every five (5) years covering the period from October 1<sup>st</sup> to September 30<sup>th</sup> of each year and completed by December 1<sup>st</sup> of each fifth year. Copies of the report will be made available upon request to each Party and Cooperator. Each report will list the properties that are enrolled under this Agreement, the current ownership of each enrolled property, the presence or absence of the Covered Species on each property, including when the species' presence or absence was determined, the quantity and quality of habitat for the species, and the best management practices that have been implemented on each enrolled property and the status of such implementation. Each Five Year Status Report will also include: (a) information on the results of biological and compliance monitoring; (b) overall status of the Covered Species; (c) a discussion of the implementation and success of the management activities on each enrolled property; (d) a discussion and evaluation of any compliance actions; and (e) identification and explanation of any incidental take event of the Covered Species. All POMAs and Certificates, as well as any supporting management plans executed during the five-year period, will be made available to the FWS upon request.

### 11.4 Adaptive Management

Adaptive management allows for mutually agreed upon changes to the Agreement's management activities in response to changing conditions or new information. If the management activities do not yield the expected results and appear ineffective, management activities can be changed or alternative activities undertaken to achieve those expected results. Decisions related to adaptive management will be based primarily on an evaluation of the compliance and biological monitoring results detailed in the annual reports.

Adaptive management decisions can be made at any time as deemed necessary by the Parties; however, a major evaluation of this Agreement will be carried out every fifth year to ensure that it is achieving its conservation goals. Management activities will be evaluated as to whether they are resulting in the protection of the Covered Species on enrolled properties. If there is no increase in the Covered Species' population sizes and/or repopulation of historical ranges within the first-ten years of this Agreement, the Parties will change management activities to improve success.

If the management activities/management activities need to be altered to improve benefits for the Covered Species, they will be altered by amending future POMAs, not by altering the responsibilities of Cooperators in existing POMAs. However, if existing Cooperators agree to alter their POMAs, any modification of their responsibilities in relation to adaptive management will be addressed on a case-by-case basis. The Parties will amend this Agreement in accordance with Section 13.1, below, to reflect alterations to management activities/management activities.

## **12.0 Responsibilities**

The Parties agree to work cooperatively on issues necessary to further the purposes of this Agreement. Each Party is tasked with and accountable for certain responsibilities as outlined below. However, all Parties agree that the implementation of this Agreement will be undertaken as a collaborative effort. The Parties will ensure that the requirements of this Agreement and any available incentives are presented to landowners to encourage enrollment under this Agreement. Moreover, nothing in this Agreement shall limit the ability of any federal or state conservation authority to perform its lawful duties, including, but not limited to, conducting investigations as authorized by statute, regulation, and/or by court guidance and direction.

Specific responsibilities of Parties to this Agreement are as follows:

### **12.1 AGFC Shall:**

- a) Implement and administer this Agreement, including monitoring Covered Species, coordinating and/or assisting in the management of Covered Species' habitat on enrolled properties, enrolling Cooperators under this Agreement, and in augmenting and/or reintroducing Covered Species, when necessary.
- b) With the assistance of the prospective Cooperator, complete the applicable POMA form (Attachments 1 and/or 2) and ensure that the proposed management activities meet the applicable regulatory standards and goals of this Agreement, including providing an adequate quantity and quality of in stream and riparian habitat, maintaining existing suggested land use practices, and continuing maintenance of the enrolled property in accordance with any other existing agreement(s) to which the prospective Cooperator is a signatory.
- c) At least thirty (30) days prior to enrolling a landowner under this Agreement, provide the proposed draft POMA and any associated management activities or habitat management plans to each of the other Parties for review and comment. (Provided, however, that all Parties are not required to review a POMA when the management activities consist solely of those that the Parties have previously determined to be completely beneficial to the Covered Species.)
- d) Upon receiving written concurrence from each of the other Parties on the proposed draft POMA referred to in the preceding subsection, enter into the POMA with the prospective

Cooperator and FWS issues a Certificate of Inclusion to the Cooperator. The POMA shall become effective and binding as of the last date signed. The Certificate of Inclusion shall be deemed issued only after it has been signed and dated by FWS.

- e) Upon receipt of a proposed draft POMA from FWS, TNC, and/or NRCS, notify each of the other Parties within fourteen (14) days of AGFC's concurrence or non-concurrence in enrolling the prospective Cooperator.
- f) Within a reasonable time period, work cooperatively with the other Parties to resolve AGFC's objections or concerns about entering into a proposed draft POMA.
- g) For any POMA entered into by AGFC, provide copies of the executed POMA and Certificate of Inclusion to the Cooperator and the other Parties to this Agreement.
- h) When requested and to the extent authorized and funded, provide technical assistance to prospective Cooperators and Cooperators to the maximum extent practicable.
- i) Inform the FWS of any known Covered Species' mortalities or injuries within five (5) working days of receiving notice of such event.
- j) Conduct compliance monitoring and biological monitoring, as described in Section 11.0, above, on the properties it enrolls under this Agreement, provide assistance in the development of a unified monitoring protocol, and assist in preparing five-year status reports pursuant to Section 11.3, above.
- k) If warranted, recommend procedures Cooperators can follow to avoid future occurrences of incidental take of the Covered Species.
- l) Work with the Parties and interested watershed partnerships or groups on potential improvements to the administration, goals, and management activities of this Agreement, as necessary and appropriate.
- m) Inform the FWS when a Cooperator gives a sixty (60) day notice (as per Section 14.1 and 14.2, below) of its intent to carry out an activity that is likely to result in the incidental take of a Covered Species so as to give the FWS the opportunity to work with AGFC in relocating affected members of the species.
- n) Inform the FWS when a Cooperator is not in compliance with the terms and conditions of its POMA, Certificate of Inclusion, if applicable, and/or this Agreement or fails to implement or timely implement any agreed upon measures to remediate non-compliance.
- o) Respond to a Cooperator's proposed modification to a POMA within sixty (60) calendar days of receiving the notice in accordance with section 13.2 of this Agreement.

- p) Provide funding to Cooperators in accordance with this Agreement to the extent such funding is authorized and available.
- q) Provide state program funding when authorized and available for Covered Species' management and/or for implementation of and compliance with this Agreement.
- r) Provide data collected from Cooperators, surveys, and monitoring to the Parties in a timely manner to allow compilation of reporting requirements described in Section 11.0.

## 12.2 NRCS shall:

- a) Implement and administer this Agreement including coordinating Cooperators' habitat management efforts for the Covered Species on enrolled properties and enrolling those prospective Cooperators who are interested in NRCS's technical assistance or Farm Bill programs.
- b) With the assistance of the prospective Cooperator, complete the applicable POMA form (Attachments 1 and/or 2) and ensure that the proposed management activities meet the applicable regulatory standards and goals of this Agreement, including providing an adequate quantity and quality of in stream and riparian habitat, maintaining existing suggested land use practices, and continuing maintenance of the enrolled property in accordance with any other existing agreement(s) to which the prospective Cooperator is a signatory.
- c) At least thirty (30) days prior to enrolling a landowner under this Agreement, provide the proposed draft POMA and any associated management activities or habitat management plans to each of the other Parties for review and comment. (Provided, however, that all Parties are not required to review a POMA when the management activities consist solely of those that the Parties have previously determined to be completely beneficial to the Covered Species.)
- d) Upon receiving written concurrence from each of the other Parties on the proposed draft POMA referred to in the preceding subsection, enter into the POMA with the prospective Cooperator and ensure that FWS issues a Certificate of Inclusion to the Cooperator. The POMA shall become effective and binding as of the date last signed. The Certificate of Inclusion shall be deemed issued only after it has been signed and dated by FWS.
- e) Upon receipt of a proposed draft POMA from FWS, TNC, and/or AGFC, notify each of the other Parties within fourteen (14) days of NRCS's concurrence or non-concurrence in enrolling the prospective Cooperator.
- f) Within a reasonable time period, work cooperatively with the other Parties to resolve NRCS's objections or concerns about entering into a proposed draft POMA.
- g) For any POMA entered into by NRCS, provide copies of the executed POMA and Certificate of Inclusion to the Cooperator and the other Parties to this Agreement.

- h) When requested and to the extent authorized and funded, provide technical assistance to prospective Cooperators and Cooperators to the maximum extent practicable.
- i) Inform the FWS of any known Covered Species' mortalities or injuries within five (5) working days of receiving notice of such event.
- j) Conduct compliance monitoring and biological monitoring with assistance from the other Parties, as described in Section 11.0, above, on the properties it enrolls under this Agreement, provide assistance in the development of a standardized monitoring protocol and long-term monitoring plan, and assist in preparing five-year status reports pursuant to Section 11.3, above.
- k) Work with the Parties and interested watershed partnerships or groups on potential improvements to the administration, goals, and management activities of this Agreement, as necessary and appropriate.
- l) Inform the FWS when a Cooperator gives a sixty (60) day notice (as per Section 14.1 and 14.2, below) of its intent to carry out an activity that is likely to result in the incidental take of a Covered Species so as to give the FWS the opportunity to work with AGFC in relocating affected members of the species.
- m) Inform the FWS when a Cooperator is not in compliance with the terms and conditions of its POMA, Certificate of Inclusion, if applicable, and/or this Agreement or fails to implement or timely implement any agreed upon measures to remediate the non-compliance.
- n) Respond to a Cooperator's proposed modification to a POMA within sixty (60) calendar days of receiving the notice in accordance with section 13.2 of this Agreement.
- o) Provide Farm Bill or other program assistance, technical assistance, and funding, when available, to Cooperators in accordance with this Agreement.
- p) Provide data collected from Cooperators, surveys, and monitoring to the Parties in a timely manner to allow compilation of reports described in Section 11.0.

### 12.3 TNC shall:

- a) Implement and administer this Agreement, including coordinating Cooperators' habitat management efforts for the Covered Species on enrolled properties and enrolling Cooperators under this Agreement.
- b) With the assistance of the prospective Cooperator, complete the applicable POMA form (Attachments 1 and/or 2) and ensure that the proposed management activities meet the applicable regulatory standards and goals of this Agreement, including providing an adequate quantity and quality of in stream and riparian habitat, maintaining existing suggested land use practices, and

continuing maintenance of the enrolled property in accordance with any other existing agreement(s) to which the prospective Cooperator is a signatory.

c) At least thirty (30) days prior to enrolling a landowner under this Agreement, provide the proposed draft POMA and any associated management activities or habitat management plans to each of the other Parties for review and comment. (Provided, however, that all Parties are not required to review a POMA when the management activities consist solely of those that the Parties have previously determined to be completely beneficial to the Covered Species.)

d) Upon receiving written concurrence from each of the other Parties on the proposed draft POMA referred to in the preceding subsection, enter into the POMA with the prospective Cooperator and ensure that FWS issues a Certificate of Inclusion to the Cooperator. The POMA shall become effective and binding as of the date last signed. The Certificate of Inclusion shall be deemed issued only after it has been signed and dated by FWS.

e) Upon receipt of a proposed draft POMA from FWS, NRCS, and/or AGFC, notify each of the other Parties within fourteen (14) days of TNC's concurrence or non-concurrence in enrolling the prospective Cooperator.

f) Within a reasonable time period, work cooperatively with the other Parties to resolve TNC's objections or concerns about entering into a proposed draft POMA.

g) For any POMA entered into by TNC, provide copies of the executed POMA and Certificate of Inclusion to the Cooperator and the other Parties to this Agreement.

h) When requested and to the extent authorized and funded, provide technical assistance to prospective Cooperators and Cooperators to the maximum extent practicable.

i) Inform the FWS of any known Covered Species' mortalities or injuries within five (5) working days of receiving notice of such event.

j) Conduct compliance monitoring and biological monitoring, as described in Section 11.0, above, on the properties it enrolls under this Agreement, provide assistance in the development of a unified monitoring protocol, and assist the Parties in preparing five-year status reports pursuant to Section 11.3, above.

k) Work with the Parties and any interested watershed partnerships or groups on potential improvements to the administration, goals, and management activities of this Agreement, as necessary and appropriate.

l) Inform the FWS when a Cooperator gives a sixty (60) day notice (as per Section 14.1 and 14.2, below) of its intent to carry out an activity that is likely to result in the incidental take of a Covered Species, so as to give the FWS the opportunity to work with AGFC in relocating members of the affected species.

- m) Inform the FWS when a Cooperator is not in compliance with the terms and conditions of its POMA, Certificate of Inclusion, if applicable, and/or this Agreement or fails to implement or timely implement any agreed upon measures to remediate the non-compliance.
- n) Respond to a Cooperator's proposed modification to a POMA within sixty (60) calendar days of receiving the notice in accordance with section 13.2 of this Agreement.
- o) Provide assistance to Cooperators in obtaining state, federal, and private funding to implement management activities on their enrolled properties in accordance with this Agreement and their POMAs.
- p) Provide data collected from Cooperators, surveys, and monitoring to the Parties in a timely manner to allow compilation of reports described in Section 11.0.
- q) Use best efforts to refrain from releasing personal information about a Cooperator that could reasonably be construed as confidential, as well as any other information that may be instructed by the Cooperator to TNC as confidential to anyone other than the Parties to this Agreement without prior approval from the affected Cooperator(s).
- r) Notwithstanding anything herein to the contrary, TNC's performance of obligations under this Agreement is subject to the availability of state and federal funds appropriated to implement this Agreement, and TNC's enrollment of a Cooperator under this Agreement shall be subject to TNC's conflict of interest policy.

12.4 FWS shall:

- a) Implement and administer this Agreement, including monitoring Covered Species, coordinating and/or assisting in the management of Covered Species' habitat on enrolled properties, enrolling Cooperators under this Agreement, and in augmenting and/or reintroducing the Covered Species, when necessary.
- b) With the assistance of the prospective Cooperator, complete the applicable POMA form (Attachments 1 and/or 2) and ensure that the proposed management activities meet the applicable regulatory standards and goals of this Agreement, including providing an adequate quantity and quality of in stream and riparian habitat, maintaining existing suggested land use practices, and continuing maintenance of the enrolled property in accordance with any other existing agreement(s) to which the prospective Cooperator is a signatory.
- c) At least thirty (30) days prior to enrolling a landowner under this Agreement, provide the proposed draft POMA and any associated management activities or habitat management plans to each of the other Parties for review and comment. (Provided, however, that all Parties are not required to review a POMA when the management activities consist solely of those that Parties have previously determined to be completely beneficial to the Covered Species.)

- d) Upon receiving written concurrence from each of the other Parties on the proposed draft referred to in the preceding subsection, enter into the POMA with the prospective Cooperator and issue a Certificate of Inclusion to the Cooperator. The POMA shall become effective and binding as of the last date signed. The Certificate of Inclusion shall be deemed issued only after it has been signed and dated by FWS.
- e) Upon receipt of a proposed draft POMA from TNC, NRCS, and/or AGFC, notify each of the other Parties within fourteen (14) days of FWS's concurrence or non-concurrence in enrolling the prospective Cooperative.
- f) Within a reasonable time period, work cooperatively with the other Parties to resolve FWS's objections or concerns about entering into a proposed draft POMA.
- g) For any POMA entered into by FWS, provide copies of the executed POMA and Certificate of Inclusion to the Cooperator and the other Parties to this Agreement.
- h) When requested and to the extent authorized and funded, provide technical assistance to prospective Cooperators and Cooperators to the maximum extent practicable.
- i) Inform the other Parties of any known Covered Species' mortalities or injuries within five (5) working days of receiving notice of such event.
- j) Conduct compliance monitoring and biological monitoring, as described in Section 11.0, above, on the properties it enrolls under this Agreement, provide assistance in the development of a unified monitoring protocol, and prepare a five-year status reports pursuant to Section 11.3, above.
- k) If warranted, recommend procedures Cooperators can follow to avoid future occurrences of incidental take of the Covered Species under circumstances described in previous five-year status reports.
- l) Work with the Parties and interested watershed partnerships or groups on potential improvements to the administration, goals, and management activities of this Agreement, as necessary and appropriate.
- m) Inform the other Parties when a Cooperator gives a sixty (60) day notice (as per Section 14.1 and 14.2, below) of its intent to carry out an activity that is likely to result in the incidental take of a Covered Species and work with AGFC in the relocation of any affected member of the species.
- n) Inform the other Parties when a Cooperator is not in compliance with the terms and conditions of its POMA, Certificate of Inclusion, if applicable, and/or this Agreement or fails to implement or timely implement any agreed upon measures to remediate the non-compliance.

o Respond to a Cooperator's proposed modification to a POMA within sixty (60) calendar days of receiving the notice in accordance with section 13.2 of this Agreement.

p) Provide funding to Cooperators in accordance with this Agreement to the extent such funding is authorized and available.

q) Provide funding through the Partners for Fish and Wildlife Program to benefit the Covered Species to the extent funds are authorized and available.

r) Apply for funding to benefit the Covered Species when such funding opportunities are authorized and available through ESA and non-ESA Programs.

### **13.0 Modifications and Amendments**

#### **13.1 Modification and Amendment of Agreement**

Any Party may propose modifications or amendments ("modifications") to this Agreement, as provided in 50 C.F.R. § 13.23, by providing written notice to and obtaining the written concurrence of the other Parties if such modifications do not change the determinations that this Agreement will provide a net conservation benefit to the SHA Covered Species and remove or preclude the need to list the CCAA Covered Species. Such notice shall include a statement of the proposed modification, the reason for it, and its expected results. The Parties will use their best efforts to respond to the proposed modification within sixty (60) days of receiving the notice. Proposed modifications will become effective upon the other Parties' written concurrence.

#### **13.2 Modification and Amendment of POMAs**

A Cooperator may propose modifications or amendments to a POMA by providing written notice to the Party with whom it entered into the POMA and the FWS. Such notice shall include a statement of the proposed modification, the reason for it, and its expected results. The Parties will respond to the proposed modification within sixty (60) calendar days of receiving the notice. Proposed modifications will become effective upon written concurrence by the Parties.

#### **13.3 Amendment of the Permit**

The Permit may be amended to accommodate changed circumstances in accordance with all applicable legal requirements, including but not limited to the ESA, the National Environmental Policy Act, the FWS' permit regulations at 50 C.F.R. Parts 13 and 17. The Party proposing the amendment shall provide a written statement to the other Parties describing the proposed amendment, the reasons for it, and an explanation of what, if any, effects the amendment may have on the Covered Species. A *Federal Register* notice of the proposed amendment and public comment period may be required if the FWS deems such actions necessary.

Notwithstanding the foregoing, the FWS reserves the right to amend the Permit for just cause at any time during the term of the Permit upon written finding of necessity, provided that any such amendment shall be consistent with the requirements of 50 C.F.R. § 17.22(c)(5) or 50 C.F.R. § 17.32(c)(5) or 50 C.F.R. § 17.22(d)(5) or 50 C.F.R. § 17.32(d)(5) , as applicable.

Through the term of this permit, covered species may become listed. This would not affect Cooperators with signed POMAs and certificates of inclusion, but the Parties would no longer be able to enroll property owners under the CCAA option for any newly listed species. The Parties intend to cover species listed in the future under the SHA option of this plan. The current list of Covered Species under the CCAA can be covered by the SHA permit, after the Parties review the conservation needs of the Covered Species at the time of listing in order to revise conservation strategies and baseline determinations as appropriate, to meet SHA issuance criteria and other requirements (may include a written finding and public notice) in accordance with the FWS's SHA policy at the time of listing.

## **14.0 Termination**

### **14.1 Cooperator's Termination of Safe Harbor POMA**

A Cooperator may terminate its POMA before the expiration date for circumstances beyond the Cooperator's control. In such instances, the Cooperator will provide ninety (90) days prior written notice to the Party with whom it entered into the POMA, which Party shall, in turn, provide written notice to the FWS. The Cooperator may return the enrolled property to baseline conditions even if the expected net conservation benefit has not been realized provided that the baseline conditions have been maintained and established management activities have been implemented. The Cooperator must provide the FWS and any Party to this Agreement the opportunity to relocate the Covered Species within sixty (60) days of receipt of providing termination notice. The Cooperator may also terminate its POMA at any time for reasons other than circumstances beyond its control. Upon such termination, however, the Cooperator will not have the authority to take the Covered Species. Under either of the termination scenarios, the Cooperator must relinquish its Certificate of Inclusion to the issuing Party.

### **14.2 Cooperator's Termination of Candidate Conservation with Assurances POMA**

A Cooperator may terminate implementation of the POMA's voluntary management actions prior to the POMA's expiration date, even if the expected benefits have not been realized. If the POMA is terminated at the request of the Cooperator, the Cooperator shall be required to surrender the Certificate of Inclusion at termination thus relinquishing his or her take authority (if the Covered Species has become listed) and the assurances granted by the Certificate. The Cooperator is required to provide ninety (90) days written notice to the Party with whom it entered into the POMA, which Party shall, in turn, provide written notice to the FWS. The Cooperator must provide the FWS and any Party to this Agreement the opportunity to relocate the Covered Species within sixty (60) days of receipt of the termination notice.

### 14.3 FWS and Parties' Termination of POMAs

A Party has the right to terminate any POMA where the Cooperator or its successor(s) is (are) found to be in non-compliance with the terms and conditions of the POMA. If a Cooperator is found to be in non-compliance, the original signatory Party to the POMA or another Party designated by the FWS will issue a written letter of non-compliance to the Cooperator. The Cooperator shall have sixty (60) days from receipt of the letter to rectify the non-compliance issue(s). If the issue(s) is not resolved to the satisfaction of the Parties by the end of the 60-day period, the POMA shall be declared terminated and null and void. At that point, the associated Certificate of Inclusion also shall cease to be in effect.

The FWS reserves the right to utilize, at its discretion, the provisions in the preceding paragraph to unilaterally review and/or terminate a Cooperator's POMA. The FWS, in coordination with a Party, also may terminate a POMA if it is determined that use of the enrolled property is no longer necessary for recovery efforts for the Covered Species.

### 15.0 Suspension or Revocation of Permit

The FWS may suspend or revoke the Permit for cause in accordance with the laws and regulations in force at the time, including, but not limited, to 50 C.F.R. §§ 13.27 and 13.28 and §§ 17.22(d)(7) and 17.32(d)(7).

### 16.0 Succession and Transfer of POMAs and Certificates of Inclusion

The right of succession under this Agreement and any associated POMA shall be governed by 50 C.F.R. § 13.24. The rights and obligations under each POMA shall apply to the owner of the enrolled property and are transferable to subsequent non-Federal owners pursuant to 50 C.F.R. § 13.25. After becoming a party to a POMA and holder of a Certificate of Inclusion, the new owner(s) will have the same rights and obligations with respect to the enrolled property as the previous owner. The new owner(s) also will have the option of receiving assurances by entering into a new POMA and receiving a new Certificate of Inclusion. A Cooperator shall provide written notice to the Party with whom it entered the POMA of any transfer of ownership of the enrolled property at least ninety (90) calendar days prior to the intended transfer, and the Party will, in turn, provide such notice to the FWS. Succession or transfer of a POMA or Certificate of Inclusion shall be governed by FWS regulations then in effect.

### 17.0 Dispute Resolution

The Parties agree to work together in good faith to resolve any disputes and to use dispute resolution procedures agreed upon by all Parties.

### 18.0 Availability of Funds

The responsibilities of each Party agency under this Agreement will be funded by respective agency or non-governmental organization resources. Implementation of management activities will be funded by applying for assistance and/or grants through various programs such as Landowner Incentive Program, Partners for Fish and Wildlife, Farm Bill, etc. Each Party's responsibility under this Agreement is subject to, and contingent upon, availability of funds for this purpose. To the extent available and authorized, management activities undertaken by Cooperators will be paid for with Party program funding or outside funding opportunities and will include matching Cooperator funds (10 to 25 percent depending on program).

Implementation of this Agreement is subject to the requirements of the Federal Anti-Deficiency Act and the availability of appropriated funds. Nothing in this Agreement will be construed by the Parties to require the obligation, appropriation, or expenditure of any funds from the U.S. Treasury. Each Party acknowledges that it is not required to expend any available or appropriated funds unless and until an authorized official or authorized employee of that affected Party affirmatively acts to commit to such expenditures as evidenced in writing.

#### **19.0 Remedies**

Each Party shall have all remedies otherwise available to enforce the terms of this Agreement and the Permit.

#### **20.0 No Third-Party Beneficiaries**

Neither this Agreement nor any associated POMA shall create any new right or interest in any member of the public as a third-party beneficiary nor shall it authorize anyone not a Party to this Agreement or an associated POMA to maintain a suit for personal injuries or damages pursuant to this Agreement. The duties, obligations, and responsibilities of the Parties to this Agreement with respect to third parties shall remain as imposed under existing law.

#### **21.0 Relationship to Other Agreements**

This Agreement is intended to complement other agreements such as those used in federal and state programs (*e.g.*, Farm Bill, etc.).

#### **22.0 Additional Management activities**

Nothing in this Agreement shall be construed to limit or constrain any Party or Cooperator from undertaking additional actions at its own expense to protect or conserve a covered species.

#### **23.0 Access to Enrolled Properties**

Each POMA shall provide that the Cooperator shall allow any Party to this Agreement or other properly permitted persons designated by a Party to enter upon the enrolled property pursuant to 50 C.F.R. §§ 13.21 and 13.47.

## 24.0 Other Species

Surveys for other federally-listed species will not be required of the Cooperators as a condition to participating in this Agreement. However, neither regulatory assurances nor incidental take authorizations will be conveyed to a Cooperator for any federally-listed species that is not identified in his/her Certificate of Inclusion as a “covered species.” If other federally-listed species are known to exist on an enrolled property, the Parties will seek cooperative and comprehensive solutions with the Cooperator to tailor his/her management actions to avoid take of and/or to minimize any disturbance to the non-covered species.

## 25.0 Subordination of POMAs

Each POMA entered into under this Agreement shall be subordinate to this Agreement, and each Certificate of Inclusion issued hereunder shall be subordinate to the Permit. This Agreement and the Permit shall be incorporated by reference into each POMA.

## 26.0 Notices and Reports

Any notices and reports, including monitoring reports, required hereunder shall be delivered to the Parties’ designees identified below. Names and addresses may be changed upon written notification to all Parties.

[Cooperators indicated on POMAs]

Field Supervisor

Arkansas Ecological Services Office

U.S. Fish and Wildlife Service

110 South Amity Road, Suite 300

Conway, Arkansas 72032

Director

The Nature Conservancy

Arkansas Field Office

601 North University Avenue

Little Rock, Arkansas 72205

Director

Arkansas Game and Fish Commission

2 Natural Resources Drive

Little Rock, Arkansas 72205

State Conservationist

Natural Resources Conservation Service

Room 3416 Federal Bldg, 700 W. Capitol

Little Rock, AR 72201

**27.0 Authorizing Signatures**

IN WITNESS WHEREOF, THE PARTIES HERETO have, as of the date last signed below, executed this Agreement.

\_\_\_\_\_  
Director  
Arkansas Game and Fish Commission

\_\_\_\_\_  
Date

\_\_\_\_\_  
Director  
The Nature Conservancy, Arkansas Field Office

\_\_\_\_\_  
Date

\_\_\_\_\_  
State Conservationist, Arkansas  
Natural Resources Conservation Service

\_\_\_\_\_  
Date

\_\_\_\_\_  
Field Supervisor  
U. S. Fish and Wildlife Service, Arkansas Ecological Services Field Office

\_\_\_\_\_  
Date

\_\_\_\_\_  
Regional Director  
U. S. Fish and Wildlife Service  
Atlanta, Georgia

\_\_\_\_\_  
Date

## **28.0 Appendices to this Agreement**

Appendix 1: Covered Species: Federally-listed Endangered Species and State-listed Species of Greatest Conservation Need in the upper Saline, Caddo, and Ouachita Headwaters watersheds.

Appendix 2: Importance of Private Lands and Conservation Strategies

## **29.0 Attachments to this Agreement**

Attachment 1: Template POMA – SHA Element

Attachment 2: Template POMA – CCAA Element

Attachment 3: National Historic Preservation Act – Section 106

Attachment 4: SHA Assurances

Attachment 5: CCAA Assurances

Attachment 6: Cooperator/Landowner Waiver to Release Information to Other Parties

Attachment 7: Literature Cited

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Covered Species: Federally-listed Endangered Species and State-listed Species of Greatest Conservation Need in the upper Saline, Caddo, and Ouachita Headwaters watersheds

### **SHA Covered Species**

**Arkansas fatmucket** (*Lampsilis powellii*) – This freshwater mussel was listed as endangered under the ESA on April 5, 1990 and is endemic to the Ouachita River basin in Arkansas.

The Arkansas fatmucket is of medium size up to 100 mm in length with a shell, elliptical in shape that is typically smooth, shiny, and yellow to tawny in color (Farris et al. 2005). This species is sexually dimorphic with the female being more rounded on the posterior end.

Arkansas fatmucket is most commonly found in deeper pools of rivers and streams with a gravel substrate, and/or often associated with islands of American water willow (*Justicia americana*) (Harris and Gordon 1988).

The reproductive cycle of the Arkansas fatmucket is similar to that of other native freshwater mussels. Following the release of sperm by the males into the water column; the females take it in through their siphons during feeding and respiration. The fertilized eggs are retained by the females, in their gills, until the glochidia, or larvae, fully develop. The mussel glochidia are then released into the water, and within a few hours/days, must attach to the appropriate species of fish, which they parasitize for a short time while developing into juvenile mussels. Female Arkansas fatmucket mussels are gravid from March through August in the Saline River drainage and in the Ouachita River drainage, from July to October (Farris et al. 2005).

Farris et al. (2005) stated “the three largest [Arkansas fatmucket] populations are found in the South Fork Ouachita, Alum Fork Saline, and the Middle Fork Saline Rivers”. Arkansas fatmucket is an endemic species to the covered watersheds. Historical ranges for this species were thought to have included Hurricane Creek, a tributary to the Saline River, (USFWS 1990). A total of four lakes have been constructed along rivers that this species inhabits: Lakes Ouachita, Hamilton, and Catherine on the Ouachita River, and Lake DeGray on the Caddo River, reducing suitable habitat for this species. In addition, there is a low-head dam placed on both the Middle Fork Saline River near Hot Springs Village and the Saline River at Benton, both used for supplementing municipal drinking water sources.

Siltation, sedimentation, and a lack of recruitment are thought to be the major contributors to the status of Arkansas fatmucket (Brown and Brown 1989, Harris et al. 1997), and the FWS states the species was listed due to curtailment of its range resulting from impoundments, channel alteration, gravel dredging, sedimentation, and water quality degradation. In addition, suspended sediment has been identified by Arkansas Department of Environmental Quality (ADEQ) as a non-point source pollutant of concern in all three of the covered watersheds, with the following streams listed on the Arkansas 2010 303(d) impaired waterways list either for total dissolved solids or turbidity: Prairie Creek, tributary to the upper Ouachita River, Cove Creek tributary to the Caddo River, the South Fork Caddo, and the Caddo River.

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**Pink mucket** (*Lampsilis abrupta*) – This freshwater mussel was listed as endangered under the ESA on June 14, 1976. Within the Covered Watershed, the pink mucket occurs in the main stem Ouachita River downstream of Lake Catherine and the main stem Saline River (AWAP, p. 921).

The pink mucket is a federally endangered species that is found in shallow riffles and shoals swept free of silt with moderate to fast flowing water. Reproduction needs for this species require a stable, undisturbed habitat with a sufficient population of fish host species, specifically smallmouth, largemouth, and spotted bass. For the scope of the covered watersheds in this plan, the pink mucket is found in the Ouachita River drainage. Historically, the species occurred in 25 river systems and was extremely widespread in distribution. However, this species has never been collected in large numbers from any one site or drainage. Therefore, has been usually considered rare (USFWS, 1985). Taxonomic concerns are due to similarity of appearance with other species and this may also be two separate species in Arkansas. The lack of recruitment and the difficulty with which it is found makes the species difficult to determine its status in Arkansas.

Dams and reservoirs have likely flooded most of this mussel's habitat across the country, reducing gravel and sand habitat and likely affecting the distribution of fish host species. Other threats include erosion and pollution from agricultural and industrial runoff (USFWS, 1997). Excessive erosion of soils into the water column and increase silt concentrations in the water, can have a blanketing effect on the substrate with which many mussel species inhabit, and can irritate, damage, or cause clogging of the gills or feeding structures of mollusks.

**Spectaclecase** (*Cumberlandia monodonta*) – This freshwater mussel was listed as endangered under the ESA on March 13, 2012. Spectaclecase is restricted to the Ouachita River within the Covered Watersheds (AWAP, p. 891).

The spectaclecase is a freshwater mussel that the U.S. Fish and Wildlife Service listed as an endangered species on March 13, 2012. This species can grow to be a very large mussel, up to 9 inches in length

Spectaclecase glochidia are the smallest known for any North American mussel, with tens to hundreds of thousands of the hookless glochidia possibly occurring in each conglutinate (Baird, 2000). The reproductive potential of this species is therefore phenomenal. Also, because extant populations were found to be generally skewed towards larger adults, there are indications that survival rates to the adult stage are low. The majority of the remaining populations of this species are also generally small and geographically isolated. The host fish for this species is unknown, despite the attempt to test over 60 species of potential fishes and amphibians in the lab during host suitability studies (Butler et al., 2002).

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The spectaclecase appears to be more of a habitat specialist than most mussel species, preferring outside river bends below bluff lines in larger rivers (Butler et al., 2002). It occurs in substrates ranging from mud and sand to gravel, cobble, and boulders in relatively shallow riffles and shoals with slow to swift current. Threats, both natural and manmade, to the continued existence of the spectaclecase include population fragmentation and isolation; disease and/or predation; overutilization for commercial, recreational, scientific, or educational purposes; sedimentation from land use activities and inadequate buffers on streams; mining activities; chemical contaminants from both point and non-point sources; channelization and dredging activities; and impoundments.

**Harparella** (*Ptilimnium nodosum*) – This aquatic plant was listed as endangered under the ESA on September 28, 1988. This endangered plant is distributed across the eastern and southern flanks of the Appalachian Mountains in six southeastern states (Bartgis 1997) and the Ouachita and Fourche LaFave River basins in Arkansas (Hardcastle and Williams 2001).

Harparella is a federally endangered plant that occurs in rocky or gravelly shoals of clear, swift-flowing streams. Leaves of this plant are hollow, quill-like structures and the plant is aromatic, smelling like dill. Flat clusters of small white flowers top the stems, similar to Queen Anne's lace (*Daucus carota*). Harparella is found in two counties of the Ouachita River watershed, Montgomery and Garland. Monitoring in the Ouachita National Forest at seven long term sites over a period of several years indicate that population levels appear to vary greatly from year to year (USFS, 2009). Substrate size class data indicates that there is a variation in substrate size preference from site to site and among the different streams, however the common factor at each site was the amount of fine sediments. Harparella exhibits a preference for areas of deposition of fine alluvium among either boulders, larger cobble, or in bedrock crevices.

This plant tolerates, and may require, a very specific water regime, which includes moderately intensive spring floods that scour gravel bars and rock crevices where competing vegetation may take hold. Following the receding floodwaters, seeds germinate in shallow, rocky crevices and complete their life cycles with root systems submerged or saturated. Late summer high water facilitates seed dispersal and vegetative rooting and protects young plants throughout the winter.

The main threat to Harparella is related to effects from sedimentation. Habitat requirements for the species include cobble/gravel bars adjacent to banks with some fines (sand) in perennial streams. It is noted that Harparella distribution surveys could be enhanced from historical surveys to better identify the range and abundance of this species. Most Harparella data to date is taken primarily from road crossing surveys.

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**Rabbitsfoot** (*Quadrula cylindrica cylindrica*) – This freshwater mussel was proposed threatened by the Service under the ESA on October 16, 2012. In the Covered Watersheds, extant populations occur in the Ouachita and Saline Rivers (USFWS 2010). The Ouachita River from Arkansas Highway 379 south of Oden, Montgomery County, Arkansas, downstream to Arkansas Highway 298 east of Pencil Bluff, Montgomery County, Arkansas and from Interstate 30 at Malvern, Hot Spring County, Arkansas, downstream to U.S. Highway 79 at Camden, Ouachita County, Arkansas was proposed by the FWS to be designated as critical habitat under the ESA on October 16, 2012. In this same proposed rule for critical habitat, the Saline River from

Interstate 30 near Benton, Saline County, Arkansas, to the Snake Creek confluence north of the northern boundary of Felsenthal NWR northwest of Crossett, Ashley, and Bradley Counties, Arkansas also was proposed as critical habitat for rabbitsfoot (77 FR 63440).

The Rabbitsfoot is a medium sized mussel that inhabits small to medium sized rivers of moderate current with clear, relatively shallow water and a mixture of sand and gravel substrates. The historical range of this species includes the Ohio River System, (including the Tennessee and Cumberland rivers) and the Mississippi River System from Northern Louisiana north to Missouri and western Oklahoma (Roe, 2002). The three species of minnows have been identified to be suitable hosts for the Rabbitsfoot are the Whitetail shiner (*Cyprinella galctura*), Spotfin shiner (*Cyprinella spiloptera*), and Bigeye Chub (*Hybopsis amblops*). Additional hosts were found suitable by Fobian in 2007 from the Spring, Little, and Black rivers in Kansas and Arkansas including the Blacktail shiner (*Cyprinella venusta*), the cardinal shiner (*Luxilus cardinalis*), red shiner (*Cyprinella lutrensis*), and bluntface shiner (*Cyprinella camura*).

Rabbitsfoot were found to be highly mobile in the 2007 study of Fobian where large numbers of specimens seemed to travel up and down the bank during the summer months depending on water levels. Threats to this species include pollution, siltation and habitat perturbation such as gravel mining and impoundments.

### **Cumulative Effects of this Agreement to SHA Covered Species**

Without this cooperative federal and state government and private effort, it is unlikely that the Cooperators' Enrolled Properties would be used in the foreseeable future to enhance and/or restore Arkansas fatmucket, spectaclecase, pink mucket, rabbitsfoot and Harparella populations (or their habitats). Therefore, the cumulative effect of this Agreement and the activities it covers, which are facilitated by the assurances of the Permit and any associated Certificate of

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Inclusions<sup>1</sup>, is expected to provide a net conservation benefit to the Arkansas fatmucket, spectaclecase, pink mucket and Harperella.

Given the uncertainty as to which areas the SHA Covered Species will inhabit in the main stem and perennial rivers of these watersheds, this Agreement is necessary to ensure adequate monitoring of these species and to improve recruitment success within and outside of existing populations. Activities described in this Agreement will increase the probability that these species will expand their range (within the upper Saline, Caddo, and Ouachita River watersheds) and survive and recruit new cohorts once settled into those stream reaches. It also will allow adequate monitoring to determine distribution, abundance, and recruitment success of the SHA Covered Species populations. The Agreement will help address these recovery plan objectives of restoring habitat for these species through activities that increase the likelihood that viable populations will develop on non-federal lands in the Covered Watersheds. The Agreement also will be an example of a mutually beneficial relationship between government agencies and non-governmental entities that benefit endangered species and provide evidence that such species can coexist with current land use practices.

#### **CCAA Covered Species**

**Irons Fork Burrowing Crayfish** (*Procambarus reimeri*) – This species is confined to 15 localities in Polk County, Arkansas (Robison 2008). This species is a primary burrower, one-half to one meter in depth and constructed in sandy clay soil, in generally wet seepage areas and road side ditches (Robison 2008; Hobbs 1979).

This endemic crayfish species is only found in Polk County in the Ouachita Mountains and is under consideration for federally threatened status. The type locality for this species is a roadside ditch or pool in the surrounding area of Mena, Arkansas. The habitat where specimens were found in the 2008 study, conducted by Henry Robison, were generally wet seepage areas and roadside ditches with a sandy clay soil substrate.

Due to this species' restricted range and low population abundance, it is susceptible to any event which will cause habitat degradation. Further research is required to determine the abundance of this species, and to what extent it is impacted upon by threats within its range.

**Ouachita Burrowing Crayfish** (*Fallicambarus harpi*) – This species is known to occur at 13 sites within the Ouachita River basin in Garland, Hot Spring, Montgomery, and Pike counties, Arkansas (Robison and Crump 2004; Robison *et al.* 2008). This species has a distribution of approximately 4,000 km<sup>2</sup>. This species is a primary burrower, 45 – 85 cm in depth and complex,

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<sup>1</sup> Certificates of Inclusion are described and discussed in Part 5 of this Agreement.

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located in sandy clay soil situated in wet grassy areas (pastures and road side ditches) often with abundant sedges nearby (Robison and Crump 2004).

This crayfish is endemic to the southern Ouachita Mountains and is known from 12 sites in Garland, Hot Spring, Montgomery, and Pike counties (Robison and Crump, 2004). Members of the genus *Fallicambarus* are seldom found in permanent bodies of water, and as adults, only after rains or during floods do they frequent temporary pools or runoff (Hobbs and Robison, 1989). Instead, these species' are primary burrowers that inhabit burrows very near a high water table, no more than a meter or so beneath the surface, and such areas are recognized by the presence of hydrophilic sedges. Often, many of the burrows were located in pastures where a suitable substrate is present and pasture grasses are kept low by grazing animals (Robison and Crump, 2004). In other areas, where pastures are unavailable, roadside ditches are the preferred habitat where water is held during the spring and early summer months and soil is present in the substrate, allowing for burrowing.

Initially, in 1996, this species was identified by Taylor et al. as “endangered”, based on the best information available at the time. The Robison and Crump survey conducted in 1999 – 2000 indicate that Ouachita burrowing crayfish is much more common than previously believed and recommended to change its status to “special concern” due to its restricted range and endemism.

**Kiamichi Shiner** (*Notropis ortenburgeri*) – This species occupies small to moderate-sized, clear upland streams of moderate gradient in the Little River system (Red River basin) and Ouachita River basins draining the Ouachita Mountains of eastern Oklahoma and west-central and southwestern Arkansas (Robison 1980; 2005).

The Kiamichi shiner is a slim, silvery fish with a large eye (Robison and Buchanan 1988). This species is described as occupying small to moderate-sized, clear upland streams of moderate gradient in the Ouachita Highlands of Arkansas and Oklahoma (Robison 1980a). It is usually found in the pool and glide (where the pool begins to ascend towards the riffle) habitats, and is likely to be found in substrates composed of sand, gravel, cobble, and boulders.

Good populations are present in the Little Missouri and Ouachita River basins, but recent surveys did not locate any specimens in several other historical basins (Robison 2005). The Kiamichi shiner is intolerant of turbidity. Threats include dams/impoundments and sedimentation from a variety of land use practices (AWAP 2005; Robison 2005).

The upper Ouachita River and smaller tributaries have been shown historically to have populations of Kiamichi shiner from one locality in 1977 and two localities in 1986 near Acorn, Polk County, Arkansas. In 1999-2000, a total of 10 collections were taken at 3 localities on the Ouachita River in nearby locations to the previous studies. Within the upper Saline River system, historic sampling showed occurrences from six localities in Saline County in the upper regions of the South Fork Alum Creek; however, collections by Robison in 1999-2000 failed to collect any additional specimens in the upper Saline River system (Robison, 2005).

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**Longnose Darter** (*Percina nasuta*) – This species is rare throughout its range in the Ozark and Ouachita Mountains (Robison and Buchanan 1988). Its current distribution is largely limited to Arkansas, and U.S. Forest Service lands harbor many of the known populations of this species (Robison 1992a, 1992b). The longnose darter inhabits clear streams, medium to large in size, and has been collected in both riffles and pools within the Ouachita River basin.

The longnose darter is a slender fish with a long head and extremely long, pointed snout (Robison, 1988). The colors of this darter species are yellowish brown on the back and upper sides with dark, midlateral blotches. The dorsal and caudal fins are lightly banded and breeding males are found with dramatic secondary development of black pigment on the fins and body (Robison 1988). The distribution of the longnose darter includes the St. Francis, White, Arkansas, and Ouachita River drainages in Missouri, Arkansas and Oklahoma (FishBase 2011).

The habitat type this species prefers is clear, silt-free upland streams with a particular preference of streams and small rivers with cobble and gravel substrates (Robison, 1988). Living mostly in the pools, the longnose darter may inhabit glide or run features of the stream during the springtime, or those areas of a pool coming into or out of the riffle with higher currents. Peak spawning times are thought to be during the month of April. In the low flow of summer, this species is found mostly in still pools over a sandy bottom and sometimes near aquatic vegetation. Threats include impoundments and other land use practices that degrade water and habitat quality and quantity (Wagner, 1985).

**Ouachita madtom** (*Noturus lachneri*) – This fish is endemic to the upper Saline River basin and a small, unnamed tributary of the Ouachita River in Hot Spring County, Arkansas (Robison and Harp 1985; Robison and Buchanan 1988).

The Ouachita madtom is characterized as slender, uniformly colored, and moderately elongate (Robison, 1988). The head is short and flattened with small eyes. The body is generally brown to gray grading to white on the belly and is described by Henry Robison as appearing almost pink at night.

The distribution of this species was historically thought to be restricted to the upper Saline River system, but was discovered also in a tributary to the Ouachita River below Remmel Dam.

General habitat requirements for the species are clear, high gradient streams with small to moderate sized gravel bottomed streams. In addition, the Ouachita madtom will frequent quiet, backwater areas with variable substrates ranging from cobblestone-sized rocks to small gravel or softer substrates (Robison, 1988). Threats were documented by Robison as including impoundments, commercial gravel operations, channelization, and clearcutting.

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**Crystal darter** (*Crystallaria asprella*) –This fish was once distributed throughout much of the eastern United States, but today persists only in isolated populations (Wood and Raley 2000). Within the Covered Watersheds, it occurs in the Ouachita and Saline rivers (Grandmaison and Mayasich 2003).

The Crystal darter is characteristically very slender with a mid-lateral series of dark, oblong blotches (Robison, 1988). The head is typically flat and wide with a horizontal mouth and jaw. The maximum length of this species is found to be around 4 inches with yellow coloring on the back and upper sides, silver belly in addition to the blotches. A wide dark brown stripe extends from eye to eye around the snout and the species has a noticeably forked tail. It differs most from all other darters in its extremely slender body (Robison, 1988). There is some variation in color with the Ouachita River populations of this species with absent or indistinct dorsal saddles.

The distribution of this species in Arkansas is throughout southern and eastern Arkansas in the Little Missouri, Ouachita, eastern Saline, lower White, and Little Rivers (Robison, 1988). It has historically been known to occur throughout the Eastern U.S., but now exists only in geographically isolated populations (USGS). The taxonomic status of a newly discovered population in the Ohio River basin, the Elk River, West Virginia is proposed as a distinct population with analysis upholding the proposal. This distinct population is now known as a new species *Crystallaria cincotta*, and has been suggested to be an endangered species. It was stated by Robison, 1988, that Arkansas may possess more stable populations than any other state, although it is rarely abundant at any locality. Little is known about the Crystal darters life history, but a late winter breeding season is suspected due to an unintentional breeding effort by the Arkansas Game & Fish Commission from the White River in the late winter of 1981 (Robison, 1988).

Habitat requirements for this species is near the lower reaches of moderate sized rivers, mainly below the Fall Line, where strong current of finer gravel substrates is found. An interesting feeding characteristic of the Crystal darter is burying itself in the substrate only protruding its eyes and darting out after smaller prey (Miller and Robison, 1973). As with many of the other covered species mentioned here, the Crystal darter requires clean water and a silt-free substrate. In addition, this species is particularly vulnerable to activities such as channelization, dredging, and impoundment (Robison, 1988).

**Paleback darter** (*Etheostoma pallidiorsum*) –This Arkansas endemic fish inhabits small tributaries of the upper Caddo and Ouachita River basins (Pardew et al. 1993).

The Paleback darter species is a stout, blunt-nosed darter with a small, slender body and a large head. A wide, pale stripe extends from the head down the middle of the back to the caudal fin.

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The sides of this species are distinctly bicolored with the upper portion dark brown, lower is orange (males) or white with black stippling (Robison, 1988).

Distribution of this species historically was thought to be only in the upper Caddo River and in a small tributary of the upper Ouachita River in Montgomery, Pike, and Garland Counties (Robison 1974, 1980b). Surveys made between 1990 and 1992, by Pardew et al. (1993), extended the range to 17 tributaries to the Caddo and 12 tributaries to the Ouachita River, however numbers collected at all sites were low. The preferred habitat is described as quiet, shallow pools at the margins of small gravel-bottomed spring-fed streams and rivulets (Robison 1980b).

Swift current is avoided by this species and it is occasionally found in aquatic vegetation over a mud substrate. Following a life history study conducted by Hambrick and Robison (1978), the Paleback darter was found to live a maximum of two years with sexual maturity at one year and spawning mainly in February and March. Spawning habitats were found to be vegetated spring heads and seeps that become intermittent and dry up during the summer months (Pardew, 1993).

Threats identified in the Arkansas Wildlife Action Plan (AWAP) include predation, resource extraction, impoundments, and sedimentation from the following activities: channel alterations, forestry activities, and road construction. Because spring heads and seeps seem to be the preferred spawning habitat, management activities identified in the AWAP included maintaining or restoring the quality and quantity of groundwater to state water quality standards and protecting spawning habitat of this species.

**Peppered shiner** (*Notropis perpallidus*) – This fish has disappeared from the fauna in several historical streams and only persists in the Ouachita and Saline Rivers (Robison 2006).

The peppered shine is a small, pale, slender shiner with a small head, large eyes, and a pointed snout. The eye diameter is greater than its snout length. The body color of a peppered shiner is extremely pallid, almost translucent. Very large, dark melanophores are scattered along the body giving a “peppered” appearance, giving rise to the name. The distribution of this species is restricted to the Saline, Antoine, Caddo, Little Missouri, and upper Ouachita rivers with smaller populations found in the Kiamichi and Little Rivers, all within the Ouachita Mountain ecoregion. It was noted by Wagner et al. (1987), that this species is never abundant at any locality with the largest single series collected in Arkansas consisting of 21 specimens from the Ouachita River at US Highway 70 in Montgomery County. It was noted in 2005 in the AWAP that more recent surveys conducted by Robison (2001) have found the species to be rare with populations only persisting in the Ouachita and Saline Rivers.

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This species inhabits pool regions 2-4 feet deep in moderate-sized, warm, clear rivers and is rarely found in small streams. It is typically found outside of the main current in the lee of

islands and other obstructions, and often within beds of water willow (Snelson and Jenkins 1973). It has also been noted by Wagner et al. (1987) that the peppered shiner has significant niche overlap with *N. snelsoni* and *N. volucellus*.

Spawning periods for the peppered shiner occur from late May to early August (Snelson and Jenkins 1973). This species is a benthic insectivore feeding primarily on dipterans (Robison, 1988), and appears to be intolerable of environmental disturbance conditions. The maximum life span of the peppered shiner is around four years. Reservoir construction has been noted as a threat to this species and has contributed to the decline of the extant populations (Robison 1988). Increases in turbidity and siltation have occurred in the upland streams inhabited by the peppered shiner, with poor land use practices noted as the source, including road building, land clearing, clearcutting, and removal of vegetation from the riparian buffers (Robison, 2006). Other possible reasons for decline include gravel mining operations (Filipek and Oliver 1994).

**Caddo madtom** (*Noturus taylori*) – This fish is endemic to the south-central Ouachita Mountains (Upper Caddo, Little Missouri and Ouachita rivers) and is relatively abundant in the Caddo River, but uncommon in the Little Missouri and Ouachita Rivers (AWAP, p. 523).

The Caddo madtom is a long, slender madtom that is yellow to dark brown above with 4 dark brown saddles alternating with light yellow or cream ellipses. A large black blotch is on the front half of the edge of the dorsal fin. This species is a habitat specialist found exclusively in gravel-bottomed pools of clear upland portions of the upper Ouachita and Caddo rivers (Robison and Buchanan, 1988) and spawns from late April to May (Robison and Allen 1995).

The Caddo madtom is endemic to the upper Ouachita, Caddo, and Little Missouri rivers of the Ouachita Mountains, however no Caddo madtoms were collected in the Little Missouri River despite extensive sampling there in 2006 (Turner and Robison). Because the Caddo madtom is restricted to a few rivers in Arkansas, and appears to be declining in the area of occupancy and number of locations, it is particularly vulnerable to habitat loss/degradation from impoundments and pollution (Natureserve.org).

It has been suggested by Turner and Robison (2006), that recent habitat fragmentation by dams might account for the high levels of genetic isolation observed in the Caddo madtom.

**Ouachita Darter** (*Percina sp. nov.*) – This fish is endemic to the Ouachita River basin, with most records of occurrence from the upper Ouachita River within the boundary of the Ouachita National Forest (Gagen et al. 2002).

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Covered Species: Federally-listed Endangered Species and State-listed Species of Greatest Conservation Need in the upper Saline, Caddo, and Ouachita Headwaters watersheds  
The Ouachita darter has a sharply triangular head and pronounced snout with a horizontal dark band through the eye to the nose (Standage and Hlass, n.d.). Until recently, this species was previously considered a form of the longnose darter. The Ouachita darter is endemic to the

Ouachita River drainage with most record of occurrence within the boundary of the Ouachita National Forest (Gagen and Moles, 2002).

Preferred habitat was identified in 2001 as reaches with emergent, semi-aquatic macrophytes growing along the edges of runs (primarily water willow) primarily in reaches of river characterized by short riffle and run habitats separated by long pools (Gagen and Moles, 2002). These darters seem to prefer the upstream edges of runs in late summer when the water level is low and among the most important microhabitat features, cobble free from sedimentation seemed to be the common thread where Ouachita darters were found most. Therefore, it was suggested by Gagen and Moles that low water levels can reduce the extent of preferred habitat if velocity becomes too low to keep the substrate clean.

**Stargazing darter** (*Percina uranidea*) – This fish is restricted to the Ouachita and Saline Rivers within the Covered Watersheds. The Ouachita River basin populations are genetically distinct from populations in the White River basin, and should be managed as separate conservation management units. Recent status surveys indicate significant declines within the Ouachita River basin, particularly the Saline River (Rigsby 2009).

The Stargazing darter is a robust darter with 4 dark dorsal saddles, extending downward and connected to lateral rows of 9-12 vertically oblong dark blotches. The eyes are closely set high on the head and the snout moderately blunt (Robison and Buchanan, 1988). This species has a current distribution confined to Arkansas and Missouri with the bulk of the distribution occurring in disjunct populations in the White and Ouachita River drainages (Rigsby, 2009).

It has been suggested by Rigsby, 2009, that the presence of stargazing darters in the Black and Ouachita River drainages shared similar habitat characteristics, namely higher mean water column velocities, bottom water velocities, and coarser substrates. Specifically with regards to substrate, the species seems to select substrates comprised of an average of 100% to 51% gravel and 49% cobble while avoiding coarser or finer substrates (Rigsby, 2009). In addition, it was noted by Rigsby that the distribution of stargazing darter in the Black River drainage is consistent with historical records; however, the distribution in the Ouachita River drainage has apparently greatly declined for unknown reasons.

**Arkansas Agapetus Caddisfly** (*Agapetus medicus*) – This Arkansas endemic insect (stonefly) is known from five counties in the Ozark and Ouachita Mountain ecoregions, and from the Ouachita River drainage within the scope of the covered watersheds in this plan. This species inhabits cool, swift-moving mountain streams (Ross 1938).

## Appendix 1

Covered Species: Federally-listed Endangered Species and State-listed Species of Greatest Conservation Need in the upper Saline, Caddo, and Ouachita Headwaters watersheds  
Very little is known about this Arkansas endemic species other than it is found in five counties in Arkansas and inhabits cool, swift-moving mountain streams (AWAP, p.561).

**Elktoe** (*Alasmidonta marginata*) – This freshwater mussel occurs in headwater streams with gravel and cobble substrates in the Ouachita River basin (AWAP, p. 873).

This species is a relatively small, thin-shelled mussel that may reach up to four inches in length. The elktoe is found in small to large sized streams and small to medium rivers, preferring a riffle habitat with swifter currents over packed with sand and gravel substrates (Carman, 2002). This species is typically only found in clean, clear water (Cummings and Mayer, 1992).

The elktoe is widespread in North America although patch in distribution, occurring in the Great Lake and St. Lawrence drainages south to the Tennessee drainage (Carman, 2002). This species is widespread throughout areas in Arkansas, but overall rare. Found in headwater streams of the Arkansas, White, and Ouachita Rivers, this species prefers gravel/cobble substrates. Range-wide population status of the elktoe mussel is not known (AWAP, p. 873).

Little is known about the biology of the elktoe. Fertilization is internal with sperm released in to the water and then taken in through the siphon from the water column (Carman, 2002). Known hosts include the white sucker, northern hog sucker, shorthead redhorse, rockbass, and warmouth species (Oesch 1984, Natureserve).

**Western fanshell** (*Cyprogenia aberti*) – This freshwater mussel is common in the Saline River, but rare in the Caddo and Ouachita Rivers (Davidson 2011, pers. comm.). Ongoing taxonomic work indicates that this taxonomic entity may be comprised of more than one species within the Covered Watersheds (Barnhardt and Eckert, 2005).

The Western fanshell is found in the St. Francis, White, Ouachita and upper Arkansas river systems in Missouri, Arkansas, and Kansas (Barnhart and Eckert, 2005). The “White” River system refers to the Upper White river above the confluence of the Black River, its tributaries, and the Strawberry, Current, and upper St. Frances rivers of the Ozark Highlands; the “Black” river reference refers to the Black river near the mouth of the Spring River, Arkansas – this region is part of the Bottomlands subdivision of the Mississippi River Alluvial Plan; “Arkansas” river system refers to the upper Arkansas River and its tributaries in Kansas; “Ouachita” refers to the Ouachita, Caddo, and Saline Rivers in the Ouachita Highlands (Serb, 2006). Ongoing taxonomic work indicates that this complex of species may be comprised of more than one species, possibly up to five. In recent years, both the federally-listed fanshell (*C. stegaria*) and the Western fanshell (*C. aberti*), have experienced serious population declines (Serb, 2006).

Historically, the species was extirpated from a chain of rivers in Kansas and Oklahoma and from Castor and Cane creeks in Missouri (Barnhart and Eckert, 2005). This species attracts fish host by means of distinctively worm looking conglomerates, or cohesive masses of eggs that mimic host prey. It has been suggested by Barnhart and Eckert 2005, that reproductive seasons are similar among all populations of Western fanshell with brooding periods beginning in early

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Covered Species: Federally-listed Endangered Species and State-listed Species of Greatest Conservation Need in the upper Saline, Caddo, and Ouachita Headwaters watersheds  
September, maturation of glochidia in late October, and conglutinate release beginning in February extending through March, coincident with rising water temperature.

It was previously shown by Eckert, 2003, that fanshells from different river systems in Kansas, Missouri, and Arkansas differ in their ability to utilize various species and populations of darters as hosts. Host species tested by Barnhart and Eckert in 2005 included rainbow darter (*Etheostoma caeruleum*) and fantail darter (*E. flabellare*) from the Black and St. Francis River systems, greenside darter (*E. blenniodes*) and orangebelly darter (*Etheostoma euzonum*) from the Spring River, Arkansas and Ouachita River systems. Greenside darters from the Ouachita River system proved unsuitable hosts. All other hosts proved somewhat suitable, however with variation between mussel species from differing river systems (Barnhart and Eckert, 2005).

**Southern pocketbook** (*Lampsilis ornata*) – This freshwater mussel has a very scattered distribution and low density in the Saline River within Arkansas. This species is not considered to be threatened range-wide, but limited distribution and low relative abundance indicates that this species is rare (AWAP, p. 928).

The Southern pocketbook has a somewhat truncated appearance due to the pronounced posterior ridge and can be quite large with some individuals exceeding 10 cm in length (Gangloff, 2003). This species historically was only known to occur throughout the Mobile Basin in Alabama, Georgia, and Tennessee (Gangloff, 2003). This species has a very scattered distribution and low density in the Ouachita Mountain portion of its range. The southern pocketbook has only been confirmed from the Saline River in Arkansas. Although this species is not considered to be very threatened rangewide, the small number of occurrences known from Arkansas seems to indicate that this species is rare (AWAP, p. 928).

Haag and Warren (2001) reported that southern pocketbook glochidia transformed only on largemouth bass (*Micropterus salmoides*). Southern pocketbook release glochidia in the late spring through mid-summer in the Coosa and Tallapoosa Drainages (Gangloff, 2003).

**Purple Lilliput** (*Toxolasma lividus*) – This freshwater mussel occurs in small to medium-sized streams within the Covered Watersheds. It is most often found in silty-clay, sand or gravel substrates. Widespread but uncommon, population numbers in Arkansas appear to be very low (AWAP, p. 1019).

The Purple lilliput is a small, dark mussel that is found in small to medium sized rivers and can be distinguished from other mussels by its size, robust hinge teeth, and purple nacre (Roe, 2002). Historical range for this species includes the Ohio River system, including the Tennessee and Cumberland Rivers as well as the White and Arkansas rivers (Roe, 2002). It is most often found in well packed sand or gravel and seems to occur at water depths less than one meter. Widespread but uncommon, population numbers in Arkansas appear to be very low (AWAP, p. 1019).

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Covered Species: Federally-listed Endangered Species and State-listed Species of Greatest Conservation Need in the upper Saline, Caddo, and Ouachita Headwaters watersheds  
Two species, Green sunfish (*Lepomis cyanellus*) and Longear sunfish (*Lepomis megalotis*) have been found to be suitable host species for the Purple lilliput. This species has a long brooding period, spawning in the summer and releasing larvae the following spring (Roe, 2002).

**Ouachita kidneyshell** (*Ptychobranhus occidentalis*) – This freshwater mussel is common in the upper Ouachita River and Saline River (AWAP, p.994).

The Ouachita Kidneyshell is a medium sized mussel that is typically found in upland streams in silt, sand, gravel, or rocky substrates in slow to moderate currents (Roe, 2004). Host fish species include orangethroat darter (*Etheostoma spectabile*), greenside darter (*E. blennioides*), yoke darter (*E. juliae*), and rainbow darter (*E. caeruleum*). The Ouachita kidneyshell appears to be common in the upper Ouachita River, however has been found in reduced numbers in recent years (AWAP, p. 994). Potential threats to the species include non-native, invasive species such as Zebra mussels and Asian clams (*Corbicula fluminea*), in-stream gravel mining, siltation, pollution, and dams/impoundments.

Information to date about the life history of this species indicates that further study is required. Research to date has also indicated potential host fish species, however additional research could further determine if there is variation in host preferences across the range of this species.

**Southern hickorynut** (*Obovaria jacksoniana*) – The freshwater mussel occurs from the Mississippi Interior Basin to Mobile drainage (Inoue, 2009). Within the Covered Watersheds, this species occurs in Ouachita River and its major tributaries and the four forks and main stem Saline River (Harris 1994; Harris et al. 1997). While fairly widely distributed, this species is not abundant within the Covered Watersheds (AWAP. P. 971).

The Southern hickorynut mussel occurs from the Mississippi Interior Basin to the Mobile drainage, and within Arkansas, this species occurs in the Arkansas, White, Ouachita, Poteau, and Red rivers (Harris 1994; Harris et al. 1997). For the scope of this agreement, the existence of Southern hickorynut is in the Ouachita River. The optimal habitat for this species is a natural run habitat in a medium to large headwater stream, with suitable habitat including pools and shoals (AWAP, p. 970). This species is found in medium sized gravel in water with low to moderate current. This species is fairly widely distributed, but not abundant anywhere.

The host fish is not known for the southern hickorynut and mobility is rather limited in the substrate with only passive downstream movement occurring when displaced by floods. Most dispersal occurs while glochidia are encysted on their hosts (Natureserve, 2012).

This species is uncommon to rare throughout its historic range and while some declines have occurred in Alabama, Mississippi, and southern Missouri, viable populations are not uncommon in Arkansas and Louisiana (Natureserve, 2012). Threats have largely not been assessed and no wide-ranging management activities have been undertaken.

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**Black sandshell** (*Ligumia recta*) – This freshwater mussel is widely distributed in medium to large rivers of the eastern U.S. and Canada, and although widely distributed in Arkansas, the species is rare and may be declining across its range. Within the Covered Watersheds, it is restricted to the Ouachita and Saline Rivers (AWAP, p.965).

The black sandshell mussel prefers large streams to large rivers in sand or small gravel. Suitable hosts for this species include Rock bass, American eel, central stoneroller, common carp, banded killifish, green sunfish, pumpkinseed, bluegill, orangespotted sunfish, longear sunfish, largemouth bass, white perch, white crappie, yellow perch, sauger, and walleye (Klocek *et al.*, 2008). Although the black sandshell is widely distributed, within Arkansas, it is rare and may also be declining across its range. Recruitment appears quite low with old individuals mainly found at sites and is not considered to be stable in any state it is known to occur (AWAP, p. 965).

**Pyramid pigtoe** (*Pleurobema rubrum*) – This freshwater mussel prefers medium to large river habitat with sand or gravel in areas with a good current (Illinois Natural History Survey, 1995). Within the Covered Watershed, this species occurs in the Ouachita and Saline Rivers.

The Pyramid pigtoe is a small to medium sized mussel typically found in medium to large sized rivers and prefers riffle and shoal habitat in shallow water with moderate to swiftly flowing currents (Roe, 2002). This species appears to have a substrate preference ranging from coarse gravel to mud and sand in depths of about 4 meters. No host information is currently available for this species.

Threats to this species include the introduction of non-native species, pollution, siltation, and habitat disturbance such as gravel mining or the construction of new impoundments (Roe, 2002). Because little is known about the life history or host preference of this species, it is difficult to assess projections of viable populations in the future, thus needs further research to develop a sound conservation plan for the species. This species does have some significance to the commercial shell industry (Roe, 2002).

## Appendix 2

### Importance of Private Lands and Conservation Strategies

#### Background

Based upon current knowledge and a 2005/2006 threats assessment conducted by The Nature Conservancy's Arkansas Field Office, threats to the SGCN in the Upper Saline River watershed can be broken down into three main classes: sedimentation, nutrification, and hydrologic alteration. Specific sources of sedimentation include land conversion (development/construction) without the use of proper erosion control, removal of riparian forest, stream bank erosion, runoff from rural gravel roads, in-stream gravel mining, and inconsistent forest practices (inadequate streamside protection zones and erosion of forest roads). Specific sources of excess nutrients in the watershed come from municipal/industrial wastewater, fertilizers, grazing livestock, and polluted runoff. Hydrologic alteration from impounded streams, water diversions, and water withdrawals exacerbate sedimentation issues and reduce habitat availability during drought periods for the SGCN.

Sediment stability and movement has a chain effect on the aquatic species that inhabit a stream. The transport and distribution of sediment once it has entered the river is determined by the annual flow regime. The accumulation of fine sediment in upper layers of the bed might be expected in river systems where impoundment(s) are located upstream of sources of fine sediment, resulting in a flow volume reduction without a corresponding reduction in fine sediment input (Osmundson et al. 2002). Within the Upper Saline, there are 23 impoundments included in this Agreement's covered area, either on major tributaries to the four forks, or on the main stem of these rivers. Due to the expansion of water withdrawals, diversions, and impoundments and the increase in elevated turbidity levels during storm events; soil erosion/sediment instability and hydrologic alteration were both given a "high" rating of severity within the Upper Saline Conservation Area Plan (DeClerk et al. 2005). See Table A1 for a summary of threats within the Upper Saline watershed.

In a landscape classification analysis comparing 1986 to 2004 in the Upper Saline, the most significant change was the growing urban component of the watershed. Urban area and roads increased by 47% throughout the Upper Saline with a corresponding decrease in pasture coverage by 29%. Another change was the growing industrial pine dominated land use, increasing by 24% over from 1986 – 2004, with a corresponding decrease in the natural/mixed woods forest matrix class of 22% (DeClerk *et. al.* 2005). This resulted from a growth in the private industrial forest presence in the watershed.

In 2005, a collaborative team of agency and non-governmental organizations developed a Conservation Action Plan for the Upper Saline River watershed. Table A1 is a summary list of threats related to target communities in the upper Saline and the ranks given to those threats from the team.

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Table A1

| <b>Summary of Threats</b><br><i>Upper Saline River Watershed</i> |   |                               |                        |                                   |                                 |                            |                               |                     |
|--|---|-------------------------------|------------------------|-----------------------------------|---------------------------------|----------------------------|-------------------------------|---------------------|
| <b>Threats Across Systems</b><br><i>Project-specific threats</i> |   | Upper Saline River Headwaters | Riparian Forest Matrix | Mussel Species of Special Concern | Fish Species of Special Concern | Benthic Macroinvertebrates | Upper Saline Mainstem & Lower | Overall Threat Rank |
| 1  | Altered Hydrologic Regime: Dam construction, water diversion, water withdrawals | Very High                     | -                      | -                                 | High                            | High                       | -                             | High                |
| 2  | Housing & Urban Development: Development/Construction                           | Very High                     | Medium                 | High                              | Medium                          | Medium                     | -                             | High                |
| 3  | Roads: Roads, unpaved, permanent, and temporary                                 | High                          | Medium                 | Medium                            | Medium                          | Medium                     | -                             | Medium              |
| 4  | Grazing & Ranching: Agricultural Practices                                      | High                          | Medium                 | Medium                            | Medium                          | Medium                     | -                             | Medium              |
| 5  | Waste or Residual Materials: In-Stream Gravel Mining                            | High                          | -                      | Medium                            | Medium                          | Medium                     | -                             | Medium              |
| 6  | Waste or Residual Materials: Point Source Discharges                            | Low                           | -                      | Low                               | High                            | Medium                     | -                             | Medium              |
| 7  | Recreation Areas: Land Conversion - Golf Course                                 | High                          | Medium                 | -                                 | -                               | -                          | -                             | Medium              |
| 8  | Waste or Residual Materials: Streambank Erosion/Sedimentation                   | -                             | -                      | Low                               | High                            | -                          | -                             | Medium              |
| 9  | Logging: Incompatible Forest Practices  | Medium                        | Medium                 | Medium                            | -                               | -                          | -                             | Medium              |
| 10   | Waste or Residual Materials: Conversion - Golf Course                           | -                             | -                      | -                                 | Medium                          | -                          | -                             | Low                 |
| 11   | Invasive Species: Introduction of Exotic Species                                | -                             | -                      | Medium                            | -                               | -                          | -                             | Low                 |
| <b>Threat Status for Targets and Site</b>                        |   | Very High                     | Medium                 | High                              | High                            | High                       | -                             | High                |

In the fall of 2010, representatives of each of the Parties, in addition to key partner groups, met to discuss watershed threats and conservation strategies for this Agreement. Table A2 summarizes the established threats to each of the Covered Watersheds as a result of this meeting.

Completing a threats assessment specific to the Caddo and Ouachita River (headwater reaches) watersheds, including analysis of land use change, stream channel stability, and prioritization of issues threatening the covered species, like the one completed for the Upper Saline watershed, will be crucial to complete for focused implementation projects in the future in these areas. Much of this information has been analyzed on the Ouachita National Forest and can be incorporated with information on private lands to give an overall analysis of watershed condition and threat prioritization. It is the intent of the Parties to this Agreement, that this type of analysis will be prioritized for completion as soon as funds become available.

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Importance of Private Lands and Conservation Strategies

**Table A2**

| <b>Safe Harbor/Candidate Conservation Agreement Prioritized Threats</b> |                            |                               |                              |
|---|----------------------------|-------------------------------|------------------------------|
| <b>General Threat</b>   | <b>Ouachita Headwaters</b> | <b>Upper Saline Watershed</b> | <b>Caddo River Watershed</b> |
| Erosion of Streambanks  | √                          | √                             | √                            |
| Stream crossings  | √                          | √                             | √                            |
| Gravel road runoff  | √                          | √                             | √                            |
| Inadequate Riparian Buffers   | √                          | √                             | √                            |
| Gravel Mining   | √                          | √                             | √                            |
| Silviculture  | √                          | √                             | √                            |
| Cattle  | √                          | √                             | √                            |
| Hay Production  | √                          | √                             | √                            |
| Poultry/CAFOs   | √                          |                               |                              |
| Recreation & Usage  | √                          |                               |                              |
| Urban Development   |                            | √                             |                              |
| Altered Hydrology   |                            | √                             |                              |
| Land Use Conversion: Urban  |                            | √                             |                              |
| Mine Reclamation  |                            |                               | √                            |
| Impacts to Springs (spawning habitat)                                   |                            |                               | √                            |

**Private Lands**

Within the upper Saline watershed, roughly 89% of the total watershed or 390,659 total acres are privately owned with roughly 302,890 of those acres adjacent to perennial streams. In the Caddo River watershed, 64% or 150,543 total acres are under private ownership with approximately 118,859 of those acres adjacent to perennial streams. Within the Ouachita River (Headwaters) watershed, 45% of the total watershed or approximately 184,677 total acres are privately owned with roughly 136,829 of those acres adjacent to perennial streams. Although there is a large presence of federally owned land in this watershed, most of the Ouachita National Forest property occurs in the upland portions of the watershed, leaving the majority of the main stem Ouachita River riparian area and its largest tributaries privately owned. The long term survival of the covered species is thus critically dependent on habitat availability on private lands. All private ownership acres will be eligible for enrollment under the SHA and/or the CCAA. In

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planning for this Agreement, however, The Nature Conservancy conducted further analysis of private lands to prioritize enrollment efforts in the short and long term.

Aquatic species are not only affected by loss of instream habitat, but also by activities on lands adjacent to streams and within the watershed that subsequently affect water quality and habitat. This Agreement sets a goal of restoring aquatic and terrestrial (riparian) habitat and utilizing best management practices to reduce sediment and pollutant runoff in the upper Saline, Caddo, and Ouachita River watersheds in order to allow for the expansion of the covered species through natural reproduction/recolonization, augmentation or reintroduction. By including all properties in the Covered Watersheds of this Agreement, the covered species are much more likely to establish viable population(s) and inhabit unoccupied reaches in all main stem, perennial, and in some cases intermittent streams, roadside ditches, and wet pastures within the watersheds. Protection should cover a large enough area, including public and private lands, such that activities in the watershed no longer adversely affect the streams. The Agreement would provide for future support of the covered species' conservation and provide landowners with funding (when available and authorized) to restore, create, and/or enhance suitable habitat on their land.

The Nature Conservancy analyzed the private ownership within the Covered Watersheds and developed a prioritization model that will guide development of realistic short and long-term goals for enrollment of properties into the SHA and CCAA. Note: A separate prioritization of land parcels will need to be conducted specific to the burrowing crayfish species as they occupy a separate specific habitat than the other covered species in this plan. The prioritization of private land parcels, for all covered species except the burrowing crayfish, was based on four factors within each parcel of ownership:

1. Presence/absence of a main stem versus perennial versus intermittent/ephemeral streams within the property,
2. Perennial stream length,
3. Percent forested riparian area, and
4. Parcel acreage.

For example, for the first category, if a parcel has a main stem channel within the parcel boundaries it received a ranking score of one; if the stream was perennial only, it received a two; if the stream was intermittent or ephemeral, it received a three; Essentially, the lower the score the higher priority the parcel was given. Similarly in the next category, properties with  $\geq 5,280$  feet of any type of stream received a ranking score of one;  $< 5,280'$  and  $\geq 2,640$  feet of stream received a ranking score of two;  $< 2,640$  feet and  $\geq 500$  feet received a ranking score of three; and  $< 500$  feet received a ranking score of four. Thirdly, parcels with  $\leq 50\%$  forested riparian area (defined as 100 linear feet on either side of the stream) received a ranking score of one;

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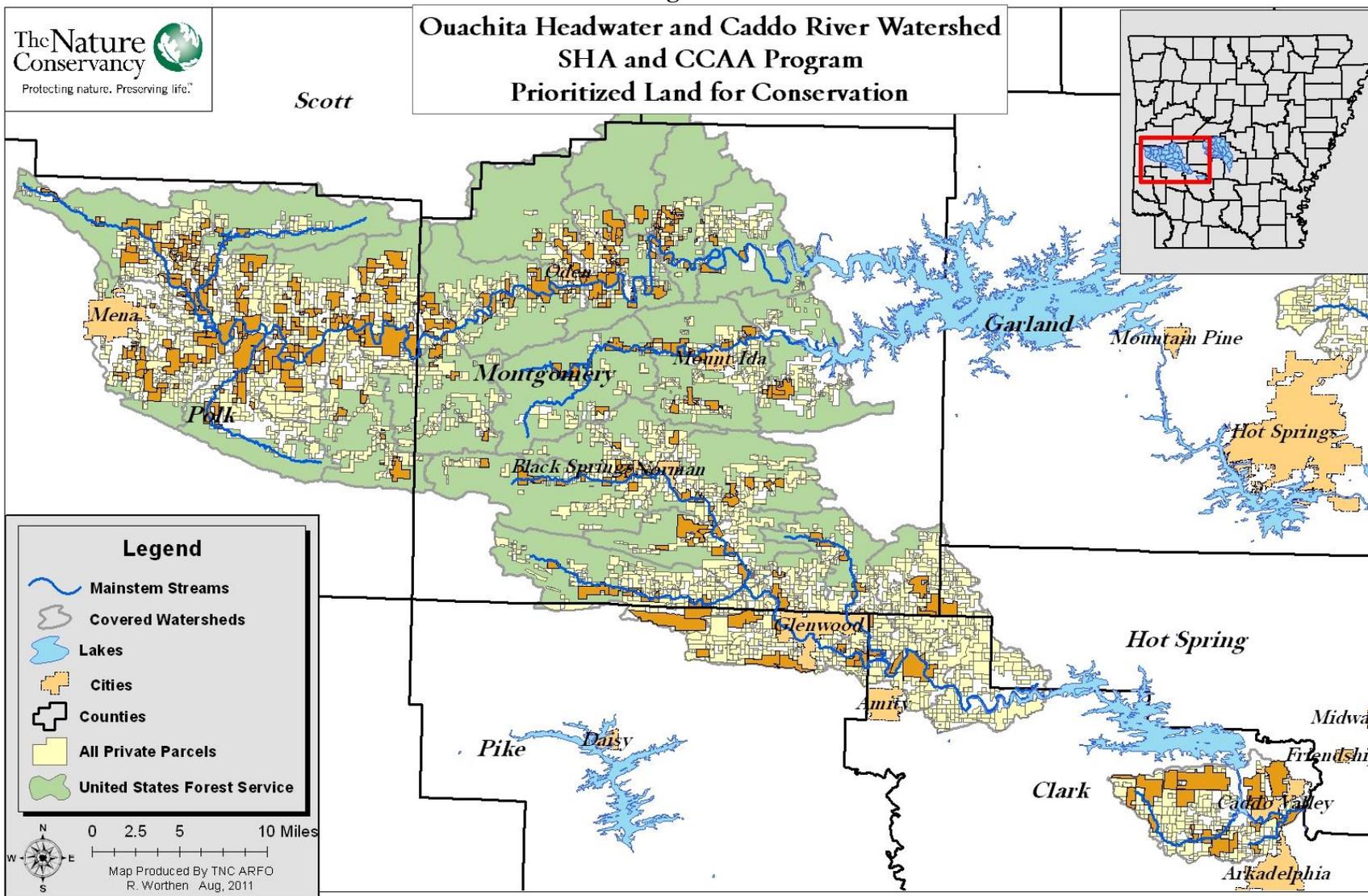
parcels with >50% and ≤ 75% forested riparian area received a ranking score of two; and parcels with >75% forested riparian area received a ranking score of three. Lastly, parcels with ≥ 1,000 acres received a ranking score of one; <1,000 and ≥ 500 acres received a two; <500 and ≥ 100 acres received a three; < 100 acres and ≥ 40 acres received a four, and parcels of < 40 acres received a five. Weighted ranking scores were calculated for all properties with riparian ownership. A summary of the statistics for total and priority weighted parcels in each watershed are shown in Table A3. Parcels with a weighted ranking score of eight or less are shown in Figures 1 and 2. The priority ranking score of eight was selected as an initial target for enrollment into the SHA and CCAA programs within the next fifteen years. This target enrollment number can be modified at any time when the presence of new data is incorporated or the parties determine otherwise.

**Table A3. Prioritized Private Parcels for Conservation**

| Ouachita Headwaters   |                |                      | Caddo Watershed       |                |                      | Upper Saline Watershed |                |                      |
|---|----------------|----------------------|-----------------------|----------------|----------------------|------------------------|----------------|----------------------|
| Tot Watershed Acres   | 412,556        |                      | Tot Watershed Acres   | 235,010        |                      | Tot Watershed Acres    | 439,792        |                      |
| Total Private Acreage   | 184,677        |                      | Total Private Acreage | 150,543        |                      | Total Private Acreage  | 390,659        |                      |
| % total private   | 45%            |                      | % total private       | 64%            |                      | % total private        | 89%            |                      |
| Total Public Acreage  | 227,879        |                      | Total Public Acreage  | 84,467         |                      | Total Public Acreage   | 49,133         |                      |
| % Public of Total   | 55%            |                      | % Public of Total     | 36%            |                      | % Public of Total      | 11%            |                      |
| Safe Harbor Agreement Land Prioritization (Weighted Priority 8 or less) |                |                      |                       |                |                      |                        |                |                      |
|   | Total ID Acres | Weighted Priority ≤8 |                       | Total ID Acres | Weighted Priority ≤8 |                        | Total ID Acres | Weighted Priority ≤8 |
| # Private Parcels   | 1,791          | 168                  | # Private Parcels     | 1,565          | 82                   | # Private Parcels      | 2,851          | 181                  |
| Total Acres   | 136,829        | 46,055               | Total Acres           | 118,859        | 27,352               | Total Acres            | 302,890        | 164,414              |
| % of Total Acres  | 33%            | 11%                  | % of Total Acres      | 51%            | 12%                  | % of Total Acres       | 69%            | 37%                  |
| Max Indiv. Acreage  | 2,620          | 2,620                | Max Indiv. Acreage    | 1,879          | 1,879                | Max Indiv. Acreage     | 18,824         | 18,824               |
| Mean Indiv. Acreage   | 76             | 274                  | Mean Indiv. Acreage   | 76             | 334                  | Mean Indiv. Acreage    | 106            | 908                  |
| Min. Indiv. Acreage   | 5              | 64                   | Min. Indiv. Acreage   | 5              | 44                   | Min. Indiv. Acreage    | 5              | 40                   |

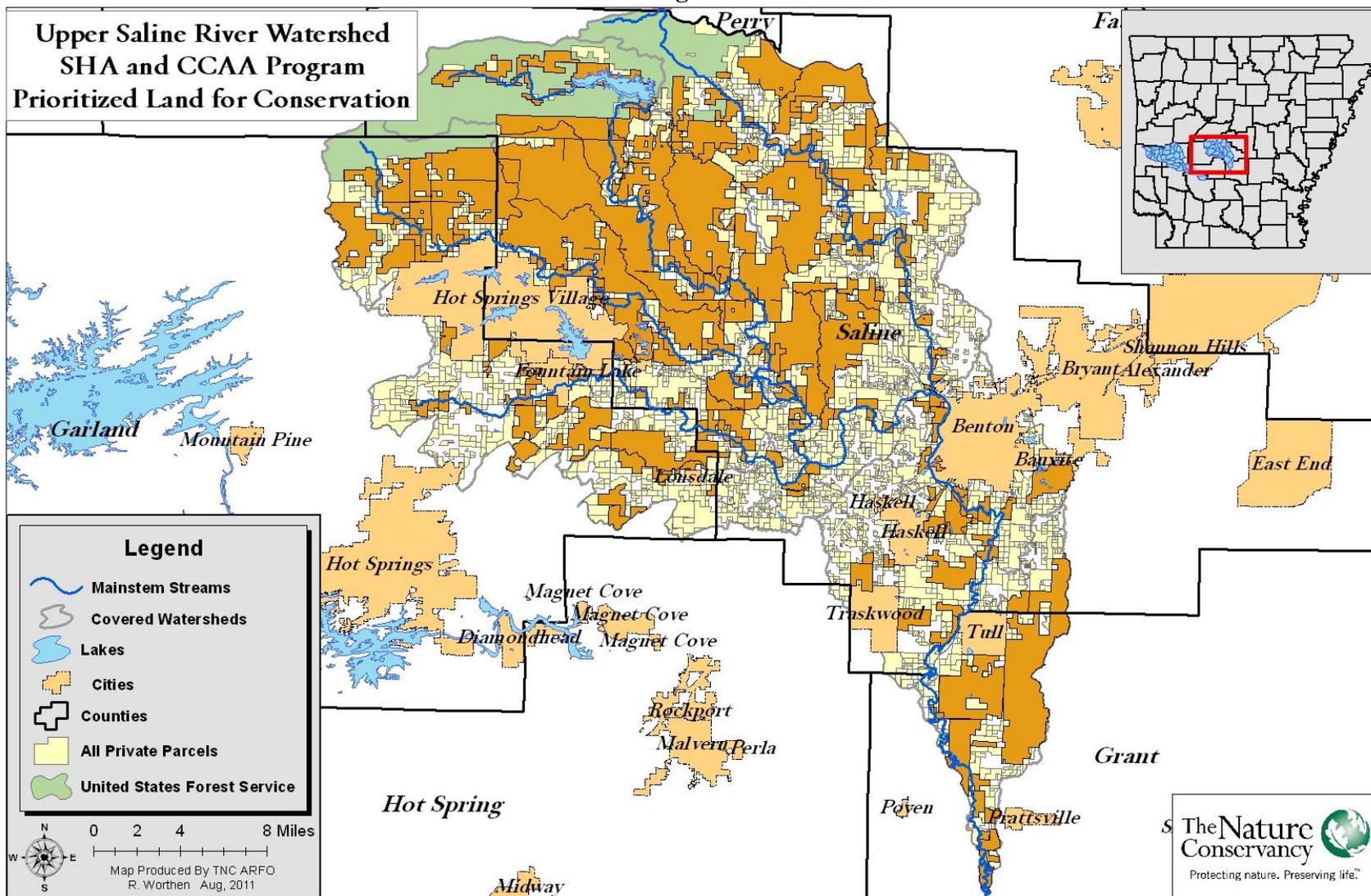
Importance of Private Lands and Conservation Strategies

Figure 1



Importance of Private Lands and Conservation Strategies

Figure 2



## Appendix 2

### Importance of Private Lands and Conservation Strategies

#### **Conservation Strategies**

The purpose of this Agreement is to provide a mechanism for implementing the conservation strategy through monitoring and management for the covered species and to encourage voluntary habitat maintenance by Cooperators who enroll under this Agreement. This Agreement and associated POMAs will collectively and individually increase the amount and quality of habitat available and improve water and habitat quality for the covered species and the ability of the FWS, AGFC, TNC, and NRCS to monitor the species while giving assurances to Cooperators that future uses of their property will not be restricted by the presence of the covered species.

A stable stream channel with suitable substrate provides the best habitat for stream dwelling species. When appropriate management activities are implemented adjacent to streams, there are fewer effects from unmanaged cattle access, stream bank erosion, and channel migration, thus reducing sedimentation in stream and allowing for a stable channel to exist with riffle substrates low in embeddedness. As rocks become embedded, or covered and/or sunken into the silt, sand or mud of the stream bottom; the surface area available to macroinvertebrates and fish decreases. Therefore, riffle substrates low in embeddedness represent good habitat for the covered species in this plan. Under the SHA and CCAA, Cooperators would provide conservation benefits to the Covered Species by maintaining or enhancing in stream and riparian habitat through a variety of means.

Riparian areas with adequate deciduous vegetation are important to help protect instream habitat for aquatic species. Under the SHA and CCAA component of this Agreement, funding may be available for riparian habitat protection and enhancement projects. Cooperators could be compensated for activities such as fencing riparian areas, creation of alternative watering sources for livestock, or planting shrubs and trees to enhance recovery of riparian habitat.

Conservation of the Covered Species would be enhanced by providing ESA regulatory assurances such that, should the Cooperator participate and attract Covered Species to their property or maintain and enhance conditions within the watershed, the Cooperator would not incur additional land use restrictions. Without regulatory assurances, landowners might be unwilling to participate in the SHA and CCAA if they are concerned about land use restrictions now or in the future.

In summary, the benefits to Covered Species from management activities under the SHA and CCAA are expected to occur from enhancement of all types of habitats beneficial to the species, as well as through reduction of the magnitude of existing threats to the species. The combination of these habitat related activities and the SHA and CCAA regulatory assurances is expected to facilitate cooperative relationships with landowners that will result in an overall benefit to Federally-listed species and SGCN and a likely increase in population sizes. In some cases with certain Federally-listed species and SGCN, to successfully increase populations to historic

## Appendix 2

### Importance of Private Lands and Conservation Strategies

abundance, the current populations will have to naturally expand and/or be augmented by propagation and/or reintroduction. This will require cooperation from non-federal landowners who own the majority of the suitable habitat in the covered watersheds. By reducing a landowner's concerns related to the potential regulatory burdens from existing Federally-listed species or the listing of any SGCN, cooperation and support from landowners for expansion of certain species populations should be enhanced. Without the support of non-federal landowners, the Federally-listed species and SGCN conservation efforts in the covered watersheds would likely be unsuccessful. Ultimately, the SHA and CCAA are expected to provide a significant contribution to the conservation of the Covered Watersheds.

**Attachment 1**  
**Template Property Owner Management Agreement (POMA)**  
**Safe Harbor Program for the Arkansas Fatmucket, Pink Mucket, Spectaclecase,**  
**Rabbitsfoot and Harparella**

## **1.0 Introduction**

This Property Owner Management Agreement (“POMA”), entered into by *[insert name]* (“Cooperator”) and **[ insert name of the Authorizing Party]** (“Authorizing Party”)(collectively the “Parties”), is intended to promote good land stewardship through the implementation of management activities on the Cooperator’s property (“Enrolled Property”) to provide a net conservation benefit for the Arkansas fatmucket (*Lampsilis powellii*), Pink mucket (*Lampsilis abrupta*), Spectaclecase (*Cumberlandia monodonta*), rabbitsfoot (*Quadrula cylindrica cylindrica*) and Harparella (*Ptilimnium nodosum*). This POMA and the associated Certificate of Inclusion (“Certificate”) ***[reference Certificate #XXX attachment to this POMA]*** are entered into and issued, respectively, in accordance with the *Programmatic Safe Harbor Agreement and Candidate Conservation Agreement with Assurances for the Arkansas Fatmucket, Pink Mucket, Spectaclecase, Rabbitsfoot, Harperella and twenty other Species of Greatest Conservation Need in the upper Saline, Caddo, and Ouachita (Headwaters) Watersheds, Arkansas* (“Agreement”) between the U.S. Fish and Wildlife Service (“FWS”), Arkansas Game and Fish Commission (“AGFC”), The Nature Conservancy (“TNC”), and National Resources Conservation Service (“NRCS”)(collectively the “Authorizing Parties”) and the associated Enhancement of Survival Permit (“Permit”).

The Arkansas fatmucket, pink mucket, spectaclecase, rabbitsfoot and harperella (the “Covered Species”) are Federally-listed under the Endangered Species Act of 1973, as amended, 16 U.S.C. § 1531 *et seq.* (“ESA”) and the only species for which incidental take is authorized under this POMA and the Certificate, which is attached hereto as Exhibit “A” and incorporated herein.

POMA Tracking Number: ***[FWS Arkansas Ecological Services Field Office will provide]***.

## **2.0 Enrolled Property**

The Enrolled Property subject to this POMA is as follows: ***[include legal description]*** in ***[County]***, Arkansas. The Enrolled Property, which contains habitat that may be used by the Covered Species and/or that is important to maintaining healthy streams inhabited by the Covered Species, lies within the ***[identify upper Saline, Caddo, or Ouachita Headwaters]*** watershed and consists of ***[insert # of acres]***, as shown on the property map ***[reference map attached to this POMA]*** attached hereto as Exhibit “B” and incorporated herein. The boundaries of the Enrolled Property and the amount of Covered Species’ habitat are reflected on the map.

## **3.0 Safe Harbor Standard, Conservation Goals, and Management activities**

### **3.1 Safe Harbor Standard**

The Parties reasonably expect this POMA to protect, enhance, and restore instream habitat, improve water quality, reduce erosion and sedimentation, and improve riparian habitat and land

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use practices on the Enrolled Property so as to provide a “net conservation benefit” to the Covered Species, which is the Safe Harbor standard. Via this POMA, the Enrolled Property will be managed in a manner so as to enhance and/or restore populations of the Covered Species in the foreseeable future. For as long as the management activities (also referred to as “management measures”) set forth herein are implemented and/or the habitat created by such measures persist, the cumulative impact of implementation of this POMA is expected to result in a net conservation benefit to the Covered Species.

### **3.2 Conservation Goals**

The primary objectives of this POMA are to protect, enhance and restore instream habitat, improve water quality and riparian habitat, and reduce erosion and sedimentation to promote the continued existence and/or reestablishment of populations of the Covered Species in the [*enter stream name*] in the [*upper Saline, Caddo, or Ouachita Headwaters*] watershed. The management activities (also referred to as “management measures”) undertaken pursuant to this POMA are expected to result in improvements in habitat quantity and quality for the Covered Species. The net effect of these activities will be to increase the likelihood that viable populations of the Covered Species persist in the watershed and inhabit unoccupied stream reaches that are within their historic ranges.

### **4.0 Baseline Conditions and the Cooperator’s Responsibilities**

#### **4.1 Baseline Conditions**

*[Describe the extent and current condition of the enrolled property and its acreage (e.g., major plant communities or habitat types, soils, hydrology, etc.) in terms of appropriate habitat for the covered species. Describe how the conservation recommendations required to meet the net conservation benefit were determined and attach a map showing the boundaries of the property. Existing conditions and those necessary to meet the net conservation benefit may be expressed either as riparian habitat (width, length, type of vegetation, fenced or not fenced), current or recommended land use practices (best management practices), and existing agreements on the property.]*

#### **4.2 Management Activities**

To achieve the Safe Harbor standard and to provide a net conservation benefit to the Covered Species, the Cooperator agrees to implement the following management activities on the Enrolled Property: *[insert a list of specific management activities necessary to the net conservation benefit on this property (acres, river miles, management practices, linear feet for fencing, increases in riparian habitat quality/quantity)].*

#### **4.3 Adjustments to Baseline Conditions**

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**Template Property Owner Management Agreement (POMA)**  
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**Rabbitsfoot and Harparella**

In spite of implementation of the management activities set forth herein and utilization of protective efforts, incidents may occur on the Enrolled Property that are neither the result of the Cooperator's action or inaction but that are unforeseen and/or beyond the Cooperator's control (e.g., *force majeure* events, such as tornados, rainstorms, severe drought, fires, or insect/disease epidemics, etc.). The effects of such incidents could be to degrade the baseline conditions on the Enrolled Property to the extent that the habitat is destroyed or becomes degraded and/or unsuitable for continued occupation by the Covered Species. In either instance, the Covered Species could be extirpated from the Enrolled Property, the numbers of species and/or the amount of suitable habitat could be reduced below the baseline conditions, and/or the elements necessary to provide a net conservation benefit to the Covered Species could no longer exist on the Enrolled Property.

When an unforeseen incident or an event beyond the Cooperator's control occurs, the Cooperator will not be held responsible for the resulting loss and may request, in writing, that the Authorizing Party, with the FWS's approval, adjust and/or modify the description of the baseline conditions on the Enrolled Property and/or the management activities to be implemented on the property. The Cooperator's request must also grant access to the Authorizing Party and/or any other of the Authorized Parties to enter upon the Enrolled Property to determine whether to approve the request. The approval or denial of the request must be in writing; however, any approval must include a detailed description of the extent to which the baseline conditions have been adjusted and the specify changes to the management activities that the Cooperator would then be required to implement on the Enrolled Property. Each approval must be appended to the POMA as an exhibit.

## **5.0 Responsibilities of the Parties**

Each Party, respectively, agrees to the following:

### Cooperator:

- a. To notify the Authorizing Party within 30 days of knowing or suspecting that the Covered Species is present on the Enrolled Property.
- b. To notify the Authorizing Party in writing at least 30 days in advance of implementing any planned land management activity (e.g., mowing, plowing, etc.) that the Cooperator reasonably anticipates to result in incidental take of the Covered Species. Before engaging in any such activity, the Cooperator shall provide the FWS and/or AGFC the opportunity to enter upon the Enrolled Property to capture and/or relocate any potentially affected individuals of the Covered Species.
- c. To refrain in all circumstances from impacting or disturbing the Covered Species or the species' instream habitat whether occupied or unoccupied.

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- d. To notify the Authorizing Party, in writing, within three working days of finding any dead individual of the Covered Species or of accidentally killing an individual of the Covered Species on the Enrolled Property.
- e. To allow any of the Authorizing Parties and/or their designees to enter upon the Enrolled Property for the purposes specified in 50 C.F.R. § 13.21(e)(2) as well as for law enforcement activities. With the exception of law enforcement personnel, any of the Authorizing Parties or their designees shall be allowed to enter upon the Enrolled Property at any reasonable hour and time after providing the Cooperator with reasonable advance notice of 7 days or more.
- f. To provide the Authorizing Party with information necessary to compile the required five-year status report described in the Agreement. Such information shall include, but is not limited to, a description of conservation measures undertaken on the Enrolled Property for the Covered Species and any activities that did or could have resulted in incidental take of Covered Species during the reporting period.
- g. To consider implementing and/or engaging in the adaptive management recommendations of the Authorizing Party and/or the FWS .
- h. To seek technical assistance from the Authorizing Party and/or the FWS or AGFC prior to undertaking activities not included herein to improve habitat on the Enrolled Property for the Covered Species.

Authorizing Party:

- a. To issue or to ensure that another of the Authorizing Parties issues a Certificate to the Cooperator upon execution of this POMA by the Parties.
- b. To provide technical assistance to the Cooperator, to the maximum extent practicable, upon request.
- c. To monitor whether the Cooperator is implementing the terms of the Agreement and, if not, to inform the Cooperator, and to inform the other Authorizing Parties that the Cooperator is not in compliance with the terms and conditions of the Agreement and of measures the Cooperator will take/has undertaken to cure non-compliance.
- d. To conduct compliance and biological monitoring with FWS preparing the status reviews from such monitoring activities.
- e. To recommend procedures to the Cooperator to avoid the occurrence of incidental take of the Covered Species, particularly where actual occurrences of take have been disclosed in the biannual reports prepared in accordance with the Agreement.

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f. To work with the Cooperator, other Authorizing Parties, and established watershed conservation groups on potential baseline adjustments, new management actions, and adaptive management plans, as necessary.

g. To collect data, along with the Cooperator, on management activities implemented in accordance with this POMA, including, but not limited to, data related to management of the Covered Species and on activities that resulted or could have resulted in incidental take of the species and to include such data in the biannual reports prepared in accordance with the Agreement.

### **6.0 Emergency Situations**

Emergency situations arising from natural disasters (e.g., tornados, fire, excessive rainfall, extreme drought, insect infestations, epidemic disease, etc.) may require the initiation of certain land management actions that could result in incidental take of the Covered Species. The Cooperator agrees to notify the Authorizing Party and the FWS and/or NRCS in writing 14 days or prior to land management activities stemming from an emergency situation and to allow the FWS and/or NRCS to enter onto the Enrolled Property to conduct surveys and/or relocate individuals of the Covered Species prior to implementation of the land management activities.

If it is not possible to provide notice before implementing the action(s), the Cooperator agrees, to the maximum extent practicable, to implement the action(s) so as to avoid impacting locations on the Enrolled Property where the Covered Species are known to occur. The Cooperator will notify the Authorizing Party and the FWS and/or NRCS, in writing, within ten working days after implementing any such action(s) and report all measures undertaken to avoid impacts to the Covered Species and, if take occurred, the amount of such take.

### **7.0 POMA and Certificate Duration**

This POMA and Certificate will be in effect until \_\_\_\_\_ [insert a date that is the longer of 10 years or until the end of the 30-year duration of the Agreement]. The POMA shall be effective upon execution by the Parties and issuance of the Certificate.

### **8.0 Incidental Take Authorization**

The Cooperator is authorized to use the Enrolled Property in any manner that does not result in a reduction of the populations and/or quantity and quality of habitat for the Covered Species to levels below the established and documented baseline conditions set forth in Section 4.1, above. Via the Certificate, the Cooperator is authorized to engage in take of the Covered Species provided such take is incidental to engaging in otherwise lawful activities on the Enrolled Property. Such activities may include, but are not limited to, driving vehicles, building or fence construction, grazing of livestock, gardening, forestry, hunting, farming, mowing, and cultivation of agricultural crops. The Cooperator may continue current land-use practices, undertake new practices, or make any other lawful use of the Enrolled Property even if such use results in

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incidental take of individuals of the Covered Species or the loss and/or degradation of habitat, provided the amount of take and/or loss and/or degradation of habitat does not go below the baseline conditions described in Section 4.1, above. Notwithstanding the foregoing, when engaging in incidental take or in activities that would result in the loss and/or degradation of habitat, the Cooperator must:

- a. Be in total compliance with the POMA;
- b. Have maintained the required baseline conditions and performed baseline responsibilities; and
- c. Have provided written notice in accordance with Section 5, above, prior to engaging in an activity that could result in incidental take of the Covered Species.

## **9.0 Regulatory Assurances**

The following assurances are provided to the Cooperator:

If additional management activities are necessary to respond to unforeseen circumstances, the FWS may require additional measures from the Cooperator only if such measures are limited to modifications within a Cooperator's POMA for the Covered Species, and only if those measures maintain the original terms of this POMA and the Certificate to the maximum extent possible. Any such additional management activities will not involve the commitment of additional land, water, or financial resources, or additional restrictions on the use of land, water, or other natural resources available without the consent of the Cooperator.

The FWS will have the burden of demonstrating that unforeseen circumstances exist, using the best scientific and commercial data available. These findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the Covered Species. The FWS will consider, but not be limited to, the following factors:

- Size of the current range of the affected species;
- Percentage of range adversely affected;
- Percentage of range conserved;
- Ecological significance of that portion of the range affected;
- Level of knowledge about the affected species and the degree of specificity of the species' conservation program; and
- Whether failure to adopt additional management activities would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

These assurances allow the Cooperator to alter or modify the Enrolled Property even if such alteration or modification results in incidental take of the Covered Species and their habitats to such an extent that the Enrolled Property is returned to the baseline conditions described in Section 4.1, above. The Cooperator may rely on these assurances only if the Cooperator is in full compliance with and properly implementing the POMA.

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**10.0 Funding**

Funding for the management activities will be provided by the Cooperator. The Authorizing Party will inform the Cooperator, however, of potential funding opportunities through state, federal, or private grant programs that may be relevant and available.

**11.0 Terms and Conditions**

In addition to the matters set forth herein, this POMA is subject to all of the terms and conditions of the Agreement and the associated Permit, both of which are incorporated herein by reference.

**11.1 Modification and Amendment of the POMA**

The Authorizing Party and/or the Cooperator may propose minor modifications or amendments to this POMA by providing written notice to the other and to the FWS. Such notice shall include a statement of the proposed modification, the reason for the proposed modification, and the expected results of the modification. Each Party agrees to use its best efforts to respond to proposed modifications within 60 calendar days of receiving the notice. Proposed minor modifications or amendment of this POMA will become effective upon written concurrence by the non-proposing Party and FWS. If the proposed modification or amendment is deemed by the FWS to be major, it must be processed in the manner set forth in Part 13.3 of the Agreement.

**11.2 Termination of the POMA**

The Cooperator must give the Authorizing Party ninety (90) days written notice, via certified mail, of its intent to terminate this POMA. The Cooperator also must provide the Authorizing Parties and/or their designees to enter upon the Enrolled Property to capture and relocate individuals of the Covered Species within thirty (30) days of receipt of the written notice. As provided in Part 12 of the FWS's Safe Harbor Policy (64 FR 32717), the Cooperator may terminate this POMA prior to its expiration date for circumstances beyond the Cooperator's control.

Provided the baseline conditions set forth in Section 4.1, above, or as modified or adjusted pursuant to Section 4.3, above, exist or have been increased on the Enrolled Property, the Cooperator, subject to the previously mentioned notice requirement and opportunity to capture and relocate individuals of the Covered Species, may return the Enrolled Property to baseline conditions even if the expected net conservation benefits have not been realized. If the Cooperator is unable to implement the management activities, plans and provisions of this POMA, whether due to catastrophic destruction of the Covered Species' population numbers or habitat or to unforeseen hardship, the Cooperator agrees to relinquish the Certificate to the Authorizing Party. Termination of this POMA shall immediately result in termination of the Certificate.

**11.3 Suspension or Revocation of the Certificate**

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The FWS may suspend or revoke the Cooperator's Certificate if the Cooperator breaches the obligations set forth in this POMA and fails to cure such breach in a timely manner.

**11.4 Succession and Transfer**

The Certificate may be transferred in accordance with 50 C.F.R. § 13.25. The Cooperator agrees to notify the Authorizing Party and the FWS, in writing, of any transfer of ownership of the Enrolled Property, whether in part or in whole, at least 90 calendar days prior to the intended date of transfer in order to provide the Authorizing Party and/or the FWS the opportunity to contact the new owner, explain the responsibilities applicable to the Enrolled Property, and seek to interest the new owner in becoming a party to the POMA or in entering into a new POMA.

**11.5 Remedies**

Each Party shall have all remedies otherwise available to enforce the terms of this POMA and the Certificate.

**12.0 Relationship to Other Documents**

This POMA is subordinate to the Agreement and the associated Permit.

**13.0 Other Species**

The Cooperator is not required to survey for other federally- listed species. However, neither this POMA nor the Certificate provides regulatory assurances or incidental take authorization, respectively for species other than the Covered Species.

**14.0 Effective Date**

This POMA shall be effective and binding on the date of the last signature, below, and upon issuance of the Certificate.

**15.0 Notification**

Communication, reports, and correspondence required by this POMA should be directed to the persons listed below. The names and contact information may be changed upon written notice to the persons listed below.

*[insert: Name and address, phone, fax, email of Cooperator]*

COOPERATOR:

AUTHORIZING PARTY:

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AGFC: Director  
2 Natural Resources Drive  
Little Rock, Arkansas 72205  
(501) 776-0218 (Telephone)  
(501)223-6461 (Fax)

FWS: Field Supervisor  
Arkansas Ecological Services Office  
110 South Amity Road, Suite 300  
Conway, Arkansas 72032  
(501) 513-4470 (Telephone)  
(501) 513-4480 (Fax)

NRCS: State Conservationist  
Room 3416 Federal Bldg.  
700 W. Capitol  
Little Rock, Arkansas 72201  
(501) 301-3173 (Telephone)  
(501) 301-3188 (Fax)

TNC: Director  
Arkansas Field Office  
601 North University Avenue  
Little Rock, Arkansas 72205  
(501) 663-6699 (Telephone)  
(501) 663-8332 (Fax)

IN WITNESS WHEREOF, each Party hereto has caused this Property Owner Management Agreement to be executed by an authorized official on the day and year set forth below their respective signatures.

COOPERATOR

By: \_\_\_\_\_  
Name and Title

Date: \_\_\_\_\_

AUTHORIZING PARTY

*[INSERT U. S. Fish and Wildlife Service, Arkansas Ecological Services Office; Arkansas Game and Fish Commission; The Nature Conservancy, Arkansas Field Office; or Natural Resources Conservation Service]*

By: \_\_\_\_\_  
[Name and Title]

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Date: \_\_\_\_\_

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**CERTIFICATE OF INCLUSION**

This certifies that the property described as follows [legal description of property covered by the Safe Harbor Permit] owned by [Cooperator’s name], is included within the scope of the Section 10(a)(1)(A) permit [reference number] issued by the U.S. Fish and Wildlife Service expiring on [date] under the authority of Section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended. Through the Permit and this Certificate, [Cooperator’s Name] is authorized to perform certain activities as part of the implementation of a program to protect, enhance, or restore a population of Arkansas fatmucket, pink mucket, spectaclecase and Harperella in the ***[upper Saline, Caddo, or Ouachita River (Headwaters)]*** watershed, Arkansas. The holder of this Certificate is authorized to engage in any otherwise lawful activity on the above described property that may result in the incidental taking of the Arkansas fatmucket, pink mucket, spectaclecase, harperella, and/or their habitats above baseline subject to the terms and conditions of the Permit and the Cooperator’s Property Owner Management Agreement [insert number] entered into by [insert Arkansas Game and Fish Commission or U.S. Fish and Wildlife Service] and the Cooperator on [insert date].

These authorizations and assurances expire on [Date permit expires].

---

[Name and Title]

Date: \_\_\_\_\_

**Attachment 2**  
**Template Property Owner Management Agreement (POMA)**  
**Candidate Conservation Agreement with Assurances for Twenty-two Species of Greatest Conservation Need**

**1.0 Introduction**

This Property Owner Management Agreement (“POMA”), entered into by *[insert name]* (“Cooperator”) and *[insert name of Authorizing Party]* (“Authorizing Party”)(collectively the “Parties”), is intended to promote good land stewardship through the implementation of management activities on the Cooperator’s property (“Enrolled Property”) to preclude or remove the need to list twenty-one (21) of Arkansas’ Species of Greatest Conservation Need under the Endangered Species Act of 1973, as amended, 16 U.S.C. § 1531 *et seq.* (“ESA”). This POMA and the associated Certificate of Inclusion (“Certificate”) *[reference Certificate #XXX attachment to this POMA]* are entered into and issued, respectively, in accordance with the *Programmatic Safe Harbor Agreement and Candidate Conservation Agreement with Assurances for the Arkansas Fatmucket, Pink Mucket, Spectaclecase, Rabbitsfoot, Harperella and Twenty Other Species of Greatest Conservation Need in the upper Saline, Caddo, and Ouachita Headwaters Watersheds, Arkansas* (“Agreement”) between the U.S. Fish and Wildlife Service (“FWS”), Arkansas Game and Fish Commission (“AGFC”), The Nature Conservancy (“TNC”), and National Resources Conservation Service (“NRCS”)(collectively the “Authorizing Parties”) and the associated Enhancement of Survival Permit (Permit).

The twenty-one species (“Covered Species”) covered by this POMA are listed in Exhibit “A”, which is attached hereto and incorporated herein. They also are the only species for which incidental take is authorized under this POMA and the associated Certificate, which is attached hereto as Exhibit “B” and incorporated herein.

POMA Tracking Number: *[FWS Arkansas Ecological Services Field Office will provide.]*

**2.0 Enrolled Property**

The Enrolled Property subject to this POMA is as follows: *[include legal description]* in *[County]*, Arkansas. The Enrolled Property, which contains habitat that may be used by the Covered Species and/or that is important to maintaining healthy streams inhabited by the Covered Species, lies within the *[identify upper Saline, Caddo, or Ouachita Headwaters]* watershed and consists of *[insert # of acres]*, as shown on the property map *[reference map attached to this POMA]* attached hereto as Exhibit “C” and incorporated herein. The boundaries of the Enrolled Property and the amount of Covered Species’ habitat are reflected on the map.

**3.0 CCAA Standard and Conservation Goals**

**3.1 CCAA Standard**

The Parties reasonably expect this POMA to protect, enhance, and restore instream habitat, improve water quality, riparian habitat, and land use practices, and reduce erosion and sedimentation to promote the continued existence and/or reestablishment of viable populations of the Covered Species in the portion of the watershed located on the Enrolled Property. For as long as the management activities set forth herein are implemented on the Enrolled Property, the

**Attachment 2**  
**Template Property Owner Management Agreement (POMA)**  
**Candidate Conservation Agreement with Assurances for Twenty-two Species of Greatest Conservation Need**

Parties anticipate improvements in habitat quantity and quality for the Covered Species that, when combined with those that could be achieved were it assumed that the same were being implemented on other necessary properties, would preclude or remove the need to list the Covered Species under the ESA, which is the CCAA standard. The net effect of implementation of the activities would be to increase the likelihood that the Covered Species persist in the watershed and inhabit unoccupied stream reaches that are within their historical ranges.

**3.2 Conservation Goals**

*[What are the specific conservation goals for this Enrolled Property?]*

**4.0 Existing Characteristics and Management Activities**

**4.1 Existing Characteristics**

*[Describe the extent and current characteristics of the enrolled property and their acreage (e.g., major plant communities or habitat types, soils, hydrology, etc.) in terms of appropriate habitat for the covered species. Existing characteristics necessary to meet the CCAA standard may be expressed either as riparian habitat (width, length, type of vegetation, fenced or not fenced), current or recommended land use practices (best management practices), and existing agreements on the property.]*

**4.2 Management Activities**

The Cooperator agrees to implement the following management activities on the Enrolled Property:

*[Describe the management activities required to meet the CCAA standard and attach a map showing the boundaries of the property].*

**4.3 Adjustments to Existing Characteristics**

In spite of implementation of the management activities set forth herein, incidents may occur on the Enrolled Property that are the result of neither the Cooperator nor its agent(s)' actions or inactions but unforeseen and/or beyond the Cooperator's control (e.g., *force majeure* events such as tornados, rainstorms, severe drought, fires, or insect/disease epidemics, etc.). The effects of such incidents on some or all of the existing characteristics could range from destruction to degradation. The effects on the Covered Species could range from extirpation to an inability to continue to occupy the Enrolled Property due to the non-suitability or non-existence of habitat. In either scenario, the Covered Species' numbers and/or habitat could be reduced below the "existing circumstances" described in Section 4.1, above, or reduced to the extent that the CCAA standard is no longer satisfied.

When such incidents occur, the Cooperator will not be held responsible for the resulting loss and may request, in writing, that the Parties amend the POMA to adjust the description of the existing circumstances on the Enrolled Property and/or the management activities to be

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implemented thereon. The Cooperator's request to amend must also include a grant of access to the Authorizing Parties and/or the designee of the Authorizing Parties to enter onto the Enrolled Property to determine whether bases exist to approve the request to amend. The approval or denial of the request must be in writing and, if granted, must be approved by the FWS and include a detailed description of the extent to which the existing circumstances have been adjusted as well as specify changes to the management activities, if applicable. Each approval must be denominated as an amendment to the POMA and appended as an exhibit to the POMA. If the destruction or degradation of the existing circumstances is such that the Enrolled Property no longer satisfies the CCAA standard, the POMA and Certificate must be terminated in accordance with Section 11.2, below.

**5.0 Responsibilities of the Parties**

Each Party, respectively, agrees to do the following:

Cooperator:

- a. To notify the Authorizing Party within 30 days of knowing or suspecting that any of the Covered Species is present on the Enrolled Property.
- b. To notify the Authorizing Party in writing at least 30 days in advance of implementing any planned land management activity (e.g., mowing, plowing, etc.) that the Cooperator reasonably anticipates to result in incidental take of the Covered Species. Before engaging in any such activity, the Cooperator shall provide the FWS and/or AGFC the opportunity to enter upon the Enrolled Property to capture and/or relocate any potentially affected individuals of the Covered Species.
- c. To refrain in all circumstances from impacting or disturbing the Covered Species or species' instream habitat whether occupied or unoccupied.
- d. To notify the Authorizing Party, in writing, within three working days of finding any dead individual of the Covered Species or of accidentally killing an individual of the Covered Species.
- e. To allow any of the Authorizing Parties and/or their designees to enter upon the Enrolled Property for the purposes specified in 50 C.F.R. § 13.21(e)(2) as well as for law enforcement activities. With the exception of law enforcement personnel, any of the Authorizing Parties or their designees shall be allowed to enter upon the Enrolled Property at any reasonable hour and time after providing the Cooperator with reasonable advance notice of 7 days or more.
- f. To provide the Authorizing Party with information necessary to compile the required five-year status report described in the Agreement. Such information shall include, but is not limited to, a description of all management activities undertaken on the Enrolled

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Property for the Covered Species and any activities that did or could have resulted in incidental take of Covered Species during the reporting period.

g. To consider implementing and/or engaging in the adaptive management recommendations of the Authorizing Party and/or the FWS.

h. To seek technical assistance from the Authorizing Party and/or the FWS or AGFC prior to undertaking activities not included herein to improve habitat on the Enrolled Property for the Covered Species.

Authorizing Party:

a. To issue or to ensure that another of the Authorizing Parties issues a Certificate to the Cooperator upon execution of this Agreement by both Parties.

b. To provide technical assistance to the Cooperator, to the maximum extent practicable, upon request.

c. To monitor whether the Cooperator is implementing the terms of the Agreement and, if not, to inform the Cooperator, and to inform the other Authorizing Parties that the Cooperator is not in compliance with the terms and conditions of the Agreement and of measures the Cooperator will take/has undertaken to cure non-compliance.

d. To conduct compliance and biological monitoring with FWS preparing the status reviews from such monitoring activities.

e. To recommend procedures to the Cooperator to avoid the occurrence of incidental take of the Covered Species, particularly where actual occurrences of take have been disclosed in the biannual reports prepared in accordance with the Agreement.

f. To work with the Cooperator, other Authorizing Parties, and established watershed conservation groups on new management activities and adaptive management plans, as necessary.

g. To collect data, along with the Cooperator, on management activities implemented in accordance with this POMA, including, but not limited to, data related to management of the Covered Species and on activities that resulted or could have resulted in incidental take of the species and to include such data in the biannual reports prepared in accordance with the Agreement.

**6.0 Emergency Situations**

Emergency situations arising from natural disasters (e.g., tornados, fire, excessive rainfall, extreme drought, insect infestations, epidemic disease, etc.) may require the initiation of certain

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land management actions that could result in incidental take of the Covered Species. The Cooperator agrees to notify the Authorizing Party and the FWS and/or NRCS in writing 14 days prior to land management activities stemming from an emergency situation and to allow the FWS and/or NRCS to enter onto the Enrolled Property to conduct surveys and/or relocate individuals of the Covered Species prior to implementation of the land management action(s).

If it is not possible to provide notice before implementing the action(s), the Cooperator agrees, to the maximum extent practicable, to implement such action(s) so as to avoid impacting locations on the Enrolled Property where the Covered Species are known to occur. The Cooperator will notify the Authorizing Party and the FWS and/or NRCS, in writing, within ten working days of implementing any such action(s) and report all measures undertaken to avoid impacts to the Covered Species and, if take occurred, the amount of such take.

### **7.0 POMA and Certificate Duration**

This POMA will be in effect until \_\_\_\_\_ [insert a date that is the longer of 10 years or until the end of the 30-year duration of the Agreement]. This POMA shall be effective when signed by both Parties and the Certificate is issued.

### **8.0 Incidental Take Authorization**

The Certificate authorizing incidental take of the Covered Species shall not become effective until such time as a Covered Species was officially listed as an “endangered” or “threatened” species under the ESA but would authorize take of the species incidental to the Cooperator engaging in otherwise lawful activities on the Enrolled Property. Such activities may include, but are not limited to, driving vehicles, building or fence construction, grazing of livestock, gardening, forestry, hunting, farming, mowing, or cultivation of agricultural crops. The Cooperator may continue current land-use practices, management activities and activities specified herein, , or undertake any other lawful use of the Enrolled Property even if such use results in take of a Covered Species or loss and/or degradation of habitat.

*[Describe level of take that may potentially occur on the enrolled property based on property acreage, habitat types, and current distribution and population status of the Covered Species.]*

The FWS recognizes that the level of take specified above is consistent with the overall goal of precluding the need to list the Covered Species and that if the management activities are implemented on other necessary properties, there would be no need to list the species.

### **9.0 Regulatory Assurances**

Through this POMA, the Cooperator is assured that no additional management activities or additional land, water, or resource use restrictions, beyond those voluntarily agreed to and described in Section 8.2 the “Management activities” of this POMA will be required should a Covered Species be listed under the ESA as “threatened” or “endangered” in the future.

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The following assurances apply to the Cooperator only where the Certificate and this POMA are being properly implemented and only with respect to the Covered Species.

(a) Changed circumstances provided for in this POMA. If additional management activities are necessary to respond to changed circumstances and the measures are set forth herein, the Cooperator will implement such measures in the event of changed circumstances.

(b) Changed circumstances not provided for in this POMA. If additional management activities not provided for in this POMA are necessary to respond to changed circumstances, the FWS will not require any management activities in addition to those provided herein without the consent of the Cooperator.

(c) Unforeseen circumstances

(1) If additional management activities are necessary to respond to unforeseen circumstances, the Director of the FWS may require additional measures of the Cooperator, but only if such measures are limited to modifications within the conservation measures set forth herein for the Covered Species and only if those measures maintain the original terms of this POMA to the maximum extent possible. Additional management activities will not involve the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources available for development or use under the original terms of this POMA without the consent of the Cooperator.

(2) The FWS will have the burden of demonstrating that unforeseen circumstances exist, using the best scientific and commercial data available. These findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the Covered Species. The FWS will consider, but not be limited to, the following factors:

- (a) Size of the current range of the Covered Species;
- (b) Percentage of the Covered Species' range adversely affected;
- (c) Percentage of the Covered Species' range conserved;
- (d) Ecological significance of the portion of the Covered Species' range affected by the POMA;
- (e) Level of knowledge about the Covered Species and the degree of specificity of the species' conservation program under this POMA; and
- (6) Whether failure to adopt additional management activities would appreciably reduce the likelihood of survival and recovery of the Covered Species in the wild.

## **10.0 Funding**

The Cooperator will be responsible for funding all management activities undertaken pursuant to this POMA. The Authorizing Party will inform the Cooperator of potential funding opportunities through state, federal, or private grant programs that may be relevant and available.

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**11.0 Terms and Conditions**

In addition to the matters set forth herein, this POMA is subject to the terms and conditions of the Agreement and the Permit, both of which are incorporated herein by reference.

**11.1 Modification of POMAs**

The Authorizing Party and/or the Cooperator may propose minor modifications or amendments to this POMA by providing written notice to the other and to the FWS. Such notice shall include a statement of the proposed modification, the reason for the proposed modification, and the expected results of the modification. Each Party agrees to use its best efforts to respond to proposed modifications within 60 calendar days of receiving the notice. Proposed minor modifications or amendments to this POMA will become effective upon written concurrence by the non-proposing Party and FWS. If the proposed modification or amendment is deemed by the FWS to be major, it must be processed in the manner set forth in Part 13.3 of the Agreement.

**11.2 Termination of the POMA**

The Cooperator must give the Authorizing Party ninety (90) days written notice, via certified letter, of its intent to terminate this POMA. The Cooperator also must provide the Authorizing Parties and/or their designees to enter upon the Enrolled Property to capture and relocate individuals of the Covered Species within thirty (30) days of the written notice. As provided for in Part of the FWS's Candidate Conservation Agreement with Assurances Policy ( FR ), the Cooperator may terminate this POMA prior to the expiration date for circumstances beyond the Cooperator's control.

Provided that the existing conditions and responsibilities have been maintained, the Cooperator, subject to the previously mentioned notice requirement and opportunity to relocate individuals of the covered species, may return the enrolled property to baseline conditions, even if the expected benefits have not been realized. If the Cooperator is unable to continue implementation of the management activities, plans and provisions of this POMA, whether due to catastrophic destruction of the species population numbers or habitat or due to unforeseen hardship, the Cooperator agrees to relinquish the Certificate of Inclusion to FWS, AGFC, TNC, and/or NRCS. Termination of this POMA terminates the Certificate.

**11.3 Suspension or Revocation of the Certificate**

The FWS may suspend or revoke the Cooperator's Certificate if the Cooperator breaches the obligations set forth in this POMA and fails to cure such breach in a timely manner.

**11.4 Succession and Transfer**

The Certificate may be transferred in accordance with 50 C.F.R. § 13.25. The Cooperator agrees to notify the Authorizing Party and the FWS, in writing, of any transfer of ownership of the

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Enrolled Property, whether in part or in whole, at least 90 calendar days prior to the intended transfer in order to provide the Authorizing Party and/or the FWS the opportunity to contact the new owner, explain the responsibilities applicable to the Enrolled Property, and seek to interest the new owner in becoming a party to the POMA or in entering into a new POMA.

**11.5 Remedies**

Each Party shall have all remedies otherwise available to enforce the terms of this POMA and the Certificate.

**12.0 Relationship to Other Documents**

This POMA is subordinate to the Agreement and the associated Permit.

**13.0 Other Species**

The Cooperator is not required to survey for other federally-listed species. However, neither this POMA nor the Certificate provides regulatory assurances or incidental take authorization, respectively for species other than the Covered Species.

**14.0 Effective Date**

This POMA shall be effective and binding on the date of the last signature, below, and upon issuance of the Certificate.

**15.0 Notification**

Communication, reports, and correspondence required by this POMA should be directed to the persons listed below. The names and contact information may be changed upon written notice to the persons listed below.

COOPERATOR:

AUTHORIZING PARTIES:

AGFC: Director  
2 Natural Resources Drive  
Little Rock, Arkansas 72205  
(501) 776-0218 (Telephone)  
(501) 223-6461 (Fax)

FWS: Field Supervisor  
Arkansas Ecological Services Offices  
110 South Amity Road, Suite 300  
Conway, Arkansas 72032  
(501) 513-4470 (Telephone)  
(501) 513-4480 (Fax)

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NRCS: State Conservationist  
Room 3416 Federal Bldg.  
700 W. Capitol  
Little Rock, AR 72201  
(501) 301-3173 (Telephone)  
(501) 301-3188 (Fax)

TNC: Director  
Arkansas Field Office  
601 North University Avenue  
Little Rock, AR 72205  
(501) 663-6699 (Telephone)  
(501) 663-8332 (Fax)

IN WITNESS WHEREOF, each party hereto has caused this Property Owner Management Agreement to be executed by an authorized official on the day and year set forth below their signature.

COOPERATOR

By: \_\_\_\_\_  
Name and Title

Date: \_\_\_\_\_

AUTHORIZING PARTY

*[INSERT U. S. Fish and Wildlife Service, Arkansas Ecological Services Office; Arkansas Game and Fish Commission; The Nature Conservancy, Arkansas Field Office; or Natural Resources Conservation Service]*

By: \_\_\_\_\_  
[Name and Title]

Date: \_\_\_\_\_

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**CERTIFICATE OF INCLUSION**

This certifies that the property described as follows [legal description of property covered by the Candidate Conservation Agreement with Assurances Permit] owned by [Cooperator's name], is included within the scope of the Section 10(a)(1)(A) permit issued by the U.S. Fish and Wildlife Service expiring on [date] under the authority of Section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended [reference number]. The Permit authorizes certain activities by the [Cooperator] as part of the Candidate Conservation Agreement program to protect, enhance, or restore populations of the Covered Species in the [*upper Saline, Caddo, or Ouachita River (Headwaters)*] watershed, Arkansas. The holder of this Certificate is authorized to engage in any otherwise lawful activity on the above described property that may result in the incidental taking of the Covered Species or its habitat, should the species become listed, above predetermined existing conditions subject to the terms and conditions of the Permit. This Certificate is only valid for as long as the Cooperator fulfills the responsibilities as described in the Property Owner Management Agreement [reference number] entered into by [insert Arkansas Game and Fish Commission or U.S. Fish and Wildlife Service] and [Cooperator's name] on [date].

These authorizations and assurances expire on [Date permit expires].

---

[Name and Title]

Date: \_\_\_\_\_

## **Attachment 3**

### **Compliance Actions**

#### **National Historic Preservation Act – Section 106**

Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 U.S.C. 470 *et seq.*) requires Federal agencies to take into account the effects of their undertakings on properties eligible for inclusion in the National Register of Historic Places (NRHP). An undertaking is defined as a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency, those carried out with federal financial assistance, those requiring a federal permit, license or approval, and those subject to state or local regulation administered pursuant to a delegation or approval by a Federal agency.

This Agreement has been reviewed and evaluated by the Region 4, Ecological Services Staff Archeologist. The overall agreement does not meet the definition for an undertaking as defined in 36 CFR 800 since the Agreement is concerned with future actions that have not yet occurred.

In addition, the management activities are the type of actions that, by themselves, are unlikely to affect any cultural resources that may be present on a specific Cooperator's property. Past review and field evaluations of the type of management activities listed on pages 8 and 9 of this Agreement indicate that it is reasonable to assume that cultural resources will not be affected by the implementation of this Agreement.

The staff archeologist is available to assist the Arkansas Ecological Services Office and any Party or Cooperator on a project by project evaluation, should any conservation measure be planned that will require significant soil disturbance or the removal of a structure or building 50 years old or older.

## Attachment 4

### Safe Harbor Assurances to the AGFC, TNC and Cooperators

The following assurances are provided to the AGFC, TNC and/or affected Cooperators. The following shall be incorporated verbatim into each Property Owner Management Agreement (POMA):

“If additional management activities are necessary to respond to unforeseen circumstances, the FWS may require additional measures from the AGFC, TNC or Cooperator only if such measures are limited to modifications within the Parties’ Agreement and/or Cooperator’s POMA conservation strategy for the covered species, and only if those measures maintain the original terms of the Agreement and/or affected POMA (and Certificate of Inclusion) to the maximum extent possible. Additional management activities will not involve the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources available for development or use under the original terms of the Agreement and/or affected POMA(s) (and Certificate(s)) without the consent of the other Parties and/or Cooperator(s).”

FWS will have the burden of demonstrating that unforeseen circumstances exist, using the best scientific and commercial data available. These findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the affected species. FWS will consider, but not be limited to, the following factors:

- Size of the current range of the affected species;
- Percentage of range adversely affected by the Agreement;
- Percentage of range conserved by the Agreement;
- Ecological significance of that portion of the range affected by the Permit;
- Level of knowledge about the affected species and the degree of specificity of the species’ conservation program under the Agreement; and
- Whether failure to adopt additional management activities would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

These assurances allow the AGFC, TNC and Cooperator to alter or modify the enrolled property, even if such alteration or modification results in the incidental take of Arkansas fatmucket, pink mucket, spectaclecase, rabbitsfoot and Harperella and their habitats to such an extent that the take returns the Arkansas fatmucket, pink mucket, spectaclecase, rabbitsfoot and Harperella habitats to the originally agreed upon baseline conditions. These assurances may apply to the entire enrolled property or to portions of the enrolled property as designated or otherwise specified in the POMA. These assurances are also contingent on the Cooperator’s compliance with the obligations of the Agreement and affected POMA. Further, the assurances apply only if the Agreement and/or affected POMA(s) is (are) being properly implemented, and only with respect to covered species.

Pursuant to 50 C.F.R. §§ 17.22(c)(5) and 17.32(c)(5), where this Agreement and a POMA are being properly implemented and only as to the species covered by the POMA and the Certificate of Inclusion, FWS and TNC and AGFC may agree to revise or modify the management measures

## **Attachment 4**

### **Safe Harbor Assurances to the AGFC, TNC and Cooperators**

set forth in this Agreement if the Service determines that such revisions or modifications do not change the Service's prior determination that this Agreement is reasonably expected to provide a net conservation benefit to the Covered Species. The Service may not, however, require additional or different management activities to be authorized by TNC and AGFC without their consent. Similarly, the Service and a Cooperator may agree to revise or modify the management measures set forth in a POMA if the Service determines that such revisions or modifications do not change the Service's prior determination that the POMA is reasonably expected to provide a net conservation benefit to the Covered Species. The Service may not require, however, additional or different management activities to be undertaken by the Cooperator without the Cooperator's consent.

## **Attachment 5**

### **Candidate Conservation Agreement**

#### **Assurances to the AGFC, TNC and Cooperators**

The assurances listed below apply to the AGFC, TNC and/or affected Cooperator(s). The assurances apply only where the enhancement of survival permit associated with the CCAA authorities and the CCAA element of the Agreement are being properly implemented and only with respect to species adequately covered by the CCAA.

(1) Changed circumstances provided for in the CCAA. If additional management activities are necessary to respond to changed circumstances and the measures were set forth in the operating conservation program of the Cooperator's Property Owner Management Agreement (POMA), the Cooperator and the Parties will implement the measures specified in the affected POMA(s).

(2) Changed circumstances not provided for in the CCAA. If additional management activities not provided for in the POMA's operating conservation program are necessary to respond to changed circumstances, the FWS will not require any management activities in addition to those provided for in the POMA without the consent of the Cooperator.

(3) Unforeseen circumstances. (A) If additional management activities are necessary to respond to unforeseen circumstances, FWS may require additional measures of the Cooperator and/or Parties, but only if such measures are limited to modifications within the POMA's management activities and programs for the affected species, and only if those measures maintain the original terms of the CCAA elements of the Agreement and the POMA to the maximum extent possible. Additional management activities will not involve the commitment of additional land, water, or financial compensation, or additional restrictions on the use of land, water, or other natural resources available for development or use under the original terms of the CCAA and/or POMA without the consent of the affected Cooperator and other affected Party(ies).

FWS will have the burden of demonstrating that unforeseen circumstances exist, using the best scientific and commercial data available. These findings must be clearly documented and based upon reliable technical information regarding the status and habitat requirements of the affected species. FWS will consider, but not be limited to, the following factors: (1) Size of the current range of the affected species; (2) Percentage of range adversely affected; (3) Percentage of range conserved; (4) Ecological significance of that portion of the range affected; (5) Level of knowledge about the affected species and the degree of specificity of the species' conservation program; and (6) Whether failure to adopt additional management activities would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

**Attachment 5**  
**Candidate Conservation Agreement**  
**Assurances to the AGFC, TNC and Cooperators**

**Attachment 6**

**Cooperator/Landowner Waiver to Release Information to Other Parties**

I do hereby grant permission to release all personal information, status review information, compliance and biological monitoring information, and any other pertinent information pertaining to my responsibilities as specified in the *Programmatic Safe Harbor Agreement and Candidate Conservation Agreement with Assurances for the Arkansas Fatmucket, Pink Mucket, Spectaclecase, Rabbitsfoot, Harperella and Twenty Other Species of Greatest Conservation Need in the upper Saline, Caddo, and Ouachita Headwaters Watersheds, Arkansas* and the associated Property Owner Management Agreement to Natural Resources Conservation Service, Arkansas Game and Fish Commission, U. S. Fish and Wildlife Service, and The Nature Conservancy. Such information may be subject to The Privacy Act of 1974, as amended (5 U. S. C. subsection 552a), or other applicable laws otherwise protected by the terms of the aforementioned agreement.

\_\_\_\_\_

Cooperator Name

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

*DRAFT*

## Attachment 7

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