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**DEPARTMENT OF THE INTERIOR**

**Fish and Wildlife Service**

**[FWS–R4–ES–2016–N124; FXES1130400000C2–167–FF04E00000]**

**Endangered and Threatened Wildlife and Plants; Final Recovery Plan for the Laurel Dace**

**AGENCY:** Fish and Wildlife Service, Interior.

**ACTION:** Notice of availability.

**SUMMARY:** We, the Fish and Wildlife Service (Service), announce the availability of the final recovery plan for the endangered laurel dace, a small fish native to the Tennessee River Basin in Tennessee. The recovery plan includes specific recovery objectives and criteria that must be met in order for us to downlist the fish to threatened status or delist it under the Endangered Species Act of 1973, as amended.

**ADDRESSES:** You may obtain a copy of the recovery plan from our website at <http://www.fws.gov/angered/species/recovery-plans.html> or the Tennessee Field Office website at <http://www.fws.gov/cookeville>. You may also request a copy of the recovery plan by contacting Geoff Call, by U.S. mail at U.S. Fish and Wildlife Service, Tennessee Field Office, 446 Neal Street, Cookeville, TN 38501 (telephone 931-525-4983).

**FOR FURTHER INFORMATION CONTACT:** Geoff Call (see **ADDRESSES**).

**SUPPLEMENTARY INFORMATION:**

**Background**

*Recovery Plans Under the Endangered Species Act*

Recovery of endangered or threatened animals and plants to the point where they are again secure, self-sustaining members of their ecosystems is a primary goal of our endangered species program and the Endangered Species Act of 1973, as amended (Act; 16 U.S.C. 1531 *et seq.*). Recovery means improvement of the status of listed species to the point at which listing is no longer needed under any criteria specified in section 4(a)(1) of the Act. To help guide the recovery effort, we prepare recovery plans for most listed species. Recovery plans describe actions considered necessary for conservation of the species, establish criteria for downlisting or delisting, and estimate time and cost for implementing recovery measures. The Act requires the development of recovery plans

for listed species, unless such a plan would not promote the conservation of a particular species.

### ***About the Species***

We listed the laurel dace (*Chrosomus saylori*) as an endangered species under the Act on August 9, 2011 (76 FR 48722), and designated critical habitat for the species on October 16, 2012 (77 FR 63604). The laurel dace is a small fish native to the Tennessee River Basin in Tennessee. This fish, from the family Cyprinidae, is found or collected from pools or slow runs from undercut banks or under slab boulders in headwater tributaries. The vegetation surrounding the first or second order streams where laurel dace occur includes mountain laurel, rhododendron, and hemlocks.

Historically, laurel dace is known from seven streams, and it currently occupies six of these, in three creek systems on the Walden Ridge of the Cumberland Plateau. Only a few individuals have been collected from headwaters of the two creek systems in the southern part of their range, Soddy and Sale Creeks, although laurel dace are more abundant in headwaters of the Piney River system in their northern range. Threats to the laurel dace include land use activities that affect silt levels, temperature, or hydrologic processes of these small tributaries; invasive species, including sunfishes, basses, and hemlock woolly adelgid; the species' naturally small population size and geographic range; and climate change.

### **Recovery Plan Development**

Section 4(f) of the Act requires us to provide public notice and an opportunity for public review and comment prior to final approval of recovery plans. We and other Federal agencies will take these public comments into account in the course of implementing approved recovery plans.

The Technical/Agency Draft Recovery Plan for the Laurel Dace was developed by the Tennessee Field Office. This draft plan was published on January 14, 2015, and made available for public comment through March 16, 2015 (79 FR 1933). We received no comments from the general public on the draft plan.

The Service also asked four peer reviewers to review and provide comments on the draft plan. We received comments from all four peer reviewers: Dr. J. Brian Alford of University of Tennessee, Dr. Hayden T. Mattingly of Tennessee Tech University, Dr. Christopher E. Skelton of Georgia College and State University, and Mr. Mark Thurman of the Tennessee Wildlife Resources Agency. All of the peer reviewers offered general support and praise for the draft plan. For a summary of our responses to peer review comments, see Appendix A in the final recovery plan. We considered the information we received from peer reviewers in our preparation and approval of this final recovery plan. Specifically, we made a slight modification to recovery criteria (see below) by adding the clarification of 500 individuals in the definition of a viable population. We also adjusted budgets of recovery actions in the implementation schedule.

## **Recovery Plan Components**

### ***Objectives for Reclassification to Threatened and Delisting***

The goal of this recovery plan is to conserve populations of laurel dace and enable the species to recover to the point that listing under the Act is no longer necessary. Because recovery and delisting will take a long time to achieve, and may be unachievable, an intermediate goal of this recovery plan is to reduce threats to the point that the species could be reclassified from endangered to threatened.

#### *Reclassification to Threatened*

Reclassification of the laurel dace to threatened status will be possible when habitat conditions in occupied streams are suitable for the conservation of the species, and viable populations are present throughout suitable habitat in five of the six currently occupied streams.

#### *Delisting*

In order for the laurel dace to recover to the point that listing under the Act is no longer necessary, it will be necessary to conserve all existing populations by maintaining, and in some cases restoring, suitable habitat conditions in all streams where the species currently occurs. It will also be necessary to discover or establish one additional population.

#### ***Criteria for Reclassification from Endangered to Threatened or Delisting***

The following criteria will be used to determine whether the objectives for reclassification and delisting described above have been met. The criteria will be achieved by reducing or removing threats to the species' habitat and conserving or

establishing viable populations throughout the species' range, as determined by monitoring of demographic and genetic parameters.

#### Criteria for Reclassification from Endangered to Threatened

*Criterion 1:* Suitable instream habitat, flows, and water quality for laurel dace, as defined by Recovery Tasks in the recovery plan, exist in occupied streams.

*Criterion 2:* Viable populations\* are present throughout suitable habitat in Bumbee, Moccasin, and Youngs Creeks, and at least two of the following streams: Soddy Creek, Cupp Creek or Horn Branch.

#### Criteria for Delisting

*Criterion 1:* Suitable instream habitat, flows, and water quality for laurel dace exist in all occupied streams, and mechanisms exist to ensure that land use activities (including road maintenance) in catchments of streams inhabited by laurel dace will be compatible with the species' conservation for the foreseeable future. Such mechanisms could include, but are not necessarily limited to, conservation agreements, conservation easements, land acquisition, and habitat conservation plans.

*Criterion 2:* Viable populations\* are present throughout suitable habitat in Bumbee, Moccasin, Youngs, Soddy, and Cupp Creeks and Horn Branch, and one additional viable population, created either through reintroduction into Laurel Branch or by discovery of an additional wild population.

\*Populations will be considered viable when the following demographic and genetic conditions exist:

- Demographics – Monitoring data demonstrate that (a) populations are stable or increasing, (b) average census size is at least 500 individuals and two or more age-classes are consistently present over a period of time encompassing five generations (i.e., 15 years), and (c) evidence of recruitment is not absent in more than 3 years or during consecutive years at any point within that period of time.
- Genetics – Populations will be considered to have sufficient genetic variation to be viable if measurements of observed number of alleles and estimates of heterozygosity and effective population size have remained stable or increased during the five generations used to establish demographic viability.

**Authority**

The authority for this action is section 4(f) of the Endangered Species Act, 16 U.S.C. 1533 (f).

**Dated: August 22, 2016.**

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**Mike Oetker,**  
**Acting Regional Director, Southeast Region.**

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