## Habitat Conservation Banking: Profiting from Endangered Species

## Author: Derald J. Hay

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When developing a forest stewardship plan, planning a timber harvest or performing general forest management, few regulatory issues can disrupt an ecologically sound management scheme more than threatened and endangered species. In Pennsylvania, the Indiana bat and bog turtle tend to cause the most issues between forest landowners and regulators; however, each state has its own species to contend with on a regular basis. Understanding the regulatory mechanisms that protect these endangered species and their habitat may help in developing a forest stewardship plan and implementing management techniques. One option that may get overlooked to address the concerns of regulators is habitat conservation banking (HCB).

HCB, like wetland mitigation banking, involves protecting areas of habitat in exchange for permission to undertake activities, such as timber harvesting, in other areas of habitat. The basis for this process is the "incidental take permit" under Section 10 of the Endangered Species Act (2009). The US Fish and Wildlife Service (FWS) will allow someone to negatively affect the habitat of an endangered species if the activity will not jeopardize the existence of the endangered species when actions are taken to mitigate the impact on the species. In some circumstances, the FWS has awarded landowners "credits" for developing a mechanism to protect and manage areas of endangered species habitat in perpetuity (Federal Register 2003). Once approved by the FWS, the credits can then be transferred within the forest management unit or sold to a land developer or Department of Transportation to represent the mitigation those entities will be required to undertake to obtain an incidental take permit from the FWS.

The objective of HCB is to mitigate the effects human activities have on an endangered species while creating an economic driver to incentivize the perpetual preservation of the habitat (Federal Register 2003). In 2003, the FWS issued guidance detailing how HCB permit applications should be evaluated. The guidance explains how the FWS determines the number of credits, how the funding should be secured, and the areas that the credits from a HCB could potentially service.

When developing a forest stewardship plan, one should evaluate the forest to determine if there is potential habitat supporting endangered species. This way, alternatives such as HCB can be considered. In weighing the regulatory and reputation costs of harvesting endangered species habitat against the potential benefit and payout that protecting the area as a HCB, a landowner may actually stand to profit from preservation.

HCB does have its costs (Hay 2006). Obtaining regulatory approval for a habitat conservation bank can be difficult because of the legal and scientific issues that must be evaluated. Also, a market demand for the credits must exist to be able to sell the credits. Although an "if you build

it, they will come" mentality may work in some circumstances, having a preexisting market will provide a greater likelihood of an adequate return on the investment. In addition to the costs of obtaining regulatory approval, some form of an operational plan to maintain the habitat may be required. For instance, suppression of woody species is necessary to maintain a tussocks- sedge-dominated wetland for the bog turtle habitat.

The primary force that will create a market for a HCB is, oddly enough, the regulatory scheme itself. The incidental take application process can be long and expensive. Additionally, the permit must undergo public comment because it constitutes a federal action under the Endangered Species Act, thus triggering the need to make a nonjeopardy determination and an Environmental Assessment under the National Environmental Policy Act (National Environmental Policy Act [NEPAl 2009).

On smaller projects with smaller profit margins, an incidental take permit may not be a feasible option because of the costs of the application process and the time involved in obtaining the permit. By consolidating the regulatory review and securing permits before the inception of a project, a HCB can streamline the permitting process for a project or development not associated with the HCB. Purchasing a credit from a HCB can significantly reduce a project's costs, delays, and business risks by creating greater certainty as to when the incidental take permit can be obtained.

There are well over 50 HCBs already in place (Hay 2006). Most of the HCBs are located in California, primarily because the prolific list of endangered species and the relentless quest to develop land creates a lush market for generating profits by protecting habitats. However, there are also HCBs located in other states such as Florida, Colorado, and Alabama. These HCBs protect a wide diversity of species including salamanders, mussels, red-cockaded woodpeckers, and gopher tortoises. Although most HCBs tend to protect wildlife species, the guidance is also applicable to protecting endangered plants located on a property.

HCB has the potential to provide an ongoing economic incentive to preserve and maintain habitat. The higher the quality and quantity of the habitat, the greater the potential returns may be. At the very least, it can help turn a headache into a profit.

## **Literature Cited**

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