

**UPDATE:**  
**REPORT ON THE CONSERVATION STATUS OF**  
***HOWELLIA AQUATILIS* IN IDAHO**

by

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**Idaho Department of Fish and Game**  
**Natural Resource Policy Bureau**  
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**Status Survey Report prepared for**  
**Idaho Department of Parks and Recreation**  
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**U.S. Fish and Wildlife Service, Region 1**

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*HOWELLIA AQUATILIS* IN IDAHO**

<b>Taxon Name:</b>	<i>Howellia aquatilis</i> A. Gray
<b>Common Name:</b>	Water howellia
<b>Family:</b>	Campanulaceae
<b>States Where Taxon Occurs:</b>	U.S.A.; Idaho, Montana, Washington, historical in California, Oregon
<b>Current Federal Status:</b>	Listed Threatened
<b>Recommended Federal Status:</b>	No change
<b>Author of Report:</b>	Robert J. Bursik
<b>Original Date of Report:</b>	Shelly and Moseley 1988
<b>Date of Most Recent Revision:</b>	This is the first revision.
<b>Individual to Whom Further Information and Comments Should be Sent:</b>	Robert K. Moseley Conservation Data Center Idaho Dept. Fish and Game P.O. Box 25 Boise, ID 83707

## SUMMARY

*Howellia aquatilis* (water howellia) was listed as Threatened under the Endangered Species Act in 1994. During 1993 and 1994, new surveys in eastern Washington, adjacent to the Idaho panhandle, revealed several vernal ponds containing previously-unknown populations. Also, since the original Idaho survey was done in 1988, considerably more information has been collected throughout the range of water howellia and habitat characteristics are better understood. For these reasons, it was felt that further surveys would be worthwhile in Idaho.

Unlike Washington, however, no new populations of water howellia were discovered, even after an extensive search of aquatic habitats in Idaho, north of the St. Maries River. This updated status survey reports on the field work, gives an updated overview of past threats and possible reasons why no populations were found, and possible recovery actions in Idaho.

## **I. Species Information.**

- 1. Classification and nomenclature.** Not revised.
- 2. Present legal or other formal designation.** Not revised.
- 3. Description.** Not revised.
- 4. Significance.** Not revised.
- 5. Geographical distribution.** Not revised.
- 6. General environment and habitat description.** Not revised.
- 7. Population biology.** Not revised.
- 8. Population ecology.** Not revised.
- 9. Current land ownership and management responsibility.** Not revised.
- 10. Management practices and experience.** Not revised.
- 11. Evidence of threats to survival.**

### **A. Present or threatened destruction, modification, or curtailment of habitat or range.**

**1. Past threats:** The most likely habitats for *H. aquatilis* in Idaho, north of the Palouse River drainage, are in the broad riparian corridors along the major river valleys, including: 1) St. Maries River, 2) St. Joe River, 3) Coeur d'Alene/Spokane River, 4) Pend Oreille River/Lake, 5) Priest River, 6) Kootenai River, and 7) Moyie River. The majority of bottomlands along these rivers were homesteaded, diked, drained, and cleared for pasture, hay, or grain production. Most remain in this use today. In the process, flooding dynamics were eliminated, and much of the potential habitat of *H. aquatilis* was destroyed. Likewise, low-elevation, low-gradient meander tributary streams of the major rivers in northern Idaho supported broad bottomlands that were easily converted to agricultural uses. Examples of such streams that appear to have supported habitats required by *H. aquatilis* include: 1) Round Prairie Creek in the Moyie River drainage; 2) Curly, Sand, and Fry Creeks in the Kootenai River drainage; 3) Moores Creek in the Priest River drainage; 4) Pack River, Cocolalla Creek, and Hoodoo Creek in the Pend Oreille Lake/River drainage; 5) Rathdrum, Spirit, Brickel, and Fish Creeks in the Coeur d'Alene/Spokane River drainage; and 6) the lower reaches of several creeks in the St. Joe and St. Maries River valleys. Field surveys for *H. aquatilis* between 1991 and 1994 in these

riparian corridors revealed that most contain analogs of once-extensive native plant communities that are known to be associated with habitats supporting *H. aquatilis* in the channeled scablands of adjacent eastern Washington (e.g., emergent marsh habitats dominated by *Equisetum fluviatile*, *Sparganium eurycarpum*, and *Carex vesicaria*). The widespread nature and scope of habitat modifications in low-elevation river- and creek-bottomlands of northern Idaho may have extirpated a rare element like *H. aquatilis* from scattered sites of occurrence, while relegating widespread native species and communities to very isolated sites that were less highly-modified for some reason. Where habitat modifications did not entirely eliminate appropriate hydrologic regimes for *H. aquatilis*, (e.g., along portions of the St. Joe, St. Maries, and Coeur d'Alene River drainages), marsh clearing to plant and encourage the growth of *Zizania aquatica* (wild rice) has nearly eliminated the potential for *H. aquatilis* to grow in many areas.

## **II. Assessment and Recommendations.**

**12. General assessment of vigor, trends, and status.** Not revised.

**13. Recommendations for listing, status change, and/or conservation actions.** Not revised.

**14. Recommended critical habitat.** Not revised.

**15. Conservation/recovery recommendations.**

**A. General conservation recommendations.** Not revised.

**B. Monitoring activities and further research recommendations:** A publicly-owned site in Kootenai County is relatively undisturbed and would be a good candidate for transplant experiments to study recovery techniques and test the capability of this apparently-suitable habitat to support *H. aquatilis*. Hauser Lake Fen (Bursik and Moseley 1995) is in the vicinity of the historical Spirit Lake *H. aquatilis* population (Shelly and Moseley 1988) and supports a mosaic of plant communities and hydrologic conditions found in *H. aquatilis*-supporting habitats nearby in eastern Washington.

**16. Interested parties.** Not revised.

## **III. Information Sources.**

**17. Sources of information.**

## **A. Publications.**

### **1. References cited in report:**

Bursik, R.J., and R.K. Moseley. 1995. Ecosystem conservation strategy for Idaho panhandle peatlands. Unpublished report on file at Conservation Data Center, Idaho Department of Fish and Game, Boise, ID. 28 p.

Shelly, J.S., and R.K. Moseley. 1988. Report on the conservation status of *Howellia aquatilis*, a candidate threatened species. Unpublished report on file at Conservation Data Center, Idaho Department of Fish and Game, Boise, ID. 166 p.

### **B. Herbaria consulted.** Not revised.

**C. Fieldwork:** Rob Bursik spent approximately 30 days between June and September, 1994, surveying potential habitats in northern Idaho from the St. Joe and St. Maries River drainages, north. Several populations of *H. aquatilis* were visited at Turnbull National Wildlife Refuge and in the Dishman Hills Natural Area of eastern Washington in May and June, 1994, to become acquainted with the habitat requirements of *H. aquatilis*. Most survey efforts in Idaho were directed at areas that appeared to support appropriate habitat for *H. aquatilis* and toward areas not previously surveyed by Bob Moseley (Shelly and Moseley 1988). Extensive field surveys and floristic inventories of northern Idaho wetlands were also carried out by Bursik between 1991 and 1993 for Idaho Fish and Game's Conservation Data Center. No additional populations of *H. aquatilis* were found during these surveys.

### **D. Knowledgeable individuals:**

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#### **IV. Authorship.**

**19. Initial authorship:** Not revised.

**20. Maintenance of status report:** The Idaho Conservation Data Center will maintain current information for *Howellia aquatilis* in Idaho and update the status report as needed.

#### **V. New information.**

**21. Record of revisions:** This report is the most recent (and only) revision of the *Howellia aquatilis* status survey for Idaho. Sections revised include: I.11.A.1 (Past threats), II.15.B (Monitoring and research), III.17.A.1 (References), III.17.C (Fieldwork), III.17.D (Knowledgeable individuals), IV.20 (Maintenance of status report), and V.21 (New information).