

[Draft (10/28/99) – Comments Welcome]

**HABITAT CONSERVATION PLANS:
CERTAINLY EMPOWERED, SOMEWHAT DELIBERATIVE,
QUESTIONABLY DEMOCRATIC**

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Introduction

Habitat conservation plans (HCPs) are currently the most controversial component of the federal Endangered Species Act (ESA). Some argue that HCPs undermine the purpose of the ESA by compromising species and habitat preservation for economic gain. Others counter that HCPs allow the ESA to work by avoiding prolonged political and legal conflicts over resource use. Some argue that HCPs are based on relatively weak science. Others counter that they are based on the best science available. Some argue that HCPs allow public input into endangered species issues. Others counter that public participation is highly variable and not assured.

These debates result in part from the great variation that exists among HCPs. Given this variation, habitat conservation planning should not be viewed as a single example of the Empowered Deliberative Democracy model, but rather as a range of examples that vary in terms of the model's criteria. As of June 1999, there were 255 HCPs in some stage of implementation, with approximately 200 more being developed.¹ Taken together, along with the federal guidelines, policies, and rules that govern how HCPs are prepared and implemented, it is possible to make some tentative claims regarding how well the HCP experience fits these criteria.

This paper begins with a brief history of the HCP experience, and then evaluates habitat conservation planning according to the six criteria of the Empowered Deliberative Democracy model and the six potential criticisms of the model. HCPs fit the model well in terms of empowerment criteria. They fit less well in terms of criteria related to deliberation and democratic participation. These are gross simplifications, however,

¹ Figures current as of June 3, 1999. The U.S. Fish and Wildlife Service publishes these figures, with a table identifying HCP characteristics, at: <http://www.fws.gov/r9endspp/hcp/hcptable.pdf>.

because HCPs vary widely on most of these criteria.. Some departures from the model can be rectified through changes in federal policy; but it is not yet clear whether any HCP is now or ever will be an exemplar of the model.

What are Habitat Conservation Plans?

HCPs are a peculiar product of the U.S. legal system. They exist solely because of the federal Endangered Species Act. In the absence of a similar law, one can not assume that HCPs would appear in other countries because individuals and organizations would lack the fundamental motivation to expend the significant time and financial resources required to complete and implement an HCP. They proliferate in the United States because, to paraphrase Don Corleone in *The Godfather*, the federal government makes an offer that some individuals and organizations can not refuse. While HCP participation is voluntary, some actors face little choice given existing alternatives.

The ESA is sometimes called the pit bull of environmental laws because it has extraordinary teeth, particularly in federal courts. Among other effects, lawsuits filed (or threatened) under the ESA have foreclosed economic use of public and private resources (Yaffee, 1994, 1982), shaped urban growth patterns (Beatley, 1994), and reoriented state and federal agency missions (Thomas, 1997a, 1997b). These outcomes occur because the ESA prohibits certain actions. By contrast, the National Environmental Policy Act (NEPA) is a procedural law. NEPA requires federal agencies to produce environmental impact statements that evaluate the environmental consequences of major federal activities; but NEPA does not specify whether a particular federal activity should be carried out, and it does not directly apply to nonfederal actors. The ESA actually

prohibits public and private actions that push species towards extinction. The ESA's prohibitions are of two types. The prohibition on "take" (Section 9) applies to all persons subject to U.S. jurisdictions. The prohibition on "jeopardy" (Section 7) applies only to federal agencies. Since HCPs (Section 10) are tied directly to the prohibition on taking endangered species, the focus of this paper is on nonfederal actors.²

Section 9 prohibits any person or organization subject to U.S. jurisdictions from taking fish or wildlife species listed as endangered by the U.S. Fish and Wildlife Service (FWS), with "take" defined broadly to include "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct."³ FWS regulations further expand the definition of take by defining "harm" to include modifying the habitat upon which listed species depend.⁴ Therefore, environmental activists can sue a private landowner for altering the habitat of an endangered species (e.g., through logging, farming,

² While both Section 7 (jeopardy) and Section 9 (take) address habitat modification, they do not provide the same incentives for actors to develop HCPs because Section 10 authorizes HCPs as a means for complying with the Section 9 prohibition on take, not the Section 7 jeopardy standard for federal agencies. Hence, federal agencies are tenuous HCP partners. The FWS is an exception because it reviews HCPs, and must consult with itself under Section 7 when issuing a permit to applicants to implement an HCP.

³ 16 U.S.C. § 1532. The Section 9 prohibition on take applies only to fish and wildlife species listed by the FWS as "endangered" (i.e., at imminent risk of extinction). It does not apply directly to plant species, or to species listed as "threatened" (i.e., likely to become endangered in the foreseeable future). Yet Section 9 covers plant species indirectly because plants (such as old-growth forests) provide habitat for wildlife (such as spotted owls). Species listed as "threatened" are protected under Section 4(d), which requires the FWS to promulgate regulations deemed "necessary and advisable to provide for the conservation of such species." Taking a threatened species is thus permissible, depending upon the wording of the 4(d) rule for that species. Since the FWS has great discretion under Section 4(d), the agency can write a rule for a threatened species that is as stringent as the prohibition on take for endangered species.

⁴ Substantial controversy has long existed over the meaning of "harm" and whether Section 9 should be interpreted to include habitat modification on private property (Rohlf, 1989:62-70). In 1995, the Supreme Court upheld the FWS definition of "harm" in *Sweet Home Chapter of Communities for a Great Oregon v. Babbitt*.

or land development), and they can sue a local or state agency for either engaging in such activities or permitting them to occur. If a federal court rules in favor of the plaintiff, it can prohibit these activities, or fine and even jail those committing the offense. Property owners have felt sufficiently threatened by the Section 9 prohibition on take that they have attempted (unsuccessfully) to reverse the charges, claiming that the federal government is "taking" their private property without just compensation, as guaranteed by the Fifth Amendment.

Prior to 1982, the ESA was unyielding with regard to endangered fish and wildlife species. As Yaffee (1982) argued, the ESA amounted to "prohibitive policy." Only scientific research and conservation activities constituted permissible take for endangered animal species. This near-absolute ban on take posed economic, political, and ecological problems. Economically, if one knew about the presence of an endangered animal species on private property, the ESA essentially implied an order to cease activities which might cause take. Although the FWS lacked staff to monitor such activities, environmentalists stood in the wings waiting to sue landowners and developers for such infringements, and to sue local and state agencies for permitting such activities to occur.

Politically, the prohibition on take was a time bomb because the ESA lacked a release mechanism to allow limited economic activity to occur within the habitat of a listed species. For this reason, economic interests lobbied hard to keep species off the list, which necessarily politicized the listing process.⁵ Environmentalists also picked their fights carefully. They did not petition to list every species for which data supported a listing; instead, they typically focused on charismatic species, which limited the ability of property

rights advocates to frame endangered species issues as pitting "rats against people" or "bugs against jobs."

Ecologically, the absolute prohibition on take was also not entirely sensible. Endangered species suffered – and continue to suffer – from the cumulative impacts of many activities, not simply the few activities someone happens to notice. Therefore, many ecologists argued that it would be more effective to preserve a species' habitat over the long run by acquiring property and adopting formal land use restrictions than blocking bulldozers at each site or punishing individuals after habitat has been altered, perhaps irreparably. In other words, it would make more sense to develop and implement a plan to preserve habitat than to track individual activities eating away at the habitat on a site-by-site, project-by-project basis.

As the 1970s came to a close, economic, political, and ecological interests dovetailed when a novel idea emerged to preserve butterfly habitat near San Francisco. Development creeping up the slope of San Bruno Mountain had been a political issue for years, but it was framed in terms of open space and growth control, not species protection. The San Bruno conflict assumed a dramatically new form in 1975 when the FWS listed the Mission Blue Butterfly as an endangered species and a local environmental group threatened legal action to stop residential and commercial development in the butterfly's habitat. In 1978, the FWS proposed listing an additional species, the Callippe Silverspot Butterfly. Backed into a corner, the primary landowner and developer, Visitacion Associates, struck a deal with environmentalists, agreeing to set aside approximately 2000 of its 3500 acres on San Bruno

⁵ This occurred, and continues to occur, even though the ESA instructs the Secretary of Interior to make listing decisions based “solely on the basis of the best scientific and commercial data available...” (Section 4(b)(1)(A)).

Mountain as butterfly habitat and open space in return for being allowed to develop the remaining acres.

This led to the first habitat conservation plan, but it could not be implemented until Congress amended the ESA to authorize the FWS to issue a new kind of permit which allowed take. The logic was simple. The developer would be allowed to take butterflies by building on part of the mountain because ecologists endorsed the HCP as a means for protecting sufficient habitat to maintain viable populations of both species. In other words, economic development would be allowed to destroy some of the habitat because credible ecologists believed the HCP would preserve sufficient habitat to guarantee the long-term survival of both butterfly species.⁶

When Congress amended the ESA in 1982, new language was inserted into Section 10 authorizing the FWS to issue permits to nonfederal actors if they submit a satisfactory HCP. Taking endangered animal species for economic purposes was no longer prohibited absolutely. Take was now permitted if it was "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity."⁷ Hence, the coveted permit is known as an "incidental take permit." The 1982 amendments established common ground between economic and environmental interests by allowing incidental take during the course of economic activities, while creating a mechanism to compel actors (other than federal agencies) to preserve habitat for the long-term survival of endangered species. In other

⁶ As Beatley (1994:58) has noted, the biological study undergirding the HCP was "subjected to a peer review process by noted conservation biologists, including Paul Ehrlich, which served to enhance the credibility of the findings." For additional background on this first HCP, see Marsh and Thornton (1987). On the role of consensual ecological knowledge, particularly conservation biology, in habitat management and planning, see Thomas (1997a, 1997b).

⁷ Section 10(a)(1)(B) of the Endangered Species Act, as amended in 1982.

words, Section 10 reframed endangered species debates from "species *versus* jobs" to "species *and* jobs," thereby providing a legal mechanism to avoid political impasses.

Each HCP must meet several basic conditions for applicant(s) to receive an incidental take permit. Specifically, it must provide detailed information on the likely impacts resulting from the proposed take; measures the applicant will undertake to monitor, minimize, and mitigate such impacts; available funding to undertake such measures; procedures to deal with unforeseen circumstances; alternative actions the applicant considered that would not result in take, and the reasons why such alternatives are not being utilized; and any additional measures the FWS requires as necessary or appropriate for purposes of the plan (FWS & NMFS, 1996:3-10).⁸ How applicants meet these conditions is largely left to them. Thus, the ESA and FWS regulations essentially compel nonfederal actors either to forego all use of certain natural resources, act illegally and risk enforcement, or prepare an HCP. This is a difficult deal to refuse. Yet, unlike Don Corleone's offer, the federal government empowers applicants to determine the institutional design of their HCP.

For example, applicants define the planning area, choose the number of species covered, decide who will participate, and select the policy tools for habitat protection. Thus, they can write an HCP covering one acre or a million acres. They can focus on one species or dozens of species. They can submit an HCP individually or with multiple partners.. They can request extensive public input or largely ignore it. And they can select from numerous policy tools to implement the plan, including development fees to acquire or restore habitat, dedication of land for habitat purposes, land use controls, and market-based approaches such as habitat mitigation banks and tradable development rights. Typically, HCPs establish a

core preserve area, within which few human uses are allowed, surrounded by buffer zones of less restricted use; but there are numerous ways to acquire, regulate, restore, monitor, enforce, or otherwise manage these areas. To a large extent, this is determined by the applicants, subject to FWS approval. This discretion empowers applicants to be creative, and to tailor solutions to local problems.

In sum, the 1982 ESA amendments empowered nonfederal actors to develop HCPs as a means for complying with the Section 9 prohibition on taking endangered species. The stage was now set for a grand experiment in land-use planning. Yet HCPs did not immediately proliferate. The FWS issued only 14 incidental take permits in the first decade following the 1982 amendments (1983-1992) – one each in Texas and Florida, and the rest in California.. HCPs diffused slowly during this period because the initial expertise was in California, and because the FWS did not distribute draft HCP guidelines until 1990. With the new guidelines, and with strong support from the Clinton Administration after 1992, HCPs spread rapidly. By August 1996, 179 incidental take permits had been issued, some covering much larger planning areas than their predecessors (FWS & NMFS, 1996:i). Three years later, the number of issued permits climbed to 255, covering 11.7 million acres, with approximately 200 additional HCPs in various stages of development.⁹

In light of this explosive growth, an increasing number of observers have wondered whether HCPs adequately protect species, and whether the public is appropriately involved. Indeed, Congress has considered several bills to amend the ESA, and the Department of Interior and FWS have experimented with new HCP policies. Yet

⁸ The National Marine Fisheries Service (NMFS) reviews and approves HCPs for marine species, including anadromous fish. Since most HCPs are land-based, NMFS is relegated to footnotes in this paper.

these policies primarily provide economic assurances to applicants, not ecological assurances to species or democratic assurances to other stakeholders. In other words, they are designed to create additional incentives for applicants to complete HCPs.

One such incentive is embodied in the 1994 “no surprises” policy, which assures applicants that no additional land use restrictions or financial compensation will be required with respect to species covered by an incidental take permit if unforeseen circumstances arise indicating that additional mitigation is needed.¹⁰ Under the “no surprises” policy, the federal government, not the permit holder, assumes responsibility for implementing additional conservation measures that may become necessary as new knowledge and information arise. This means the public, not the applicant, bears the risk associated with ineffective HCPs.

If landowners, developers, and local governments are guaranteed there will be no regulatory surprises should new knowledge or information arise, they become much more certain about the future benefits HCPs provide. Fundamentally, applicants want to know what they can do within a given planning area. They are willing to spend years and substantial sums of money to develop and implement HCPs because incidental take permits provide them with greater certainty. Without a permit, the ESA’s regulatory hammer looms, poised to foreclose any and all activities. With a permit, applicants know

⁹ U.S. Fish and Wildlife Service, “Habitat Conservation Plans/Incidental Take Permits,” <http://www.fws.gov/r9endspp/hcp/hcptable.pdf>, June 3, 1999.

¹⁰ At least 74 HCPs completed between 1994 and 1997 are thought to contain “no surprises” assurances (Yaffee, et al., 1998:2-5). In 1998, the “no surprises” policy was codified (50 CFR Parts 17 and 222) when the FWS and NMFS published the final “Habitat Conservation Plan Assurances Rule” in the *Federal Register* (Vol. 63, No. 35, February 23, pp. 8859-8873). All HCPs must now be consistent with this rule. More recently, the FWS developed similar assurances through “safe harbor” and “candidate conservation” agreements. See the final rule on “Safe Harbor Agreements and Candidate Conservation Agreements with Assurances,” *Federal Register*, Vol. 16, No. 116, June 17, 1999, pp. 32705-32716.

they can pursue activities covered in the plan. Thus, HCPs tend to occur where the Section 9 prohibition on take is enforced aggressively (Yaffee, 1998:1-1). If the prohibition on take is not enforced by the FWS or citizen suits, then applicants have no incentive to prepare HCPs. When an HCP is completed, and the permit is issued, it becomes a binding contract providing certainty to applicants.

While the “no surprises” policy is politically expedient, it is ecologically unsound and limits public participation after a permit is issued. Adaptive management is more sensible because ecological knowledge and information are fluid. As we learn more about species and their habitat requirements, HCPs should be revisited and redesigned (Noss, et al., 1997). After all, the ESA’s purpose is to prevent extinctions. If new knowledge or information suggest that an HCP does not ensure a species’ survival, then the HCP should be adapted to new circumstances, or the permit withdrawn. Adaptive management would also provide an opportunity for public participation and continued deliberation after incidental take permits have been issued.

Implementation evaluations should also be part of the adaptive management process (Thomas and Schweik, 1999). If those receiving a permit are not complying with the terms of an HCP, then the FWS and environmental watchdogs should know this is the case, so they can decide whether and how to enforce the law. If the institutional design of an HCP proves to be less than ecologically sound, then it should be redesigned to ensure the survival of the species. If the applicants are unwilling to comply or redesign an HCP, then the public should know this is occurring and have access to the process. In sum, we need to evaluate the legal, ecological, and political aspects of HCP implementation to

understand how well an HCP is performing, and incorporate these findings into an adaptive management framework.

Do HCPs Fit the Empowered Deliberative Democracy Model?

The previous section provided an overview of habitat conservation planning in the United States. This section evaluates the HCP experience by the six criteria of the Empowered Deliberative Democracy model (Fung and Wright, 1999:27-30). Given that HCPs vary widely on many dimensions, including these criteria, some HCPs fit the model better than others. This section also considers the federal guidelines, rules, and laws that shape HCP planning and implementation.

(i) Deliberation

“The distinctive characteristic of deliberation is that participants listen to each other’s positions and generate group decisions after due consideration” (Fung and Wright, 1999:5). Rather than simply voting or advocating preformed preferences, individuals allow their preferred strategies and solutions to evolve through collective deliberation with other participants. The key question for this criterion is: How genuinely deliberative are the actual decision-making processes?

When assessing deliberation, we should consider its temporal, numeric, and representational features. That is, how long does deliberation occur, how many actors are involved, and who do they represent? In terms of time scale, deliberation in HCPs can occur during both the planning and implementation phases. Here, I focus on the planning phase because we know little about HCP implementation. The first and only study of

HCP implementation was not completed until 1999 (Thomas and Schweik, 1999) – 16 years after the FWS issued the first incidental take permit to a developer on San Bruno Mountain. Thus, we have very little evidence of the extent to which deliberation occurs after permits are issued.

During the planning phase, the numeric and representational extent of deliberation varies widely. The best evidence to support this claim is reported by a team of researchers who studied public participation in HCPs (Yaffee, et al., 1998). Their research design included a survey of lead FWS staff for 55 large-scale HCPs (i.e., those covering thousands to millions of acres), and case studies of 14 HCPs in this sample. They found public participation varying from open, collaborative steering groups to closed-door processes in which the only opportunity for participation beyond the applicant and the FWS came during the notice-and-comment periods required under the ESA and NEPA. While their study does not analyze deliberation per se, we can assume that notice-and-comment periods do not constitute deliberative processes because they occur after the HCP is virtually complete and the FWS is ready to issue an incidental take permit. Hence, they emphasize disclosure of decisions already made. Moreover, NEPA does not require federal agencies to incorporate public comments into planning documents, which means the FWS need not ask applicants to consider the merits of these comments – let alone deliberate with those submitting the comments.

While the authors of this study do not use the language of deliberation, their conclusions nevertheless suggest that it sometimes does occur. For example: “In those cases where public participation resulted in substantive changes to the HCPs, public participation invariably began early in the process, and often included a committee with

members of the public” (Yaffee, 1998:xv). Yet such changes were relatively rare. Their survey of FWS staff “indicated that public participation resulted in significant substantive changes to only 3 out of 45 responding HCPs (7%)” while more than 75% of the sample reported that public participation led to “only minimal or moderate changes” (Yaffee, 1998:xv). Future research on Empowered Deliberative Democracy should explore the causal roots of this variation.

That deliberation occurs in some cases of HCP planning is not surprising, given that HCPs result from a stalemate in the more traditional form of environmental regulation, in which actors are unable to achieve their preferred outcomes. Developers, for example, prefer to build housing tracts, but doing so is illegal if it harms an endangered species, and they would be sued by environmental watchdogs for violating the Section 9 prohibition on take. This leads them to work with local governments to roll zoning plans into an HCP, so planned development is covered by an incidental take permit. Doing so requires deliberation and/or negotiation among private and public actors, along with professional or academic ecologists, as to what percent of the remaining habitat should be preserved, where it should be preserved, and how it should be managed.

To avoid future lawsuits, applicants may request public participation early in the planning process so the completed HCP will not be challenged during implementation. Yet public participation may still be closer to a negotiated process than to deliberation. Indeed, the participation study analyzed the HCP process as “a negotiation” between the applicant and permitting agency (Yaffee, et al., 1998:3-2). A quote from one participant in the Balcones Canyonlands HCP illustrates this point (1998:3-4):

The public participation process is really not designed to help people develop a new or redirected self-interest. It ... allows people who already have pre-conceived positions to continue to state and argue for those.... It's a process designed to allow people to express pre-conceived or pre-established positions, not to adjust their positions based on new information. I don't think it's a dynamic or real iterative process; it's a real static process.

The numeric and representational scale of deliberation varies greatly because applicants define the scope of participation. Some HCPs are submitted by a single applicant. The Simpson Timber Company, for example, submitted an HCP in 1992 covering 380,000 acres of private timberland in three California counties. With only one applicant, deliberation likely occurred only among Simpson Timber Company and the FWS. By contrast, the *Coachella Valley Fringe-Toed Lizard Habitat Conservation Plan* was completed in 1985 by a steering committee composed of a wide spectrum of interests, including representatives from local governments, state and federal agencies, an Indian tribe, legal and technical consultants, and a nonprofit organization (The Nature Conservancy). Presumably, deliberation is more likely to occur within a multi-organizational committee than a single firm.. Indeed, the extensive literature on the Coachella Valley case suggests that deliberation was extensive during planning and implementation, including actors not formally identified as members of the steering committee.¹¹

The scope of deliberation is not driven by federal laws, rules, or guidelines. HCP guidelines instruct FWS staff to “encourage” applicants to broaden participation by including affected state and federal agencies and tribal governments, but applicants are not required to do so (FWS and NMFS, 1996:2-3). This is only a guideline for FWS staff, not an enforceable rule for applicants. Moreover, the FWS “regards HCPs as voluntary,

¹¹ See Thomas and Schweik (1999) for specific citations on the Coachella Valley HCP.

applicant-driven processes where the applicants decide whether and how to involve outside stakeholders” (Yaffee, et al., 1998:vi). Hence, there is no guarantee that deliberation will occur among more than a single applicant and the FWS. Where deliberation among many actors occurs, it is driven by other factors, particularly the pattern of private land ownership and public jurisdiction. Where habitat is shared among multiple owners, agencies, and political jurisdictions, species preservation becomes a collective-action problem, in which multiple partners come together to share information and develop solutions to their common problem (Thomas, 1997b). Hence, broad participation in HCPs is more likely where complex ownership patterns occur (Yaffee, et al., 1998:4-21).

(ii) *Action*

The key question for this criterion is: How effectively are decisions made during the planning process translated into real action? There is little systematic evidence upon which to answer this question because only one case study of HCP implementation exists (Thomas and Schweik, 1999). Nevertheless, there are several economic and legal reasons to believe that HCPs are partially, if not fully, implemented.

Applicants prepare HCPs because they desire incidental take permits to use natural resources for economic or public purposes. This permit removes them from the shadow of the ESA’s regulatory hammer. The FWS can revoke a permit if applicant(s) do not implement an HCP because implementation is a condition of the permit.

Environmental activists also sit in the wings prepared to sue under the ESA’s strong provisions when they see violations. Evidence suggests that HCP implementation is

occasionally monitored by the public, but rarely by members of the scientific community (Yaffee, et al, 1998:5-8).

In addition to applicant incentives to implement HCPs, the FWS also assesses whether an HCP is likely to be implemented before issuing a permit. The ESA and federal HCP guidelines stipulate that each HCP must identify funding to implement specific provisions in the plan designed to mitigate the impacts of incidental take.¹² The FWS also requires a signed implementation agreement, in which applicants specify the organizations responsible for implementing specific parts of an HCP. In sum, financial feasibility is a condition of the permit, implementation is a condition of retaining the permit, and signed implementation agreements establish accountability if an HCP is not completely implemented.

We should not assume, however, that any HCP is or will be fully implemented.. HCPs are thick documents, containing numerous provisions, any one of which could be overlooked or found infeasible. In the Coachella Valley, HCP participants made a good-faith effort to translate the plan into action; but, thirteen years after the FWS issued the permit, the plan was still not completely implemented (Thomas and Schweik, 1999). For example, several parcels targeted for the preserve system remained unpurchased because the acquisition fund, which is based on a flat-rate mitigation fee levied on developers elsewhere in the Coachella Valley, proved insufficient to acquire all of the designated preserve lands due to changes in real estate prices. These parcels have not been developed; but they will remain unprotected until the mitigation fee structure in the HCP is redesigned, or some other organization (public or private) acquires the land.

¹² Section 10(a)(2)(A)(ii), Endangered Species Act, as amended in 1982; FWS & NMFS (1996:3-10).

In sum, there are strong incentives for those who receive incidental take permits to implement their HCPs. Unfortunately, we do not know whether any HCP has been or will be fully implemented. If we extrapolate from the only implementation study currently available, then we should assume that full implementation is not assured, even after more than a decade of continuous participation among multiple, dedicated stakeholders.

(iii) *Monitoring*

Monitoring is a crucial component of the Empowered Deliberative Democracy model because monitoring feeds information into (what ideally is) a continuous learning process. Monitoring provides information about how well these experiments work, which indicates whether they should be revisited and redesigned in an on-going deliberative process. In the environmental policy literature, this process of experimentation, monitoring, learning, and redesign is called “adaptive management” (Lee, 1993).

Without monitoring mechanisms in place, there is action without experimentation. Thus, Fung and Wright (1999:29) ask: “To what extent are these deliberative groups capable of monitoring the implementation of their decisions and holding responsible parties accountable?” To this I would add: “To what extent are these groups willing to monitor implementation?” Deliberative groups may be technically, financially, and organizationally able to monitor implementation, but that does not mean that all actors in a group want to monitor, learn, and redesign their experiments. This is particularly the case with HCPs, because the thought of redesigning HCPs creates regulatory uncertainty in the minds of applicants and permit holders.

Indeed, monitoring may be the most significant shortcoming for HCPs in terms of fitting the model. The best evidence for this comes from a team of scientists who recently evaluated how science is used in HCPs (Kareiva, et al., 1999). Roughly half their sample (22 of 43 HCPs) contained “a clear description of a monitoring program,” but only one-sixth (7 of 43 HCPs) contained monitoring programs “sufficient for evaluating success” (1999:40). On a more positive note, they found monitoring to be closely correlated with adaptive management in their sample. “In particular, 88% of the plans with provisions for adaptive management had clear monitoring plans, whereas less than 30% of the remainder had clear monitoring plans” (Kareiva, et al., 1999:41).

Two implications can be drawn from this data. First, relatively few HCPs are conceived in terms of adaptive management (i.e., experimentation, learning, and redesign); hence, they do not include sufficient monitoring programs to evaluate HCP effectiveness during implementation. Given that adaptive management necessarily entails monitoring, those HCPs conceived in terms of adaptive management typically have clear monitoring programs. Second, we do not know whether monitoring programs in HCPs are actually implemented, or whether HCPs with weak monitoring programs are nevertheless implemented with strong monitoring programs which are capable of evaluating success.

Regardless of whether monitoring programs exist in plans or in the field, it is crucial to know whether actors want to learn from the new information and are willing to revisit the plans and deliberate anew. Some actors are open to such reconsideration, but others are not. During implementation of the Coachella Valley Fringe-Toed Lizard HCP, for example, monitoring indicated that crucial habitat had been overlooked in the original

preserve design.¹³ This oversight was due primarily to limited information at the time the plan was completed, not to political intrigue. Nevertheless, many of the actors who developed and/or implemented the HCP are currently unwilling to revisit the plan. Instead, they seek to protect the “missing” habitat through other institutional processes, such as local zoning, acquisition by land conservancies, and/or incorporating the habitat into a new HCP currently being developed for multiple species in the vicinity (Thomas and Schweik, 1999).

The Coachella Valley experience tells us something intriguing about HCP implementation. Habitat conservation planning is challenging, expensive, and time-consuming, particularly when it involves deliberation or negotiated bargaining among multiple actors. Hence, there is great inertia against reopening an HCP after the FWS issues a permit, regardless of applicant sincerity about implementing the plan. In the Coachella Valley, actors made a good-faith effort to implement the plan, discovered the plan was inadequate, and are attempting to address the plan’s shortcomings through other means. All of which suggests that we should not expect to see HCPs revised after monitoring, if monitoring exists. Instead, the lingering threat that the FWS will pull an incidental take permit may lead permit holders to fix HCP weaknesses through related planning processes because actors perceive the HCP process to be very cumbersome.

¹³ Following several years of implementation, some individuals wondered whether the HCP protected the most important sand sources for the dunes in the preserve system. The preserve manager accordingly commissioned geological field studies, which indicated that the western Indio Hills provide as much as 95% of the dune field sand source (Barrows, 1996). One study analyzed trace elements in sand grains (Meek and Wasklewicz, 1993; Wasklewicz and Meek, 1995). A second study used aerial photographs from 1939 to 1992 to analyze active sand movement (Lancaster, et al., 1993). Our subsequent analysis of remote-sensing data from Landsat satellites confirmed this finding, and pinpointed the sand source areas that require additional protection (Thomas and Schweik, 1999). We accordingly gave HCP participants in the Coachella Valley the raw data and processed images to aid them in adaptive management.

While this is a motivating threat, it has never actually been carried out, in part because HCP implementation is not systematically monitored, and in part because FWS officials work with permittees to bring them into compliance when problems are discovered.¹⁴

Similarly, we should not expect the FWS – the only consistent HCP participant – to monitor implementation because the agency’s Endangered Species Division is underfunded relative to its workload. Without additional funding, FWS staff are unable to monitor HCP implementation systematically. Given the agency’s backlog in listing species, developing required recovery plans, and reviewing HCPs currently being developed, there is little reason to expect FWS staff to monitor HCP implementation. Moreover, neither the FWS nor the Department of Interior seem particularly interested in developing a public HCP library, let alone a transparent monitoring program through which centralized actors and citizens can learn whether and to what degree HCPs are being implemented. We might even wonder whether high-level officials in the FWS and Interior are interested in learning from these experiments, given the dearth of centralized HCP monitoring within the federal government.

On the positive side, the FWS recently issued a proposed addendum to HCP guidelines.¹⁵ If approved, this addendum would lay out an adaptive management strategy, which could be required of specific HCPs if significant biological data gaps exist when the HCP is approved. For HCPs that incorporate this adaptive management strategy, the implementing agreement would state the range of possible adjustments and the circumstances under which they would be triggered. The proposed addendum also builds

¹⁴ Marjorie Nelson, Division of Endangered Species, U.S. Fish and Wildlife Service, personal communication, October 1, 1999.

on current guidance for establishing monitoring programs to ensure compliance with an HCP, and calls for increased public participation in the HCP process through a variable 30- to 90-day comment period (depending on the scope of the plan). If this strategy is adopted, it will be intriguing to see how it is reconciled in practice with the “no surprises” policy, which is the antithesis of adaptive management.

(iv) *Recombination*

Recombination refers to mechanisms of coordination among local actors and central authorities. Rather than acting autonomously, local actors learn from and coordinate their actions with other local actors and state structures. The key question for this criterion is: To what extent do these experiments incorporate recombinant measures that coordinate the actions of local units and diffuse innovations among them?

To answer this question in the context of HCPs, we should recall that some HCPs are submitted by a single applicant. In such cases, applicants believe they can solve the problems they face largely – if not entirely – by themselves. Hence, the only other actor with whom they work closely is the FWS, which approves their plan and issues the permit. This does not mean, however, that individual applicants can necessarily solve the problems confronting particular species, because they may not own or manage all of the species’ habitat. The term “habitat conservation plan” is a misnomer because HCPs need not cover a species’ entire habitat. Species preservation is often a collective-action problem because habitat sprawls across multiple ownerships and jurisdictions. The decision to submit an HCP individually rather than collectively is largely driven by an

¹⁵ “Notice of Availability of a Draft Addendum to the Final Handbook for Habitat Conservation Planning and Incidental Take Permitting Process,” *Federal Register*, Volume 64, Number 45, pp.

applicant's belief that he/she owns or manages enough of the species' habitat to determine his/her own destiny (Thomas, 1997b). In other words, neither the ESA nor FWS regulations require coordinated action. Instead, coordination occurs where and when it does due to the desire of applicants to pool land, water, information, money, and other resources as a collective means to remove themselves from the threat of legal challenges under the ESA. Hence, horizontal coordination varies with the degree to which habitat sprawls across ownerships and jurisdictions. The more interlaced these are, the more coordination we will see, both in planning and (presumably) implementation.

The Coachella Valley Fringe-Toed Lizard HCP, for example, includes nine cities and one county, along with developers, state and federal agencies, and other actors. Together, they designed an HCP that created a main preserve, two smaller preserves, and a fee area. In the fee area, developers could transform habitat by paying a per-acre mitigation fee of \$600 to a city or county. The local governments then forwarded the fees to The Nature Conservancy, which pooled the money to purchase preserve lands designated in the HCP. Developers and local government officials enthusiastically endorsed this fee-payment system because it greatly reduced the burden of complying with the ESA (Thomas and Schweik, 1999). In this case, local jurisdictions and developers created a novel means for addressing the common problem they confronted on lands they owned or managed. Ecologists meanwhile provided input on the design of the preserve system for the targeted species – the Coachella Valley Fringe-Toed Lizard.

This was the second HCP; and, like the first HCP on San Bruno Mountain, the innovations were locally developed and subsequently spread to other areas. One of the principal architects of the Coachella Valley HCP – Paul Selzer, a local attorney initially

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hired by one of the developers – has since built a career by diffusing HCP innovations to other areas, including the Clark County HCP for the desert tortoise near Las Vegas.

Another principal architect of the early HCPs was FWS biologist Gail Kobetich. Because Kobetich and Selzer, among others, lived in California, 12 of the first 14 HCPs were in that state, where the expertise resided. HCPs did not diffuse widely until the FWS issued draft guidelines that provided templates for those lacking expertise, and the Clinton Administration subsequently provided additional incentives to garner further interest from potential applicants.

Yet the role of central structures in the Clinton Administration has been largely one of policy diffusion, not monitoring and accountability. HCP guidelines help actors across the country learn about and copy experiments in California and other states, without having to hire or wait for experienced actors to appear on the scene. Interior Secretary Bruce Babbitt and his legal staff also roam the country, spreading ideas and encouraging local actors to undertake HCPs through centrally administered incentives such as the “no surprises” policy.

(v) *Schools of Democracy*

“For deliberative democracy to work in real-world settings with ordinary people, it must be able to involve individuals with relatively little experience or skills in the practices of democratic deliberation” (Fung and Wright, 1999:30). The key question for this criterion is: To what extent do the deliberative processes constitute schools of democracy?

No one has studied this question in the context of HCPs. Yaffee, et al. (1998) provide indirect evidence in their study of public participation during the planning process, but we currently lack direct evidence of whether HCPs enhance the deliberative skills of participants. Nevertheless, the public participation study is telling because the data and case study analyses suggest that public participation varies widely, and that some participants consider the planning process to promote negotiation and bargaining, rather than deliberation. Hence, we should wonder just how many people are learning deliberation in these schools of democracy.

Moreover, if one casually reviews the list of participants for HCPs with relatively broad participation, the participants appear to be highly educated and occupy important decision-making positions in society. They are not “ordinary” people. For example, the primary environmental protagonist in the Coachella Valley Fringe-Toed Lizard HCP during the planning phase was Allan Muth, Ph.D., director of the University of California’s Deep Canyon Desert Research Center. To the west, in San Diego and Orange Counties, one of the primary environmental protagonists in several HCPs has been Dan Silver, who previously practiced medicine. These individuals can not be considered “ordinary people.” Indeed, HCP planning and implementation require relatively high levels of commitment and knowledge to participate effectively. For this reason, extraordinary – rather than ordinary – people are likely to predominate. Yet HCPs can still provide schools of democracy for these individuals by providing an opportunity to learn deliberative skills, for which their professional and academic training did not necessarily equip them.

(vi) *Outcomes*

Are the actual outcomes of the HCP process more desirable than those of prior institutional arrangements? Perhaps the best way to analyze whether planning and implementation outcomes are preferred to other institutional arrangements is to examine the perceptions of those who follow and analyze HCPs.

With regard to the planning phase, scientists – particularly conservation biologists, who study the causal mechanisms of species extinction – have not been entirely pleased with HCPs. As a group, scientists have criticized the scientific standards and limited data underlying HCPs (Kareiva, et al., 1999). As individuals, scientists who have served on review panels for specific HCPs have also been critical of the disjunction between scientific guidelines and planning details. A prominent example of this occurred with Natural Communities Conservation Planning (NCCP), a multi-species program sponsored by the State of California for coastal sage scrub habitat in Southern California. NCCP is essentially a metaHCP, or aggregation of similar HCPs, because the FWS issues incidental take permits to subregional NCCP plans. In 1993, the NCCP scientific review panel was disbanded over conflicts between scientific guidelines and planning details. As two conservation biologists who served on this review panel later stated in their book, *The Science of Conservation Planning* (Noss, et al., 1997:58): “Local implementation of these guidelines and fulfillment of the research agenda have been troublesome, but nevertheless, they represent a rare conscious and formal attempt to integrate science into the decision-making process..” Such statements should make us wonder whether and to what extent HCPs benefit targeted species, given that conservation biology has much to say about the appropriate design of habitat preserves (Noss and Cooperrider, 1994).

Some environmental interest groups have criticized HCP outcomes. The National Wildlife Federation funded the critical participation study described earlier (Yaffee, et al, 1998) due to concerns about limited public participation. Defenders of Wildlife has also published a critical study of HCPs, giving similar attention to public participation, but also concerned with the absence of an explicit legal mandate for HCPs to promote the recovery of species (Hood, 1998). The Nature Conservancy, on the other hand, regularly provides financial and technical support to HCPs around the country. At the local level, some environmental groups also criticize HCPs, while others express enthusiasm.

This variation among environmental interest groups can be explained in two ways. First, some groups have been very successful pursuing litigation under the Endangered Species Act, and accordingly worry that HCPs compromise their comparative advantage in court and the ESA. By contrast, The Nature Conservancy never litigates; instead, it conducts on-the-ground preservation activities through real estate transactions and technical advice on preserve design. Thus, an environmental organization's perception of HCPs likely depends upon its propensity to litigate, since HCPs are an alternative to litigation and stalemate. Second, local environmentalists often have a social and economic stake in the communities where HCPs are developed. For them, HCPs allow for environmental protection, socioeconomic welfare, and local participation. Local environmentalists may be more open to a wider range of outcomes and strategies than national groups.

Some argue that the traditional alternative to HCPs – strict prohibition of take – has also been unsuccessful in recovering species (Rohlf, 1991). For evidence, one need only glance at the short list of species which have been removed from the endangered list

because their populations recovered. Whether HCPs help species more than the strict prohibition on take, however, is unknown. Logically, one might presume that no take is better than some take; but prohibition does not necessarily prevent take, while HCPs channel take in ways that (presumably) preserve habitat integrity. This remains a rhetorical debate, with thin evidence to sway neutral minds. In the meantime, Interior Secretary Bruce Babbitt has recently moved forcefully to downlist species, as a symbolic effort to demonstrate that the ESA actually brings species back from the brink of extinction.

In sum, litigation is necessary to provide the fundamental incentive for applicants to develop HCPs, but that does not mean that litigation alone leads to socially preferred outcomes. Thus, it is not clear whether HCPs improve upon the traditional command-and-control implementation of the ESA in terms of species protection. HCPs likely provide a better opportunity for citizens to participate in a deliberative process, but there is great variation in the extent of deliberation. Flexibility has also allowed some HCPs to be highly innovative – including developing fee systems to finance habitat preserves and designing plans that enhance positive externalities. Hence, every HCP has the potential to be a unique, innovative experiment in Empowered Deliberative Democracy.

Criticisms of the Empowered Deliberative Democracy Model, as Viewed from the HCP Experience

This section evaluates HCPs by the six potential criticisms of Empowered Deliberative Democracy (Fung and Wright, 1999:31-37), the first of which considers whether HCPs may evolve into forums for domination rather deliberation.

(i) *Deliberation into Domination*

One of the intriguing characteristics of HCPs is that the ESA levels the playing field by making actors relatively dependent upon one another. The desire for certainty among permit applicants is so strong that they actively seek to work with others who can help them create this certainty by warding off potential lawsuits over resource use. This mutual dependence increases the willingness of applicants to share information and resources, and decreases their potential dominance within deliberative arenas. One might argue that the moral character of HCPs is undermined by implicit or explicit threats to sue, but these threats bring actors to the table for long periods of time.

In the Coachella Valley, for example, a single individual brought developers to the table by threatening legal enforcement of the ESA – even though he possessed no obvious political, financial, or legal resources of his own, either to pressure the FWS to enforce the ESA or to mount a successful lawsuit. The mere threat of enforcement, which could halt development in the valley, was sufficient to bring developers to the table. Thus, the ESA leveled the playing field, on which developers would seemingly have the upper hand with millions of dollars in assets at stake. After deliberation began, The Nature Conservancy stepped in as a neutral partner, providing technical expertise in conservation biology (for designing the preserve system) and real estate transactions (for acquiring the property).

Unfortunately, this dynamic only applies *within* the deliberative arena, which can be relatively small and elitist. For most HCPs, participants are not typically ordinary citizens. They tend to be highly educated and informed. Few ordinary citizens understand how the ESA works, or have time to devote themselves to a lengthy planning and

implementation process. Thus, one might argue that the deliberative arena itself dominates over other parts of society. This concern may be assuaged where representation is broad, but single-applicant HCPs should give us pause to reflect, particularly when there is no public participation before the NEPA comment period or during implementation. In these cases, HCPs may be mechanisms for newly empowered applicants to pursue diluted preferences; they may not be experiments in deliberative democracy. HCPs indeed empower single applicants, but it would be hard to claim that single applicants deliberate in a democratic way, if they deliberate with anyone at all. To the extent that their use of natural resources perpetuates negative externalities for society, then HCPs might be considered a means for continued domination by the economically privileged.

(ii) *Forum Shopping and External Power*

Some HCP participants forum shop during the planning process. One might even argue that all permit applicants forum shop: that they initiate and complete HCPs because they believe they can achieve better outcomes through this process than through the ESA's otherwise prohibitive regulatory framework. As a corollary, one might also hypothesize that those HCPs which collapse during the planning process fail because applicants pull out when the expected value of participating in other forums exceeds that for the HCP. This represents a strong view of self-interested behavior, but it likely applies to some applicants. If it did not apply to some applicants, then we do not need the "no surprises" policy to keep them at the table.

Environmental groups similarly press their advantage outside the deliberative process when they become dissatisfied with HCPs. This usually means filing a lawsuit or whipping up a public relations frenzy against an HCP. In Southern California, Dan Silver has become notorious in this regard, particularly with NCCP. Silver directs the Endangered Habitats League, a small nonprofit representing dues-paying environmental groups. His reputation for leading HCP/NCCP participants to believe he is part of the deliberative process, and then to press his advantage outside the deliberative arena when dissatisfied with impending outcomes, extends beyond the HCPs in which he participates.¹⁶

In sum, HCPs likely exist due to forum shopping by applicants, while forum shopping by environmental activists has the potential to undermine HCPs. This is probably a good thing. After all, forum shopping by environmentalists provides a lingering threat that keeps applicants at the discussion table and prompts them to implement HCPs in a responsible manner. Since the threat of lawsuits gives applicants the basic incentive to develop HCPs, forum shopping by environmental activists before, during, and after planning is always a possibility. Forum shopping appears to be inherent in the process.

¹⁶ Silver focuses primarily on HCPs associated with Natural Communities Conservation Planning (NCCP), but his reputation extends further than his geographically isolated participation. In the Coachella Valley, a representative of the Building Industry Association (BIA) pointed to Silver as an example of destructive forum shopping – even though Silver and NCCP operated an hour or more to the west (Thomas and Schweik, 1999). Silver justifies such forum shopping by claiming that it provides clout within these planning processes (Yaffee, et al., 1998:xvi, note 16). Yet forum shopping during the planning process pushes HCPs towards traditional power-based bargaining, and away from deliberation.

(iii) *Rent Seeking vs. Public Goods*

Unlike forum shopping, it is difficult to put a positive spin on rent seeking. If deliberative experiments fall prey to rent seeking and capture by especially well-informed or interested parties, then empowerment becomes a means for self-aggrandizement. This is a common critique of HCPs, particularly single-applicant HCPs. According to this critique, the FWS allows applicants to pursue economic gain at the cost of species and habitat preservation, while requiring minimal mitigation measures to limit threats to species and habitat.¹⁷

Certainly, we should assume that HCP applicants attempt to better their position. Since HCPs are voluntary, applicants would not bother to prepare HCPs unless they believed that preparing and implementing an HCP was to their advantage. Yet the crucial question here is whether applicants – particularly single applicants – pursue or achieve outcomes that are primarily beneficial to themselves, while providing few (if any) positive externalities for society. In deliberative HCPs, participants design a preserve system for species with other social benefits in mind, such as where to zone open space and how to manage growth. In doing so, they also develop social capital, including skills for deliberative practice. When HCPs are prepared by single applicants, consideration of these positive externalities falls by the wayside. They become incidental to the HCP, rather than an integral part of it.

¹⁷ This critique has some empirical merit. Scientists evaluating the use of science in HCPs found that 85% of the species in their sample were protected by mitigation procedures that addressed the primary threat to the species' continued existence; but for only 57% of the species did they rate proposed mitigation procedures as sufficient or better, while 43% of the species were covered by proposed mitigation procedures that were "significantly lacking" (25%), "inadequate" (13%), or "extremely poor" (5%) (Kareiva, et al., 1999:39).

This problem can be addressed by requiring broader participation, transparency, and accountability. Broader participation leads to wider discussion of positive and negative externalities. Transparency allows observers to monitor HCP planning and implementation, and thereby to hold applicants accountable for rent-seeking behavior. Unfortunately, broad participation is currently only encouraged by federal HCP guidelines; and the FWS and Interior Department have done little to make the process transparent to the public. Anyone who has tried to find copies of HCPs, incidental take permits, and implementation agreements – whether in draft or final form – understands how far the system is from public transparency. A web-based library would be ideal; but, for now, simply creating a library would be a big improvement. Given the current role of centralized institutions, participation and transparency are problematic, which means that rent seeking is always a possibility.

(iv) *Balkanization of Politics*

At first glance, one might presume that HCPs necessarily Balkanize politics by focusing on a narrow issue (one or more endangered species) and limited geographic space (some or all of the habitat of these species). Indeed, some HCPs cover less than an acre, which suggests extreme Balkanization. Yet other HCPs cover more than a million acres, with the Wisconsin Statewide HCP for the Karner Blue Butterfly (which is nearing completion) topping out at 9 million acres. Again, the key point to consider is variation. While some HCPs may Balkanize the political arena through narrow scope and limited public participation, other HCPs clearly aggregate issues and factions. The potential for aggregation depends on the relationship between habitat boundaries, private boundaries,

and political and administrative jurisdictions. As previously noted, the larger the habitat, and the more fragmented the boundaries of private parcels and public jurisdictions, the greater the potential for aggregation. The ESA does not mandate coordinated action, but the logic of cooperation is compelling.

One might still argue that HCPs Balkanize politics by focusing only on endangered species. Superficially, this is correct. Yet the desire for an incidental take permit among applicants is so great that HCPs often become the focal document for general planning purposes, particularly in urban areas, where habitat is directly affected by numerous (sub)urban issues, including physical infrastructure, pollution, open space, development patterns, and transportation. Thus, HCPs have become the focal planning document in many urban areas as local actors fold zoning ordinances, development fees, and general plans into HCPs. This has certainly been the case with NCCP, which covers a planning area of 6000 square-miles in Southern California and 59 local jurisdictions. In the Pacific Northwest, the latest salmon listings will likely further the trend towards aggregation because future HCPs will have to incorporate the waterways through the cities, as well as the land-based activities that affect salmon, such as urban runoff, agriculture, and logging. Thus, the potential for issue aggregation is potentially great.

Even with respect to endangered species per se, Balkanization is a moot issue because there never existed a “Yugoslavia” of habitat conservation planning. Thus, HCPs have not fragmented and factionalized something that was previously unified. Prior to HCPs, the closest thing to habitat conservation plans were – and still are – recovery plans. Under Section 4 of the ESA, the FWS is mandated to prepare recovery plans for all listed species. These plans are supposed to identify the management responsibilities of

agencies and other actors with jurisdiction over listed species. Yet, the mandate to prepare recovery plans is not absolute, and the FWS failed to prepare recovery plans for 45% of listed species through 1992 (Smith, Moote, and Schwalbe, 1993:1051). Moreover, recovery plans are merely advisory documents, not binding agreements like HCPs. Thus, there was nothing to Balkanize through empowerment.

To the contrary, HCPs arguably aggregate preservation efforts in certain situations. As previously noted, species preservation is a collective-action problem when habitat is shared among multiple owners, agencies, and political jurisdictions. Rather than preparing individual HCPs, applicants can lower their transaction costs by sharing information, pooling resources, and developing integrated solutions to the common problem they face. Though federal regulations do not require applicants to plan for a species' entire habitat or to coordinate with others when preparing an HCP, the FWS nevertheless encourages them to do so. This occurred with NCCP in Southern California, where FWS staff made it known that anyone choosing to develop their own HCP outside the NCCP process would have to demonstrate that their plan was compatible with subregional NCCP plans (Thomas, 1997b). With the NCCP planning area covering 6000 square-miles, this incentive clearly aggregated, rather than Balkanized, participation.

Nevertheless, it is true that most HCPs focus on a narrow issue (species preservation) and a narrow geographic area (some or all of a species' habitat). Positive externalities may result from HCPs, and some HCPs cover large areas; but the planning process itself is relatively focused, particularly when public participation is limited. For single-applicant HCPs, Balkanization may indeed be a problem; but we will not know to what extent it occurs until researchers specifically study this issue.

(v) *Apathy*

Citizen apathy is a serious problem for HCPs because planning and implementation occur over many years – even decades. For most individuals, this is an unbearable commitment, unless it is part of their job description. Therefore, most HCP participants represent specific organizations, such as local planning agencies, state and federal agencies, environmental nonprofits, and private firms. “Ordinary” citizens rarely participate for sustained periods. This is not a critique of public apathy per se, which is indeed a problem for the Empowered Deliberative Democracy model; rather, it is a realistic assessment of the extraordinary time demands required to produce an HCP, particularly a multi-actor HCP – regardless of whether the HCP is ever implemented, monitored, or redesigned.

Effective participation also requires significant knowledge and information about habitat requirements, organizational planning processes, and deliberative skills. This is a relatively minor issue because participants can learn these things during the lengthy planning process. They need not begin deliberation with specific knowledge, information, and skills. They must, however, be willing and able to learn as they participate. Again, this requires an extraordinary commitment, one seldom found among ordinary citizens. If the Empowered Deliberative Democracy model requires participation by ordinary citizens, then HCPs will never become exemplars of the model without funding to support citizen participation. Such funding could come from the federal government, or it could be required of applicants as a condition of the incidental take permit. Both

scenarios are unlikely, however, given that current FWS guidelines only encourage participation, but do not require it.

(vi) *Stability and Sustainability*

The exponential growth in HCPs (cited early in this paper) suggests they are stable and sustainable. If this paper had been written in the 1980s, we might have wondered about future trends. Having been written in 1999, the current trend clearly suggests continued proliferation of HCPs in both number and geographic extent. The pool of potential applicants will remain large so long as the FWS continues to list species, which seems likely given that listing decisions must be based primarily on biological (rather than political) criteria. If human use of natural resources continues unabated, HCPs will likely thrive as the preferred means for nonfederal actors to comply with the ESA's prohibition on take, particularly if the federal government continues to provide applicants with specific assurances, such as the "no surprises" policy.

The important question is whether HCPs will thrive as experiments in Empowered Deliberative Democracy. As previous sections of this paper suggest, great variation among HCPs exists in how well they fit the model's six criteria. Deliberation and monitoring are particularly problematic, though the FWS is addressing the latter through a proposed addendum to the HCP guidelines. Forum shopping, rent seeking, and apathy also pose problems for some HCPs. In light of these shortcomings, we should consider alternative institutional arrangements to enhance habitat conservation planning, so that HCPs better approximate experiments in Empowered Deliberative Democracy.

Suggested Reforms

Some reforms seem obvious, if not politically feasible. A centralized library of HCPs and related documentation, including findings from monitoring programs and implementation evaluations, would enhance transparency and accountability. A web-based library would be particularly helpful in light of the proposed HCP guidelines requiring expanded public participation and well-formulated monitoring programs. These are relatively easy reforms. More ambitious would be federal funding of implementation evaluations. Since HCPs are experiments, the federal government should fund studies to analyze how well they work during implementation. A much more ambitious reform would be to terminate the “no surprises” policy. Doing so would encourage adaptive management by permit holders, but it would likely reduce the number and scope of HCPs. In the current political climate, more HCPs are preferred to well-designed HCPs, so this reform may not be feasible.

The most challenging problem for HCPs is deliberation. Even if federal HCP guidelines, rules, or laws mandate increased public participation, more deliberation will not necessarily result. As the quote from one participant in the Balcones Canyonlands HCP suggested, the HCP process may institutionalize bargaining and compromise rather than deliberation. Indeed, centralized directives can not mandate deliberation per se. If participants view habitat as a zero-sum pie, then they will likely fight over how much of their piece of the pie must be preserved rather than consumed, which means the standard pluralist model of bargaining and compromise will prevail. From a scientific perspective, however, this is the wrong view. Information and knowledge about the relationship between species and their habitats is constantly changing. Hence, the habitat pie is not

fixed. Viewing it as fixed is to ignore the evolving nature of scientific knowledge and the accumulated information gleaned from monitoring programs.

This is why adaptive management is crucial to environmental policy applications of the Empowered Deliberative Democracy model. If HCPs are framed in terms of adaptive management, then monitoring, evaluation, learning, and redesign can occur. Since learning implies that individual preferences and strategies are not stable, deliberation entails willingness and ability to learn. The fundamental weakness of the “no surprises” policy is that it sacrifices long-term adaptive management and deliberation for short-term bargaining and compromise. In a world of limited regulatory surprises, the habitat pie is relatively constant and participants grind out rational-comprehensive plans. Even a devoted pluralist like Charles Lindblom (1959) understood that rational-comprehensive plans are technically infeasible. Yet, forty years later, such plans are still being promoted under the “no surprises” banner. Admittedly, fewer actors will participate in HCPs without the “no surprises” guarantee. Yet those who do participate will be much more likely to do so in a deliberative manner.

Finally, it should be noted that HCPs and traditional enforcement of the prohibition on take are not the only conceivable alternatives for protecting endangered species. While they are the two alternatives recently practiced, other possibilities for regulatory reform exist, none of which have been considered in this paper. For example, community-based watershed organizations are rapidly spreading throughout the country, and they routinely employ deliberative decision-making processes (Thomas, 1999; Moseley, 1999). While they focus on many issues, community-based watershed organizations do not necessarily focus on endangered species or habitat conservation, so

it is not clear whether they are a viable alternative in this regard. Nevertheless, like other environmental models, such as ecosystem management (Cortner and Moote, 1999), community-based watershed organizations may better approximate the Empowered Deliberative Democracy model on some criteria.

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