

APPENDIX 6

Agency and public comment on the draft plan

Summary of Agency and Public Comment on the Hine's Emerald Dragonfly Technical/Agency Draft Recovery Plan

In July 1999, the U.S. Fish and Wildlife Service (Service) released the Technical/Agency draft recovery plan for the Hine's emerald dragonfly for review and comment by Federal agencies, state and local governments, and members of the public. The comment period ended on September 13, 1999. Thirty-eight letters commenting on the draft were received. In the time since the comment period closed, additional comments and information or updates to the plan have been received by the Service. These comments have also been considered and reflected in the approved recovery plan.

This section provides a summary of general information about the comments the Service received during the comment period, including the number of letters from various sources. Fourteen odonatists provided peer review comments. Three of the letters were from state conservation agencies, one letter was received from a state department of transportation. Three letters were received from county forest preserve districts. Two letters were submitted on behalf of a private industry. Fourteen letters were received from residents, organizations, and municipalities in Door County, Wisconsin. One letter was received from a professional in the field commenting as a private citizen. Each letter contained one or more comments. Some letters raised similar issues. Most letters requested explanation of various points made in the draft plan and included suggestions for clarity, other information sources, or future research, or shared lessons learned from their own conservation experience. A few letters provided updated information on population occurrences. Many Door County, Wisconsin residents expressed strong support for the conservation of this species and associated wetland ecosystems, and surface and groundwater resources. Many peer reviewers commented on the thoroughness, usefulness, and sound documentation of the plan. Most comments were incorporated into the approved recovery plan. Information and comments not incorporated into the approved plan were considered and noted. Significant comments that were not incorporated or that require clarification in addition to their incorporation are addressed below.

Summary of Comments and Service Responses

Comment: Many commenters expressed concern that the "total cost of recovery," estimated at around ten million dollars, is unrealistic and unlikely to ever be allocated to the conservation measures proposed in the plan. One citizen expressed opposition to spending so much on a dragonfly.

Response: The total cost of recovery is calculated by adding up the estimated costs of every recovery task described in the plan, for a period of 10 years. The amount of the overall price tag attached to recovery of the Hine's emerald dragonfly may be misleading, for several reasons.

Some of the tasks included in the plan are actions that are ongoing, and are already incorporated into the budgets of the necessary agencies. For example, management of many of the natural areas supporting the dragonfly on county forest preserve district lands is already allocated in the district budgets. In addition, many of the estimated recovery costs, such as land acquisition, represent the entire cost of an action that will benefit not just the dragonfly, but a whole natural community or preserve. It is true that there are many endangered species and that the budget of the Service is inadequate to accomplish the needed recovery tasks, but it is the responsibility of the Service to identify actions that, if taken, would recover this species. The Service works with other government agencies, conservation organizations, private industry and individual landowners, to seek funding or support to accomplish recovery of these species. Actions to conserve the Hine's emerald dragonfly have already been funded by diverse entities such as the Wisconsin Department of Natural Resources, The Nature Conservancy, Material Service Corporation and Commonwealth Edison.

Comment: Several reviewers addressed the requirement that a subpopulation contain at least 500 adults before it is counted toward meeting the recovery criteria. It was suggested that this number seems arbitrary, is too large, and will not be easy to satisfy.

Response: The number 500 is based on the best available information and theory found in the conservation biology literature on minimum viable population size. The number does not seem unreasonable when compared with the population estimates at some of the larger sites, which figure in the thousands. Several comments seemed to address the number of individuals that would likely be seen at a site at a given time, and that 500 seems inordinately large by that standard. The text that accompanies the recovery criteria has been rewritten to clarify what is meant by a population of 500 adult dragonflies. The text emphasizes that the number 500 is meant to represent the annual brood of dragonflies that emerge as adults over a summer flight season and live long enough to mature sexually and be capable of producing offspring. It is expected that far fewer than 500 dragonflies will be observed on any given day and that census methods that estimate population size will be needed to determine whether or not a population meets this size criterion. The recovery outline and narrative include a task (Model population dynamics task 2.1.3) to work on population size estimation techniques for this species. It is also understood that population numbers will fluctuate from year to year, and intended that 500 sexually reproductive adults represents a threshold above which the population numbers should be fluctuating to meet this criterion.

Comment: Another general comment made in various forms by several reviewers was that the recovery criteria are too narrowly defined, and do not incorporate the possibility of reintroductions or the discovery of new populations.

Response: The criteria for reclassifying the status of this species from endangered to threatened have been rewritten in response to this comment to provide greater flexibility in determining whether the reclassification threshold has been crossed. The reclassification criteria establishes a certain number, size, sustainability and distribution of populations needed to consider this

species removed from the danger of extinction in the foreseeable future. The reclassification criteria attempt to describe a population status that would meet this goal. Recognizing that there can be trade-offs between different elements that contribute to the security of the species, such as between the number and the arrangement of populations, additional flexibility has been incorporated into the reclassification criteria. At present, this additional flexibility has not been incorporated into the criteria for eventually delisting the species from the protection of the Act. The recovery task 2.1.3 Model population dynamics, is intended to address this by generating information that could be used to determine which alternative combinations of the required components mentioned above provide equivalent long term security and sustainability. In addition, if further research provides new information that justify changing one of these required components, for example information on the distances that Hine's emerald dragonfly will travel between sites, the recovery criteria can be revised to reflect that.

Comment: Several commenters, aware that new population occurrences were discovered during the open comment period, suggested that the plan be updated to provide information on the new sites, and to discuss changes to the approach outlined in the draft for searching for new populations.

Response: The approved plan has been updated to incorporate new information on the Hine's emerald dragonfly populations discovered during the open period for submitting comments on the draft plan. In addition, the implications of the new sites were considered in terms of the distribution of populations required by the recovery criteria, resulting in the increased flexibility incorporated into the criteria as discussed above. The new population survey tasks in the implementation schedule have also been revised to reflect the need to search more broadly for this species.

Comment: One commenter suggested that the Service waive collecting permits for Hine's emerald dragonfly specimens collected from new sites, and another commenter recommended that more people be "deputized" to search for new populations.

Response: Activities that may result in the death or injury of any wildlife species listed as threatened or endangered are unlawful unless authorized by a permit issued by the Service under the Endangered Species Act. Since accurate identification of Hine's emerald dragonfly adults requires netting and handling, the potential for harm to the dragonfly exists and permits are required. Permit applications may be received by calling regional or field Service offices.

Comment: Two commenters suggested that the Service consider reclassifying the status of the Hine's emerald dragonfly from endangered to threatened, based on the new sites discovered in 1999 and the potentially greater range of the species.

Response: Though additional populations have been discovered since the Hine's emerald dragonfly was listed, the known populations still do not meet the criteria for reclassifying the

status of the species from endangered to threatened. In addition, many of the known sites that support this species remain threatened by development or by degradation of the groundwater supply supporting its unique habitat.

Comment: Many commenters emphasized the need for guidelines for habitat management practices at sites that support this species. Issues of concern include the use of herbicides, prescribed burns, and threats to native plant communities from aggressive non-native plant species. Commenters variously recommend very conservative management, express concern that misplaced caution would prevent needed management such as prescribed burns, suggest an adaptive management strategy, and advocate funding research to guide management plans. One commenter suggested that evaluation of current management practices be a Priority 1 task.

Response: The approved recovery plan does not include guidelines for management of sites supporting the Hine’s emerald dragonfly because empirical data to determine appropriate management practices do not currently exist. A conservative approach to natural areas management is often recommended, yet the “no action” alternative may have severe adverse impacts to the species at some of these sites. For example, we lack the data needed to balance the threat to the species from loss of habitat degraded by aggressive non-native vegetation, with the potential harm to the species if the herbicides used to control the non-native vegetation were to contaminate its habitat. Fire is a historical component of some of the natural communities where the Hine’s emerald dragonfly resides, and prescribed burns are an important tool for maintaining these habitats, yet questions about the appropriate frequency and extent of these burns remain. Addressing these questions is extremely important for the continued conservation of this species. Recovery task 2.5.1 “Evaluate responses to habitat management practices” has been changed to Priority 1 from Priority 2 to reflect this urgency.

Comment: One commenter asked whether the habitat restoration work funded by a quarry operator was successful in creating new habitat.

Response: The work reduced brush encroachment in the natural area but was probably neutral in terms of impacts to Hine’s emerald dragonfly larval habitat in the spring fed seeps.

Comment: One commenter asked whether brush clearing and burning pose a risk by eliminating sites for perching, roosting and copulation.

Response: Forest edges, brush, or small trees in some proximity to larval habitat appear to be important, based on observations of Hine’s emerald dragonflies using those habitat features. These habitat features exist at or near many of the sites being managed by brush clearing and burning. This is another habitat management question that could be addressed by task 2.5.1.

Comment: One commenter asked whether cattail marshes should be a desirable or mandatory habitat component, and stated that cattail invasion can be “deleterious or catastrophic” to natural areas.

Response: The habitat requirements section of this plan describes cattail marshes as an existing component of sites that support the Hine’s emerald dragonfly. Essential reproductive behaviors, such as egg laying, larval foraging, and adult emergence, occur in the cattail-dominated areas of the dolomite prairie, wet meadow, and marsh complexes where the Hine’s emerald dragonfly survives in Illinois. The relative importance of the species composition and/or habitat structure in these areas is not clearly understood. References in the plan to larval habitat structure have been modified to emphasize the importance of the presence of a thatch and detritus layer of decaying vegetation rather than the species composition of the parent plant material.

Comment: One commenter recommended that the approved plan contain language that “privately controlled sites that harbor the Hine’s emerald dragonfly would be considered for additional protection on a strictly “voluntary basis,” and that private landowners be included in all discussions of implementation strategies.”

Response: The Endangered Species Act prohibits “take” of an endangered species, including harm through actions that degrade or destroy habitat used by an endangered species for necessary life functions, such as foraging, roosting, and reproducing. Compliance with this take prohibition is mandatory. The additional actions outlined in this recovery plan, to recover the species by managing and improving habitat, are voluntary.

Comment: Two commenters questioned why the plan lacks specific habitat restoration recommendations. One commenter contended that the presence of Hine’s emerald dragonflies at a restored site adjacent to an existing population in Illinois shows that the species is able to quickly colonize even less than pristine habitat as long as it is near existing population structures, has suitable hydrology, and has suitable vegetation structure.

Response: The plan does not include specific habitat restoration guidelines or recommendations because the Service is not aware of any site to date that has been restored to fully support the life requirements of the Hine’s emerald dragonfly. Though adults are frequently observed foraging along roadways, railroad tracks, and other far from pristine habitats, the used of a previously degraded site for successful production of a brood through emergence from the larval stage into adult dragonflies is not known to the Service. This species appears to require very specific and unique habitats, the exact components of which are not completely understood. One component that appears important is the shallow surface water fed by springs or groundwater. If this is the case, hydrological restoration of a degraded site would be far more difficult than is true for systems supported simply by surface water. However, the plan certainly does not preclude nor is intended to discourage restoration attempts. As noted by one commenter, the Midewin National Tallgrass Prairie, located south of the Illinois populations along the Des Plaines River, may provide restoration opportunities.