U.S. FISH AND WILDLIFE SERVICE SPECIES ASSESSMENT AND LISTING PRIORITY ASSIGNMENT FORM

Scientific Name:

Physaria globosa

Common Name:

Short's bladderpod

Lead region:

Region 4 (Southeast Region)

Information current as of:

04/06/2012

Status/Action

___ Funding provided for a proposed rule. Assessment not updated.

___ Species Assessment - determined species did not meet the definition of the endangered or threatened under the Act and, therefore, was not elevated to the Candidate status.

___ New Candidate

_X_ Continuing Candidate

___ Candidate Removal

> ___ Taxon is more abundant or widespread than previously believed or not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status
>
> ___ Taxon not subject to the degree of threats sufficient to warrant issuance of a proposed listing or continuance of candidate status due, in part or totally, to conservation efforts that remove or reduce the threats to the species
>
> ___ Range is no longer a U.S. territory
>
> ___ Insufficient information exists on biological vulnerability and threats to support listing
>
> ___ Taxon mistakenly included in past notice of review
>
> ___ Taxon does not meet the definition of "species"
>
> ___ Taxon believed to be extinct
>
> ___ Conservation efforts have removed or reduced threats

___ More abundant than believed, diminished threats, or threats eliminated.

Petition Information

___ Non-Petitioned

_X_ Petitioned - Date petition received: 05/11/2004

90-Day Positive:05/11/2005

12 Month Positive:05/11/2005

Did the Petition request a reclassification? **No**

For Petitioned Candidate species:

Is the listing warranted(if yes, see summary threats below) **Yes**

To Date, has publication of the proposal to list been precluded by other higher priority listing? **Yes**

Explanation of why precluded:

Higher priority listing actions, including court-approved settlements, court-ordered and statutory deadlines for petition findings and listing determinations, emergency listing determinations, and responses to litigation, continue to preclude the proposed and final listing rules for this species. We continue to monitor populations and will change its status or implement an emergency listing if necessary. The Progress on Revising the Lists section of the current CNOR (http://endangered.fws.gov/) provides information on listing actions taken during the last 12 months.

Historical States/Territories/Countries of Occurrence:

- **States/US Territories**: Indiana, Kentucky, Tennessee
- **US Counties**:County information not available
- **Countries**:Country information not available

Current States/Counties/Territories/Countries of Occurrence:

- **States/US Territories**: Indiana, Kentucky, Tennessee
- **US Counties**: Posey, IN, Anderson, KY, Bourbon, KY, Clark, KY, Fayette, KY, Franklin, KY, Jessamine, KY, Madison, KY, Mercer, KY, Powell, KY, Scott, KY, Woodford, KY, Cheatham, TN, Davidson, TN, Dickson, TN, Jackson, TN, Montgomery, TN, Smith, TN, Trousdale, TN
- **Countries**:Country information not available

Land Ownership:

Most of the sites where Physaria globosa occurs are privately owned or are located within state and county road rights-of way. Exceptions to this include: two Tennessee sites occupy lands managed by the U.S. Army Corps of Engineers; one Tennessee site is situated on state-owned lands; and the lone Indiana site occupies land owned by the Indiana Department of Natural Resources. A review of land ownership for this species, based on recent natural heritage inventory data, is needed.

Lead Region Contact:

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Lead Field Office Contact:

TENNESSEE ESFO, Geoff Call, 931-528-6481, geoff_call@fws.gov

Biological Information

Species Description:

Short's bladderpod plants are 3 to 5 decimeters tall and have yellow flowers that appear March through May. The leaves are 1.5 to 3 centimeters (cm) long, 0.2 to 0.6 cm wide, gray-green in color, and densely hairy. The fruits develop soon after flowering and are round, small (0.2 to 0.27 cm in diameter), and become slightly hairy as they mature. These round fruits readily distinguish Short's bladderpod from other members of the genus Lesquerella (now Physaria) and from other genera in the family such as Brassica and Barbarea (Shea 1993, page 6).

Taxonomy:

A member of the mustard family (Brassicaceae), Short's bladderpod was first described as Vesicaria globosa by Desvaux in 1814 (Payson 1922, pages 103-236). Because of several distinctive characters, Watson (1888) proposed that the American species of the genus Vesicaria be placed in the genus Lesquerella (Watson 1888, pages 249-252). This treatment was recognized as valid, until Al-Shehbaz and O'Kane (2002 entire) reunited most of the genus Lesquerella with the genus Physaria, which was originally described in Torrey and Gray (1838 in Al-Shehbaz and O'Kane 2002, p. 319) as a section of the Old World genus Vesicaria and later elevated to generic status by Gray (1848 in Al-Shehbaz and O'Kane 2002, p. 319). This determination was supported by multiple lines of evidence, as Al-Shehbaz and O'Kane (2002, p. 320) concluded that molecular, morphological, cytological, biogeographic, and ecological data all supported reuniting the genus Lesquerella with Physaria. The Flora of North America (http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=250095135, accessed on April 20, 2011) recognizes this change, using the scientific name Physaria globosa for Short's bladderpod.

Habitat/Life History:

Physaria globosa is a perennial that grows on steep, rocky, wooded slopes and talus areas. It also occurs along cliff tops and bases and cliff ledges. The species usually is found adjacent to rivers or streams and on south- to west-facing slopes. Most populations are closely associated with calcareous outcrops (Shea 1993, page 16). The Indiana population is found within the Shawnee Hills Section of the Interior Low Plateaus Physiographic Province. The Kentucky populations are found within the Bluegrass Section of this Province. The Tennessee populations occur within the Highland Rim and Central Basin sections of the Interior Low Plateaus Province (Fenneman 1938, pages 411-448); Quarterman and Powell 1978, page 30).

Historical Range/Distribution:

Physaria globosa historically occurred in the following states and counties:
• Indiana - Posey
• Kentucky – Bourbon, Clark, Franklin, Scott
• Tennessee - Cheatham, Davidson, Dickson, Jackson, Montgomery, Smith, Trousdale

Current Range Distribution:

Physaria globosa is currently known to occur in the following states and counties:
• Indiana - Posey
• Kentucky – Bourbon, Clark, Franklin, Scott
• Tennessee - Cheatham, Davidson, Dickson, Jackson, Montgomery, Smith, Trousdale

Population Estimates/Status:

Historically, there were at least 57 sites supporting Short's bladderpod. Of these 57 sites, only 29 apparently are extant. All remaining populations are small and vulnerable to extirpation.
Populations vary in size from 2 to about 1,500 individuals; most contain fewer than 50 plants. In a 1992 status survey for Short's bladderpod, Shea (1993, pages 6-15) reported that there were records of 50 sites that supported or historically supported this species. Of these 50 occurrences, only 26 were found to be extant during her survey. The remaining 24 records were from sites from which the species had been extirpated, or insufficient information was available for the sites to be relocated during the survey. In 1993, Indiana supported one population of the species, Kentucky supported 14 populations, and Tennessee supported 11 populations.

In 1998, the Tennessee Department of Environment and Conservation (TDEC) conducted extensive searches for additional populations of Short's bladderpod and revisited most of the previously known sites. Shea (1999) reported that these searches revealed the presence of 7 new sites in Tennessee. Occurrences at these new sites varied in size from 3 to 60 plants. In 1998, there were a total of 18 known locations for Short's bladderpod in six Tennessee counties. Cheatham County had six sites. The two largest known populations occurred in Cheatham County; one of these large sites contained 1,000 plants, and the other contained 1,500 plants. The remaining 4 populations had 6, 6, 7, and 50 plants, respectively. Davidson County had four sites that supported the species, which varied in size from 13 to 50 plants. Jackson County had three locations supporting Short's bladderpod, which contained 3, 5, and 50 plants, respectively. Montgomery County had 2 populations, one of which contained 10 plants and the other had 21 plants. Smith County also had 2 populations, one of which had 10 plants and the other had 30 plants. Trousdale County only supported one population, which contained 100 to 150 plants in 1998. Estimates of the 1998 population levels for all of the known Tennessee sites were provided by Andrea Shea (1999, pers. com.). Lincicome (2004, 2005 and 2007) reported no change in the species' status in Tennessee.

Tennessee Department of Environment and Conservation (TDEC) (2009, p. 1) monitored 17 extant Short's bladderpod occurrences during 2008, including a new one discovered in Dickson County, and found the following: there were three A-ranked occurrences with more than 1,000 plants, one AB-ranked with more than 1,000 plants in disturbed habitat, one B-ranked with 1,000 plants in poor habitat, five C-ranked with 300 or less plants, two CD-ranked with 50 or less plants, and five D-ranked with less than 30 plants. Extant occurrences exist along the Cumberland River in three different USCOE reservoirs in Cheatham, Davidson, Montgomery, Trousdale, Jackson and Smith Counties, and on the Harpeth River at the confluence with Cumberland River in the Cheatham Reservoir. TDEC surveyed most of these occurrences by boat with assistance from USCOE. The one new occurrence found on the Harpeth River in Dickson County was discovered by boat on the exposed limestone bluffs. These plants are on shaley ledges of the high bluff and probably cannot be accessed by foot. Seven clumps were seen from the boat but there could be more on the "non-exposed" portions of the bluff.

TDEC (2009, p. 1) reports that prior site visits or surveys for Physaria globosa were done in 1992-1993 and 1998. Since these surveys 10 to 16 years ago, the numbers of plants have increased at eight occurrences, remained stable at six occurrences, and decreased at two occurrences. One explanation for the increase in numbers could be that the counts or estimates of plants in 2008 were more thorough with more area of the sites explored. The plants are adapted to disturbed habitat and at the occurrences where open, disturbed

habitat remains, populations appear stable. One new site was found in 2008. Five occurrences could not be relocated; three have not been seen in 10 years and two have not been seen in 16 years, due mostly to overgrown or unsuitable habitat.

Shea (1993, pages 7-8) and White (1999, pers.com.) reported that Kentucky supported 14 Short's bladderpod sites. In 1992, these sites varied in size from 2 to 118 individual plants, and in 1998 they varied from 2 to 237 plants. One population in Bourbon County, Kentucky, had 118 plants in 1992 and 98 plants in 1998. Clark and Scott Counties each have one site, both of which supported only 2 plants in 1992. Franklin County contains 11 Short's bladderpod populations that vary in size from 4 plants to 237 plants. The majority of Franklin County sites (7 of 11) contain fewer than 50 plants. In 1998, the KSNPC developed site conservation plans for five of the Kentucky populations. These sites were chosen for conservation plan development because they were believed to be the highest quality sites remaining in Kentucky (White 1999, pers. com.).

White (2005, pers. com.) stated that surveys conducted since 1999 resulted in the discovery of 2 new occurrences, 10 previously documented locations could not be relocated and were considered extirpated. Additional surveys conducted at 12 Kentucky sites during 2010 produced no new locations for Short's bladderpod (White 2011, pers. com.). White (2012, pers. com.) reports only 8 extant occurrences remain in Kentucky as of 2011, and that low numbers were observed at sites visited during 2011.

Homoya (1999, pers. com.) reported that despite searches for additional Indiana populations of Short's bladderpod, the species is restricted to only one site in Indiana. This population is owned by the Indiana Department of Natural Resources (IDNR) and grows on a clay bank adjacent to a periodically flooded gravel road. This flooding necessitates regular road grading in order to remove debris deposited during flood events. Homoya (2005, pers. com.) stated that the species had not been observed at the Indiana location that year and that habitat management needed to be implemented at the site. In late 2006, IDNR brush-cut and mowed this site, exposing small areas of mineral soil in an attempt to release a seed bank for Short's bladderpod and return the species to the area. On May 18, 2007, seedlings were observed at the site. The site was flooded in early April 2008 by overflow from the Wabash River. The flooding deposited some woody debris, as well as breaking off the upper portions of the stems of many of the plants. Nonetheless, the plants sprouted axillary shoots and flowered, albeit at a later date (early to mid -May) than normal (mid- to late April). The population was estimated at over 100 flowering individuals, a definite increase in plants compared to the years just prior to management. In 2009, between 50-75 flowering plants were estimated as present at the site (Homoya 2009, pers. com.). During 2010, thousands of seedlings were observed at this site in areas that were intentionally scraped by heavy equipment in 2009; though few reproductively active plants were observed. The site was mowed in 2010 to reduce the vigor of associated species (Homoya 2011, pers. com.). This population was subjected to prolonged flooding during the 2011 growing season, and no plants were found during post-flood surveys (Bacone 2012, pers. com.).

Threats

A. The present or threatened destruction, modification, or curtailment of its habitat or range:

Road construction and road maintenance have played a significant role in the decline of Physaria globosa. During Shea's 1992 status survey for this species (Shea 1993, page 22), she observed at least three sites that had been lost or drastically reduced by road construction or maintenance activities. She also noted that road maintenance remains a threat at most of the sites. In the introduction to site conservation plans developed by KSNPC for the highest quality Kentucky sites, White (not dated) stated that, with only one exception, all of

the sites are roadside occurrences that are no longer part of naturally functioning ecosystems. She also stated that most occur as small roadside remnants of natural cliffline or rock outcrops; consequently, her management recommendations for these sites concentrate on implementing roadside maintenance activities in a manner compatible with the protection of Short's bladderpod. In Tennessee, Element occurrences (EO) that could be affected due to road maintenance activities include: Trousdale Co. EO3, Davidson EO10 and EO4 (A-ranked occurrences), Cheatham Co. EO15, EO22, Smith Co. EO20. EO15 is located next to Montgomery Bridge on a bluff adjacent to the roadway (Tennessee Department of Environment and Conservation 2009, p. 3). Specific activities that have impacted the species in the past and continue to threaten it include bank stabilization, herbicide use, mowing during the growing season, grading of road shoulders, and road widening or repaving. Sediment deposition during road maintenance or from land disturbing activities adjacent to the sites supporting the species also potentially threatens many populations. These activities continue to affect many populations; though it is possible that road maintenance activities, if properly timed and implemented, could help to maintain conditions that enable Short's bladderpod to persist in these marginal habitats.

Tennessee Department of Environment and Conservation (2009, p. 4) provided information on another possible transportation related threat to Tennessee populations. Several sites in Cheatham County occur along the Cumberland River near a designated greenway located on the old railroad bed, as well as within the right-of-way of the inactive railroad corridor between Nashville and Clarksville. At the McMinns Bluff site, the Physaria globosa plants are located along River Road (Old State Route 12) that parallels this railroad (which is adjacent to the river). The railroad was abandoned many years ago but sections of it are still being maintained by the owner with herbicides and tree clearing equipment. There is currently a feasibility study being conducted of this railroad corridor for a possible commuter rail system. There are also P. globosa plants growing within the railroad corridor. This species thrives in disturbed areas and if the railroad is abandoned and there is no disturbance, there will be competition from other woody and herbaceous plants. On the other hand, if the railroad becomes active again there will be greater maintenance pressures which could threaten the existence of P. globosa at several sites. EOs that could be affected include: Montgomery Co. EO2, EO13 and EO28 (all failed to find in 2008); Cheatham and Davidson Counties EO17, EO30, EO1, EO10, EO4 and EO9 (not found in 2008). Three of these occurrences in Cheatham Co. are A- and B-ranked, probably the largest sites for the entire species.

Shea (1993, pages 22, 23) noted that impoundments and artificial water level manipulation threatened and, in a case along the Cumberland River, have destroyed sites supporting the species. Many Short's bladderpod locations are adjacent to rivers and streams, and impoundment and water level manipulation still threaten the species. In Tennessee, almost all of the Physaria globosa locations are adjacent to the impounded Cumberland River and its tributaries thus water level manipulation is a possible threat. EOs that could be affected include: Montgomery Co. EO12, Trousdale Co. EO3, Smith Co. EO20, EO24, Jackson Co. EO25 (did not find in 2008), EO26, and EO27 (Tennessee Department of Environment and Conservation 2009, p. 3). However, we are not aware of any proposed changes in management of these aquatic systems that would threaten Short's bladderpod populations by manipulating water levels and inundating occupied habitats.

Activities such as commercial and residential construction potentially threaten the species at several sites. These threats can be direct in the form of actual loss due to construction, or indirect in the form of severe habitat alteration from sediment runoff from areas disturbed during construction.

Despite the threats listed above, typical for plants occurring in disturbed habitats such as roadsides, the viability of 10 of the 22 occurrences observed during 2008 in Tennessee were rated as fair or better. This indicates the magnitude of such threats is moderate. Efforts undertaken in 2006 to restore suitable habitat conditions at the Indiana site, located on land owned and managed by the Indiana Department of Natural Resources, apparently have shown early signs of success (Homoya 2007, 2008, 2009 pers. com.). While threats associated with roadside maintenance activities and invasive plant encroachment are imminent, these threats are of moderate magnitude.

B. Overutilization for commercial, recreational, scientific, or educational purposes:

Although there is little or no commercial trade in Short's bladderpod at this time, inappropriate collecting for scientific purposes or as a novelty would be a threat to the species as most populations are very small and cannot support collection of plants for scientific or other purposes. However, we have no information to suggest that this threat is either imminent or of significant magnitude at this time.

C. Disease or predation:

Disease and predation are not known to be factors affecting the continued existence of the species at this time.

D. The inadequacy of existing regulatory mechanisms:

The Tennessee Rare Plant Protection and Conservation Act of 1985 (T.C.A. 11-26-201) forbids persons from knowingly uprooting, digging, taking, removing, damaging, destroying, possessing, or otherwise disturbing for any purpose, any endangered species from private or public lands without the written permission of the landowner. The species is listed as endangered in Indiana. Although this listing does not provide legal protection for the species, listed species are given special consideration when planning government funded projects. Additionally, the Indiana site is located on land owned by the IDNR where collection or damage to plants is prohibited. The species does not receive any State protection in Kentucky.

Because Physaria globosa receives no protection under state law in Kentucky, and the Indiana and Tennessee state laws protecting plants do not forbid destruction of plants on private lands with landowner consent, we conclude that inadequacy of existing regulatory mechanisms is a threat to the species.

E. Other natural or manmade factors affecting its continued existence:

Invasive, nonnative vegetation is a threat at many sites. White (not dated) listed invasive plants as a major threat at all five of the sites for which she prepared management plans. This exotic vegetation was also noted as a threat by Shea (1993, page 24) in her assessment of the species' status. Invasive plants that have been identified as potential threats to Short's bladderpod include Lonicera japonica (Japanese honeysuckle), Alliaria petiolata (garlic mustard), Trifolium hybridum (alsike clover), Melilotis alba (sweet clover), Festuca pratensis (fescue), Rosa multiflora (multiflora rose) and Camassia scilloides (wild hyacinth). These plants have often been planted as ornamentals, as cultivated plants, or for erosion control; once established, they often become quite aggressive and displace native vegetation.

Other threats listed by Shea (1993, page 24), Homoya (2005, pers. com.), and White (not dated) include trash dumping, cattle and goat grazing, shading from overstory trees, and competition and shading from herbaceous perennials. We do not have current information regarding the imminence or magnitude of these threats to Physaria globosa populations.

Conservation Measures Planned or Implemented :

The KSNPC has developed site conservation plans for the five highest quality sites remaining in Kentucky. Cedars have been removed at one site, and Recovery Land Acquisition Funds (Section 6) were used to purchase another site. This property was dedicated by KSNPC as Rivercliffs SNP in 2006. Close investigation of the site revealed that plants on and adjacent to the property extended over a larger area than was previously known (White 2008, pers. com.). Seeds from one Kentucky population have been deposited with the Center for Plant Conservation for long-term storage (White 2007, pers. com.). The TDEC has

conducted extensive searches for additional populations of Short's bladderpod, but it has not taken any actions to protect known sites for the species. Bishop (2009) reported that all of the known Tennessee sites were visited during the 2008 status survey; the species is still extant at 21 previously known locations and an additional population of the species was discovered in Dickson County, Tennessee. Therefore, there are currently 22 extant occurrences in Tennessee. The Indiana site is on land owned and managed by the IDNR, which brush-cut and mowed the habitat in late 2006, exposing small areas of mineral soil in an attempt to release a seed bank for Short's bladderpod and return the species to the area. The Indiana population responded favorably to this treatment as discussed above. Heavy equipment was used to scrape areas of this site in 2009, which promoted the germination of thousands of seedlings during 2010 (Homoya 2011, pers. com.).

The IDNR (Bacone1999, pers. com), the KSNPC (White 1999, pers. com) and TDEC (Shea 1999, pers. com) all supported the elevation of Short's bladderpod to candidate status and the eventual federal listing of the species as endangered or threatened. The Nashville District Corps of Engineers was aware of the elevation of Short's bladderpod to candidate status, and they anticipated that they would be able to provide any management that is needed to protect the species on lands under their control. Region 3 of the Service supported the elevation of Short's bladderpod to federal candidate status.

Summary of Threats :

Road construction and road maintenance activities have played a significant role in the decline of Physaria globosa. Specific activities that have impacted the species in the past and continue to threaten it in some locations include bank stabilization, herbicide use, mowing during the growing season, grading of road shoulders, and road widening or repaving. Sediment deposition during road maintenance or from other activities also potentially threatens the species. Interruption of natural processes that maintained habitat suitability and competition from invasive, nonnative vegetation necessitates active habitat management at many locations. We find that this species is warranted for listing throughout all its range, and, therefore, find that it is unnecessary to analyze whether it is threatened or endangered in a significant portion of its range.

For species that are being removed from candidate status:

_____ Is the removal based in whole or in part on one or more individual conservation efforts that you determined met the standards in the Policy for Evaluation of Conservation Efforts When Making Listing Decisions(PECE)?

Recommended Conservation Measures :

Conservation measures are being implemented to protect the species in all three states as outlined in earlier sections. All three states where the species is currently found supported the elevation of the Short's bladderpod to candidate status and the eventual federal listing as threatened or endangered. In an effort to abate threats posed by roadside maintenance activities, the Service and state conservation agencies should work with local highway departments and others responsible for roadside management to develop maintenance regimes that also maintain suitable conditions for Short's bladderpod. We also should engage the Tennessee Native Plant Society in this effort, as they have held workshops with Tennessee Department of Transportation to promote sustainable roadside management practices that are compatible with native plant conservation.

Priority Table

Magnitude	Immediacy	Taxonomy	Priority
High	Imminent	Monotypic genus	1
		Species	2
		Subspecies/Population	3
	Non-imminent	Monotypic genus	4
		Species	5
		Subspecies/Population	6
Moderate to Low	**Imminent**	Monotypic genus	7
		Species	**8**
		Subspecies/Population	9
	Non-Imminent	Monotype genus	10
		Species	11
		Subspecies/Population	12

Rationale for Change in Listing Priority Number:

Magnitude:

Road construction and road maintenance have played a significant role in the decline of Physaria globosa. Many of the sites supporting the species are roadside occurrences that are no longer part of naturally functioning ecosystems. Most occur as small roadside remnants of natural cliffline or rock outcrops. Specific activities that have impacted the species in the past and continue to threaten it in some locations include bank stabilization, herbicide use, mowing during the growing season, grading of road shoulders, and road widening or repaving. Many of the Short's bladderpod locations are adjacent to rivers and streams, and impoundment and water level manipulation would threaten the species. Invasive nonnative vegetation is a threat at many sites. Activities such as commercial and residential construction potentially threaten the species at several sites. These threats can be direct in the form of actual loss due to construction, or indirect in the form of severe habitat alteration from sediment runoff from areas disturbed during construction. Other threats to the species include trash dumping, cattle and goat grazing, shading from overstory trees and shading from herbaceous perennial plants.

Despite the threats listed above that are typical for plants occurring in disturbed habitats such as roadsides, the viability of 10 of the 22 occurrences observed during 2008 in Tennessee were rated as fair or better, suggesting that the magnitude of such threats is moderate. Efforts undertaken in 2006 to restore suitable habitat conditions at the Indiana site, located on land owned and managed by the IDNR, apparently have shown early signs of success (Homoya 2007, 2008, pers. com.); however, no plants were observed at this site during 2011 following prolonged growing season flooding of the bladderpod habitat (Bacone 2012, pers. com.). While threats associated with roadside maintenance activities and habitat alterations by invasive plant encroachment are imminent, these threats are of moderate magnitude. Threats associated with manipulation of water levels are low to moderate in magnitude due to the proportion of occurrences potentially affected.

Imminence :

Threats associated with manipulation of water levels are not ongoing but the threats of habitat destruction or degradation due to incompatible roadside maintenance practices and invasive plant encroachment are ongoing, and therefore, imminent.

__Yes__ Have you promptly reviewed all of the information received regarding the species for the purpose of determination whether emergency listing is needed?

Emergency Listing Review

__No__ Is Emergency Listing Warranted?

The species is rare and threats are imminent. However, the threats have a slow and gradual effect on the populations, and are only moderate in magnitude. Therefore, an emergency listing is unnecessary.

Description of Monitoring:

The IDNR, KSNPC and TDEC monitor sites supporting the species when possible. Funds specifically designated for monitoring were provided to KSNPC in FY2004 and to TDEC in FY2007, which supported monitoring in Tennessee during 2008.

Indicate which State(s) (within the range of the species) provided information or comments on the species or latest species assessment:

Indiana,Kentucky,Tennessee

Indicate which State(s) did not provide any information or comment:

none

State Coordination:

All states in the species' range have reviewed and provided input for the 2012 update of the candidate assessment for *Physaria globosa*.

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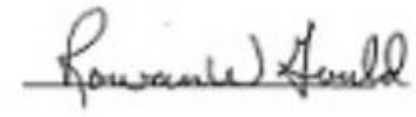
Approval/Concurrence:

Lead Regions must obtain written concurrence from all other Regions within the range of the species before recommending changes, including elevations or removals from candidate status and listing priority changes; the Regional Director must approve all such recommendations. The Director must concur on all resubmitted 12-month petition findings, additions or removal of species from candidate status, and listing priority changes.

Approve:  06/12/2012
Date

Concur:  11/06/2012
Date

Did not concur: _____ _____
Date

Director's Remarks: