

**DRAFT**



# MEMORANDUM

Date: April 1, 2002

To: The Honorable Chair and Members  
Pima County Board of Supervisors

From: C.H. Huckelberry  
County Administrator

A handwritten signature in dark ink, appearing to read "CHH", is written over the printed name "C.H. Huckelberry".

Re: Mitigation Land Banking

## I. Background

During the last two years the Arizona Open Land Trust has collaborated with Pima County to host a number of workshops for the Ranch Conservation Team of the Sonoran Desert Conservation Plan. These well attended workshops have covered topics ranging from conservation easements, to adaptive management, to estate tax planning. The attached proceedings are from a recent workshop on the topic of mitigation land banking.

## II. Workshop

The Mitigation Land Banking workshop featured Mr. Michael Bean, who is an attorney with the Environmental Defense Fund in Washington D.C., and he is currently Chair of its Wildlife Program. Mr. Bean leads legislative and policymaking activities for the organization; he testifies frequently before Congress on endangered species policy issues; and he serves as a consultant to national and international wildlife groups. Mr. Bean has published numerous articles on wildlife conservation and wildlife law, and he is the lead author of *The Evolution of National Wildlife Law*, a comprehensive analysis of federal wildlife conservation law that has been influential for the last quarter century and is now in its third edition. Mr. Bean's three hour workshop in March of 2002 provides an overview of types of mitigation banking activities that have evolved from the Army Corps of Engineers wetlands banking. The discussion provides important distinctions between traditional practices in the area of mitigation banking and banking for endangered species purposes. The potential role of private sector in this market is described, as well as the roles of federal and local government participants.

## III. Conclusion

Both the Science Team and the Ranch Team for the Sonoran Desert Conservation Plan have held regular workshops over the years that have proven to be both useful and popular. Future sessions on topics including biological monitoring and determining costs for long term conservation management are being planned now. The proceedings of these events will be widely available, and the events will be open to the public.

Attachments



# Sonoran Desert Conservation Plan

## PIMA COUNTY SONORAN DESERT CONSERVATION PLAN CONSERVATION TOOLS WORKSHOP SERIES

MARCH 8, 2002

Sponsored by the Arizona Open Land Trust

Featuring Mr. Michael J. Bean

Michael Bean is an attorney with the Environmental Defense Fund in Washington D.C., and he is currently Chair of its Wildlife Program. Mr. Bean leads legislative and policymaking activities for the organization and he serves as a consultant to national and international wildlife groups. He has published numerous articles on wildlife conservation and wildlife law, and he is the lead author of *The Evolution of National Wildlife Law*, a comprehensive analysis of federal wildlife conservation law, the third edition of which was published in 1997.

### MICHAEL BEAN

Good afternoon everyone; it's an honor for me to be here. Let me compliment those of you who are part of this Sonoran Desert Conservation Plan planning process to protect the environment and so forth and I gather that the Steering Committee of which at least some of you are actually members has had recent successes and is to be congratulated. Let me echo that and encourage you to keep up the process of developing that plan. Let me tell you what my plan is for the afternoon.

- The first thing I want to do is give you a brief history of mitigation banking or conservation banking as it is sometimes called.
- I want to step back from that history to go over a few key terms and few ideas to give you a sense of the various strategies for accomplishing mitigation and explaining it.
- We'll take a break I would guess in about an hour into this presentation.
- And then we'll come back for a more detailed focus on conservation or mitigation banking, sort of a how to do it.
- We'll have at least one-half hour for questions. Let me say that I don't mind taking questions.

In preparing for my trip out here I read some of the background material and something just jumped off the page. It was the discussion of the Gila Top Minnow and I quote, "meaningful recovery will have to involve private parties and it will have to provide rewards." It is probably true not just for that particular species, the Gila Top Minnow or most endangered species in general.

The topic we're going to be discussing today -- mitigation banking -- is potentially one means of providing rewards or incentives for landowners. I hope that what I will be discussing today will be viewed by you as helpful to your situation but I don't want to exaggerate to you that it's necessarily going to be easy.

### Information Sources

The first slide just lists a few information sources about the topic I'm going to be discussing today because quite frankly, some of what I have to say is a little bit abstruse and my presentation is necessarily not an overview and therefore, some of you may have the desire to dig a little more deeply for some of these topics. If that's the case, we'll find at least three-fourths of the information quite useful.

The first website is for a group called Environmental Law Institute. They list the preliminary result of their Wetlands Mitigation Banking Study, and what this study is intended to do basically is to survey and describe all of the Wetlands Mitigation Banks currently operating throughout the country. They currently only have preliminary results of that study and will shortly have the total results of this study and it will be a very excellent source of information about where they are, who is doing it, what resources it covers and it will be a very good source of information. Likewise, on Wetland Mitigation Banking, there is a great deal of very useful information on the website of the Army Corp of Engineers. The Army Corp of Engineers has commissioned a National Wetlands Mitigation Banking Study. The topic today is not limited to Wetland Mitigation Banking. The last website here is in the State of California.

### **Information sources:**

- **Environmental Law Institute**
  - **Wetlands Mitigation Bank Study in progress**
  - **Preliminary results at <http://www.2.eli.org/wmb/>**
- **Army Corps of Engineers**
  - **National Wetlands Mitigation Banking Study (nine reports)**
  - **<http://www.iwr.usace.army.mil/iwr/Services/PDCPNWetlandsM.htm>**
- **State of California**
- **<http://www.dfg.ca.gov/hcpb/conplan/mitbank/mitbank.shtml>**

## History

I will give you a brief history of conservation banking. The Clean Water Act as most of you probably know requires that anyone who builds a wetland has to get a permit, generally from the United States Corp of Engineering. The Army Corp of Engineers will issue permits generally provided that the person who builds that wetlands agrees to mitigate in some manner towards any environmental impacts.

Mitigation can take a variety of forms, including the purchase of an existing wetlands site or the restoration of a site. This practice historically was done on a project by project basis with each new developer, highway builder or what have you going through this process of determining what mitigation was appropriate for his or her impact or project.

Somewhere along the line, the Highway Department realized that they were going to be in the business of building highways forever, and they were going to be committed to the building wetlands in association with the impacts of those highway projects

So some of the big highway departments asked, wouldn't it make more sense to get ahead and for each new highway project anticipate our future need for mitigating the impacts of the highways we know we're going to be building over the next several decades and start today to either acquire some wetlands sites or form a wetland, or maybe enhance some of the sites that are in existence today ?

That really was the origin of this notion that some projects can begin to bank credit for mitigation actions to use those credits in the future to offset the impacts

Landowners got a similar notion, and their idea was, well there are a lot of private parties, developers and others who are required to mitigate for the impacts of their wetlands. That is sort of a quick history of how this concept mitigation arose in the wetlands concept. Those of you who are familiar with wetlands mitigation banking know that although there are some arguments that I've summarized for the virtues of wetland mitigation banking, the actual practice has sometimes fallen short, and that has meant that many people get persuaded that wetland mitigation banking is as good as its proponent claims to be.

Be that as it may, there is also now interest that is reflected in the 1995 position of the State of California, which has a conservation banking policy that applies to wetlands mitigation and species of a special habitat. It perhaps has useful application to conservation banking.

Wetland mitigation banking by the highway department began around 1980 and entrepreneurial banking began within a few years after that. Another key date in the history in 1995 when the Corps of Engineers, Fish and Wildlife Service and EPA among others propagated interagency guidance on wetland mitigation banking. The affect of that guidance was to make clear for everybody what the process was going to be, what the rules were going to be, what the standards were going to be and so forth since the promulgation of that guidance the business if you will, the wetlands mitigation banking has become more standardized and more regularized.

So let me turn to a few key terms and this in the short while I've been here I'm aware that there are some different understanding on what mitigation terms in particular, as shown here.

### **Definitions of Key Terms**

- **Mitigate**
- **Mitigation (or Conservation) Banking**
- **In-lieu Mitigation**

Mitigation or mitigation banking or in-lieu mitigation.

### **Mitigate**

- **General Dictionary Definition**

to cause to become less harsh or hostile; to make less severe or painful  
Mitigate suggests a moderating or countering of the effect of something violent or painful

- **In an Environmental Context**

Avoiding, minimizing, compensating for, or rectifying detrimental impacts to a particular resource (e.g., wetlands, other natural communities, endangered species, etc.)

The dictionary definition of the term mitigation is fairly straightforward, it's to cause to become less harsh or less severe or painful. To moderate the undesirable affects of some activities in an environmental context.

What mitigation means is avoiding, minimizing, compensating for, or rectifying detrimental impacts to a particular resources.

Whether that resource is wetlands or other natural communities, mitigation can be any or all of these things.

The first two verbs there, avoiding and minimizing are not what I'm really going to be talking about today because what that means is when land developers or land users in general are doing something that has a detrimental impact to a particular resource.

One of our strategies for dealing with that is to try to avoid those incidental impacts altogether and minimize those detrimental impacts assuming that it is impossible to avoid altogether the detrimental impact then the question is, how do you compensate for those that are unavoidable?

## **Mitigation (or Conservation) Bank**

- **For wetlands ...**

**"A site where wetlands and/or other aquatic resources are restored, created, enhanced, or in exceptional circumstances, preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources."**

- **In general ...**

**"A site where particular natural resources are restored, created, enhanced, or preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources."**

Here's the definition of wetlands mitigation. That definition is as shown here. (Shown on previous page as Mr. Bean reads it for audience). That definition as used in the wetlands context is a useable definition from which to generalize for natural resources, conservation banking or mitigation banking much like it's authored here is my definition that I'm going to be using. (Mr. Bean reads for the audience the In general term above).

As I recounted for you a few moments ago, the history of wetlands mitigation banking the arguments of the proponents for banking made was that mitigation takes place in advance. That was a strong point on their part because one of the concerns about traditional mitigation, that is project-by-project mitigation, often isn't effective.

## **Types of Mitigation (or Conservation) Banks**

- **Single-user banks (banker banks credit for its own later use)  
e.g. State DOTs**
- **Entrepreneurial banks (banker banks credits for later sale to third parties)  
e.g., numerous privately owned wetland banks**

A brief history of wetland mitigation banking. I emphasize that there are really two types of banks, two basic types. The so-called friendly user banks in which the banker, the person who has created the bank doing the advance preparatory mitigation intends to use those credits himself in the future, just like the state highway department. Here I gather the County may be at least considering a mitigation bank for development activities on County land. The second category is entrepreneurial banking, a bank in which basically a private party wants to invest in conservation, that's in preserving existing habitat, restoring existing habitat, enhancing it, improving it to realizing a financial return. Now these two categories aren't necessarily mutually exclusive. They can be sort of a blending of the two in that so called friendly user bank sometimes can be structured so that the person who creates the banks uses some of the credit from that bank for him or herself and then has excess credits to bill third parties.

## **In Lieu Mitigation**

- **The collection of fees in lieu of requiring a developer to compensate for resource losses through on-site mitigation or acquiring credits from a mitigation bank.**
- **Fees transferred to a fund managed by a designated resource agency or private organization for use in mitigating projects.**
- **Differs from mitigation banking in that mitigation occurs after permitted impacts, not before.**
- **Many regional HCPs are essentially in-lieu mitigation arrangements (i.e., landowners mitigate by paying a fee that goes into a fund for conserving reserving resources elsewhere)**

Now let me talk about what I describe as in-lieu mitigation because in conversation recently I realized that a lot of people look upon this as mitigation banking, and let me explain what this is and why I treat it differently from what I described.

The first bullet here is really a definition of it. (Mr. Bean read the first bullet item for the audience).

What that means is, I think this, I apologize, this definition is a bit garbled here as there are a few words left out of it.

This is in-lieu of.... In-lieu of doing on-site mitigation or in-lieu of establishing a bank you simply tender a fee, you pay an amount to somebody else. That somebody might be a County agency, it might be a private party, and that entity then uses the money that it has collected, this sum for purposes that are intended to be compensatory for meeting the purpose of the Bank.

Now what is different about in-lieu mitigation generally and conservation banking is that the mitigation occurs after the impact occurs, typically.

There are many regional habitat conservation plans that are essentially in-lieu mitigation arrangements.

Landowners in the County or in a specified area pay a per acre fee for development activities. That goes into a special fund and that fund is then used to acquire resources in some manner.

That's very typical of doing the mitigation yourself or in-lieu of purchasing a credit from an existing bank.



## Other examples of in-lieu mitigation arrangements

- **NFWF funds for Houston toad, red-cockaded woodpecker**
- **Several wetland programs**

Other examples from elsewhere in the country: there's an organization called the National Fish and Wildlife Foundation which is sort of a Congressionally chartered entity that has a fund for the Houston toad, and a separate fund for another endangered species call the red-cockaded woodpecker. Basically in both cases, landowners who carry out development or activities that give rise to the need to protect those species pay to the National Fish and Wildlife Foundation and then when its count reaches a certain level there are several wetlands programs around the country which are funded. One of the criticisms of it is that it is often difficult to trace the relationship between the activities for which the landowner pays and mitigation eventually gets done.

## Definition of Related Terms

- **Sequencing of mitigation**
- **On-site mitigation**
- **Off-site mitigation**
- **In-kind mitigation**
- **Out-of-kind mitigation**

I gave a number of terms already that are probably familiar to most of you but if not all of you, I'll go quickly through them: Sequencing, on-site and off-site mitigation, in-kind and out-kind mitigation.

- In the wetland context, sequencing is very important to do and it's sort of written in stone now that the first thing you do, with any given project, is try to avoid the impacts.
- The corollary of that is if you can you should at least minimize the impacts to the wetlands, that is sequence mitigation.
- And then the third and usually final step is that which you cannot avoid, you need to compensate for.
- In some cases, the cases of activities there are temporary measures and then the developments later remove like an oil drilling pad or something, you might rectify for the loss by reclaiming the site after the impact.

But, these are the steps that are built into wetland mitigation sequencing and there is sometimes a tendency to assume naturally that these same sequence of actions should be a resource but after actually some don't necessarily subscribe to that because of the fact that for some resources it may not be that important to protect each resource at risk.

Wetland context sequencing is written in stone.

### **Sequencing of mitigation**

- **First avoid**
- **Then minimize**
- **Then compensate**
- **And sometimes, rectify**

### **On-site mitigation**

- **Occurs at or very near the site of the activity to be mitigated**
- **Federal wetlands mitigation policy generally favors on-site mitigation**

On-site mitigation means that the mitigation takes place at the sites of development. Now literally that can't be exactly at the site, it usually means on the same parcel as the development so immediately adjacent to development. Wetlands mitigation policies generally favors on-site mitigation.

### **Off-site mitigation**

- **Occurs away from the site of the activity to be mitigated**
- **Banking and "in-lieu" mitigation are always off-site mitigation**

Off-site is just what you would expect, the off-site mitigation takes place somewhere other than the location of impact. And again, banking and in-lieu mitigation they are both always off-site.

### **In-kind mitigation**

- **Compensates for the loss of particular resources by creating, restoring, or preserving resources of the same basic kind (e.g., ironwood forest habitat for ironwood forest habitat)**
- **Federal wetlands mitigation policy strongly favors in-kind mitigation**

In-kind mitigation. The notion here is that if you lose a particular type of resource from development or other activities you want to compensate for that particular type of resource by protecting, restoring, enhancing, the same basic kind of resource.

The notion is you are losing ironwood forest habitat you would compensate for that by protecting or enhancing or restoring ironwood forest habitat, not something different.

### **Out-of-kind mitigation**

- **Compensates for the loss of particular resources by creating, restoring, or preserving a different kind of resource (e.g., ironwood forest habitat for cienega habitat)**
- **Query why out-of-kind mitigation should be disfavored if it provides a means of trading the loss of relatively more common habitats for creation, restoration, enhancement or preservation of relatively rarer habitats?**

### **Laws Requiring Mitigation**

- **Fish and Wildlife Coordination Act**
- **Clean Water Act**
- **Endangered Species Act**
- **Others (e.g., local tree planting ordinances, impact fees, etc.)**

The ultimate program is a law called Fish and Wildlife Coordination Act. There are several laws largely that apply to major water development projects of that scale.

The Clean Water Act has provisions for wetlands and mitigation that can be used for banking.

The Endangered Species Act, because of its prohibitions and permit requirements, the mitigation requirements are another potential source of mitigation banking.

And then again as I tried to make this point earlier, any law or ordinance that requires landowners to protect particular resources might create mitigation bank opportunities.

### **Mitigation Policies**

- **Clean Water Act**
- **Endangered Species Act**
- **California State Law**

I mentioned that under the Clean Water Act, the EPA and Fish and Wildlife Service in 1995, published this Comprehensive Interagency Guidance that sets out the expectations, standards and so forth. Those policies are relatively clear and reasonably comprehensible.

In contrast, under the Endangered Species Act there are, as yet, no mitigation banking policies that have been adopted.

Banks proved in various places around the country that there is nothing comparable to the interagency guidance that came under the Clean Water Act. So to some extent just as in the wetlands context, there is a lot of experimentation with banking.

## **Clean Water Act Mitigation Policies**

- **Federal Guidance on Mitigation Banks and the Section 404 Program published November 28, 1995**
- **Federal policy on in-lieu mitigation in CWA published November 7, 2000**

Just for references to the Clean Water Act Mitigation banking policies, actually, there is now both under the Clean Water Act, a policy which was done November 28, 1995. Recently there was a federal policy on in-lieu mitigation under the Clean Water Act.

### **Federal Guidance on Mitigation Banks and the Section 404 Program**

- **Favors small service areas**
- **Allows preservation only in exceptional circumstances**
- **Limits the use of public lands**
- **Allows limited advance crediting**
- **Allows less-than-permanent protection in exceptional circumstances**

Federal policy tries to in many ways to track the banking problems. Just a few highlights about the mitigation banking policy of the Corp of Engineers and other federal agencies. First of all, what is meant by service area is any given bank is permitted to sell credits for impacts within a defined area. That defined area in the case of Section 404 wetlands program is usually a very small defined area. Typically a small wash of any adjacent wash. Wetland banking policies also limit the use of public land. Actually what the policy says is that all these other activities taking place on public land are additive to what was already the management plan for that land, additive to long term preservation. That public property or bank will only be credited if the written policy can be accomplished.

### **Federal policy on in-lieu mitigation in CWA**

- **Generally tried to impose standards for in-lieu arrangements similar to banking standards**
- **Restoration favored over preservation**
- **Funds should be used to replace lost resource functions and values, not for education, research, etc.**
- **Funds collected should ensure a minimum of one-for-one acreage replacement**
- **Land acquisition and initial physical improvements should be completed by first full growing season following initial collection of funds**

Federal policy in-lieu of mitigation: this as I mentioned is a relatively new policy, it's about a year and a half old and basically what happened here was again, the folks who had invested in wetlands banking began to cry foul that they were subject to some fairly detailed requirements in the 404 banking policy, requirements relating to the requirements related to proof of success of their restoration efforts and so forth and they saw nothing comparable applying to these in-lieu mitigation scenarios and so, they complained there was a double standard at work.

## **ESA Mitigation Policies**

- **No written policies re banking or in-lieu mitigation as such; however, both are addressed in the FWS/NMFS HCP Handbook, pages 3-19 to 3-26**

As I said earlier, under the Endangered Species Act there is no written policy in use for either mitigation banks or in-lieu mitigation.

## **California Mitigation Policies**

- **Official Policy on Conservation Banks published April 7, 1995**
- **Applies to wetlands, endangered species, environmental sensitive habitat areas, and other resources**

Then as I mentioned in the beginning, the California Policy: it's noteworthy because of its scope. It's one policy that supports the wetlands as well as endangered species and even other resources in environmentally sensitive habitat.

We'll break for fifteen minutes.

## **What do Conservation Banks have to Offer?**

- **From the Government's Perspective**
- **From the Banker's Perspective**
- **From the Regulated Community's Perspective**

There actually is an association of wetland mitigation bankers, I think it's the National Association. Who are those people? I'm not sure if I can characterize it very well. There are, well they have land and they are risk takers because this is not by any means a risk free venture.

They tend to be people with business backgrounds. In some cases they are people who have been in the development business and have on the other hand, been having to perform mitigation.

In some cases, they are the consultants who work with landowners to put together mitigation packages so it's a learned art of how to do mitigation, wetland mitigation so now they have launched the business of supplying these services in the form of a wetland mitigation bank.

Some of the conservation bankers there are simply people who own a piece of land that is in some way, constrained by the presence of environmental resources that affect its culpability and for them, they have come to the realization that the highest and best use of their land is as mitigation for developing somebody else's land and so they are product maximizers but because of the attributes of their land they know and believe that they can maximize their value for mitigation purposes as opposed to running the gauntlet of regulatory approval for other uses. So that's the best I can do for characterizing this.

## QUESTIONS ASKED DURING BREAK:

There were a couple of questions during the break that I thought I would address now before moving back to the formal presentation.

One was, are any uses of land in banks allowed for economic uses or is it strictly, are the banks strictly in the preservation use, so no other income generating use can be made of it?

And the answer is, there is not necessarily any prohibition against other income generating uses. Any income generating uses whether it's lease, hunting, cattle grazing, timber harvest and what have you would have to be compatible with the resource objection establishing the bank and if those uses in any way detracted from the quality of the resulting environmental improvement bank that would probably be reflected in the amount of credit that was recognized by the bank, but there is no crossover or prohibition.

Another question was, what happens if for example, the bank is set for some particular endangered species and despite the best efforts of the landowner, the banker that species just disappears for whatever reason, what happens then?

What the wetlands policy does is typically obligate the banker to carry out certain activities to try to restore habitat that may be lost due to fire or unexpected contingencies and may obligate him to provide some financial security that those banks will, in fact, be done in that eventuality, but if it is...as a practical matter simply impossible to restore the resources from which the bank has created, that would mean that no credit at that point would not be available for sale but for a full credit would not be effective. In other words, to the extent the bank only sold credits to mitigate something else and a contingency arose that destroyed the bank that doesn't reopen the validity of those previous sold credits, although the landowner or the banker may have an obligation, typically would have an obligation were it feasible to try to carry over what has been lost by fire or unforeseen contingencies.

Another question is: If there are multiple banks in a given area who decides from whom, the bank the credits can be purchased and is it possible for one banker to sell credits for less because his cost may be less than another?

The answer is, yes it is possible to have competing banks in a given area. In every case the regulatory agency, whether it's the Corp of Engineers for wetlands or the Fish and Wildlife Service for a or somebody else for some other resource, they will determine who will be part of the agreement that the banker enters into when he establishes his bank the service area, that is the area within which it can be sold.

There may be more than one bank in a given service area and the amount that a banker wants to charge for credits from his bank is determined by the market. So if Banker A wants to sell credits for less than Banker B, they can compete for buyers within that service area and so you are right, that if a given landowner can accomplish an environmental result that produced a credit more cheaply than somebody else you have the competitive edge over that competitor.

Another question is, what happens when all the credits in the bank have been used up, sold or used up? What happens to the land and the bank at that point?

Several things can happen, some banking agreements provide that when all the credits are sold, the property will be deeded over to somebody else, to the local government or state government or what have you for the reason you give. If the landowner isn't using the land for any other purpose consistent with conservation purpose it no longer has any value to him so he's happy to transfer the deed to a governmental agency or even a conservation organization. In other cases, the landowner may want to keep the land because there are other compatible uses.

Another question is: what's the rate of return?

I don't know what the rate of return is quite frankly. Certainly some of the effort that wetlands mitigation banking have not succeeded, others have been successful. You said it is something for big business only, no, I don't think it is necessarily. Certainly landowners who have significant land resources with potential.....with significant resource values associated with those can with relatively little investment set themselves up in business if they choose.

Another question is: are the tax benefits that are typically associated with conservation easements available when the conservation easement is used as part of the bank?

Well first of all, I believe that the charitable deduction for a conservation easement if it's in the case of a donation easement to a qualified recipient and in the case of mitigation banks, I don't think that the conservation easement would typically qualify as donating. You are, in fact, exchanging an easement in return for the right to sell credits from the bank so you wouldn't get that tax benefit.

The fact that the land is subject to an easement presumably reduces its value for the purposes of the state tax valuation and maybe even property tax valuation, that was presumably be the same but of course, the credits generate income which you would not have from a donated conservation easement so those are some of the similarities and differences.

Another question is: would it make a difference if the easement was donated to a nonprofit organization?

Let me qualify my answer by saying I'm way beyond my area of expertise in talking about tax laws. I'm not sure it would make a difference with this possible exception.

A landowner who sells all the credits in his bank and that bank is subject to a conservation easement presumably, if he's not obligated to deed the land somebody else could, of his own volition, choose to deed the land to somebody else. In which case, the value of that land as qualified by an easement would be a charitable donation to a nonprofit organization.

Another question is: what is the length of time that a mitigation bank has to be in existence, it was the length of time for which a conservation easement has to be in existence as part of the bank, is that right?

Okay. Well in the....let me explain what the California policy is because it's fairly straightforward. In California, under their policy, as soon as you sell the first credit from the bank you must convey the current easement covering either the entirety of bank or some recognized phase of the bank. In California the possibility exists from phasing in a piece of property, the bank buys pieces over time. Now there you have future sale of the first credit or proof of credit, the conservation easement has to be conveyed, and that is an easement in perpetuity so that's the answer for the length of time of the easement. Now the bank, you know, the bank can have a life that is short or long, it continually if the bank sells all the credits quickly and the landowner no longer has credits for sale, to sell it's no longer functioning as a bank but it is subject to an easement that is in perpetuity. On the other hand, if the bank doesn't sell credits quickly the bank can be open for business for a long time the longer it takes to sell credits. So the answer to that question is, it depends.

Any other questions? All right, let me just at this point just quickly summarize what are the, at least the theoretical advantages of conservation banking. From three different perspectives, the governments perspective, the bankers perspective and the regulated communities perspective.

#### **From the Government's Perspective**

- **An opportunity to enlist non-federal landowners in conservation efforts on voluntary basis while providing regulated interests additional mitigation options**
- **An assurance that mitigation efforts are successful before impacts are authorized**

From the governments perspective the main advantage of banking is that it provides a means to enlist voluntarily, non-federal landowners in conservation activities while at the same time, giving additional mitigation opportunities to regulated parties. In general, from the governments perspective the virtue or one of the virtues of banking is that it provides assurance that mitigation efforts are successful before impacts are authorized.

#### **From the Banker's Perspective**

- **An opportunity to generate income from investing in conservation on suitable land**

From the bankers point of view, the potential benefit is that it creates an opportunity to generate income from investing in conservation on suitable land. It's a way of diversifying, if you will, your potential income stream from your property. It's a way, in other words, of turning resources, natural resources on your property that aren't typically valued like some endangered species aren't typically valued by the market from liability to the potential asset.



### **From the Regulated Community's Perspective**

- **An opportunity to choose among a greater variety of mitigation options**
- **Predictability of Mitigation Requirements**
- **Transfer of responsibility for success of mitigation to a third party (the banker)**
- **Potentially an opportunity to reduce the costs of mitigation**

And from the regulated community's viewpoint, the viewpoint of those who might buy credit, at the very least they need the additional option for mitigation that would no longer work. It's to provide some predictability of mitigation requirements because typically it entails some clear set of rules of how debits and credits are going to be determined so that people who are regulated know what their responsibilities will be. It also allows a regulated party to get off the hook for responsibility for the upkeep of mitigation by transferring that responsibility.

### **Major Issues for Conservation Banks**

- **How does a mitigation (or conservation) bank get established?**
- **What should be included in a mitigation banking agreement?**
- **What is a bank "service area"?**
- **What is the currency for credits and debits (i.e., what is being traded)?**
- **How should mitigation ratios be set?**
- **Should the preservation of existing habitat generate credits?**
- **Should credits ever be used before the success of mitigation is established?**

As I have indicated throughout, there are some major issues that conservation banks face, particularly the non-wetland banks, the endangered species banks, the habitat driven banks.

Those are, first of all, how these banks get established, what goes into a mitigation banking agreement? Again, the service area I talked about previously, what is the service area for a bank? What is the currency for debits and credits and what exactly is being traded here? And how do you get your hands around that? What are the mitigation ratios? What, if you are developing a particular piece of property that affects an acre of habitat, how many credits are you going to be required to buy in order to do that? Should preservation of existing habitat generate credit?

I pointed out that at least in the wetland policy that is strongly disfavored. And should credits ever be used before extensive mitigation is established? Again the wetland policy allows limited credit use. Let's look at these questions one at a time.

**How does a mitigation (or conservation) bank get established?**

- **Essential first step: Develop a banking agreement.**
- **Parties must include the relevant natural resource regulatory agency, the prospective banker, and possibly others**

How does a bank get established? Well, the essential first step no matter what type of bank it is enter into a so called banking agreement. That is an agreement that includes a landowner and the regulatory agency that is going to recognize credits in that bank. So if it's a wetlands bank that means the Corp of Engineers can be the state agency. If it's an endangered species bank, that means Fish and Wildlife Service and perhaps the state counterpart. If it's some other regulatory agency for some other resource, that agency and that landowner then have to be parties to this agreement.

**What should be included in a mitigation banking agreement?**

- **Identification of the bank site and the management actions to be undertaken there.**
- **Identification of the "service area" within which credits can be used.**
- **Explanation of how "credits" will be earned and "debits" assessed and mitigation ratios established**

The agreement has to identify what the bank site is. The site can be all of a piece of property or all the parcel or a portion of the parcel but it has to be clearly said at the outset, what's in the bank and what isn't? So at least what potentially is in the bank and what isn't.

**What is a bank "service area"?**

- **The area within which credits from the bank may be used to mitigate impacts to protected resources**
- **Large service areas facilitate trades**
- **But, large service areas also make it more difficult to ensure the comparability of what is being traded**

And then the service area question. If this bank works and generates credit, where can those credits be sold? Where is the geographic boundary within which the market is going to exist? And I pointed out that in the wetland context those areas can be very small for the reason that many of the values of wetlands are specific to particular watersheds in which they are located so allowing sale of credits outside of watersheds loses some of those values.

In the endangered species context that may or may not be the case. At least for some endangered species it may matter relatively little that the species are protected in Area A if it's protected in Area B so there may be greater latitude to allow for larger service areas for endangered species but not necessarily is it always the case.

There may be circumstances in which an endangered species in a particular area is important to keep in that particular area, therefore, you would not expect the Fish and Wildlife Service to enter into a banking agreement that allows development occurring in that area to be compensated by purchasing banks in the area. It's important that that bank agreement clearly identify where the service area is.

And then this is the most complex and vital task. How are credits to be earned? How are debits to be assessed? What is the mitigation ratio?

In the case of wetlands banks, in theory what the Corp of Engineers tries to do is to evaluate the functions in values of both the wetland that is restored or in the bank and the function of the values of the wetland that is being affected by development activity.

In reality, it's very difficult to quantify functional value and so the Corp of Engineers often end up using a pretty rough formula. I mean acres and so for example, the banking agreement may provide that a bank that is going to restore hundreds of acres of wetlands will earn 100 credits, but the exchange ratio may be two months so that if a landowner wants to develop an acre of wetland, he has to purchase two credits from the bank, equivalent to two acres of the bank.

Why would there be others not, why wouldn't we be one-to-one? In part because the Corp of Engineers are typically trying to factor in some of the uncertainty about success of restoration efforts so one way to do that is to adjust the exchange ratio if you will. In other cases, it may be that the resource is being wanted for development or simply regarded as more valuable than the resource is greater than the bank even though they are more or less the same general kind.

In that case too, there may be a jump in the mitigation ratio but what is important to have in a banking agreement is a very clear understanding of what it is that is going to produce credit at the bank is adjustment.

Preserving what's there or is it enhancing what's there and if it's the latter, how is it going to be measured? And how many credits is that going to translate into? And how is the regulatory agency going to measure those mitigation obligations of developers and others so that the banker has some idea of what the market or credit to the bank are going to be. This is extremely difficult and that's one of the things that this article here sort of emphasizes, the extreme difficulty doing that in a natural resources context.

About the service area: every banking agreement has to identify the service area and that's the area in which credits from the bank can be used to mitigate impacts to affected resources elsewhere in that service area.

I guess from the bankers point of view because the more potential buyers there are, but from the point of view of resource conservation the wider the service area the more difficult it is to ensure comparability of what's being traded in the exchanges because typically at least, resources are removed from the bank.

One question is, how does the endangered banks been tested in court and have they held up?

The answer is, they have not been tested in court. There are, at this point, relatively few endangered species banks and the oldest of them is only a matter of a half a dozen years old or so, so there's not a lot of track record on that. In every case, the Fish and Wildlife Service would authorize the use of customer bank by means of a permit the Fish and Wildlife Service will issue so those permits are essentially subject to challenge and they are as vulnerable to challenge as or invulnerable as the quality of the determination of of the Service. At this point, something I just want to leave you with, there's not been a court challenge of any of the endangered species.

**What is the currency for credits and debits (i.e., what is being traded)?**

- Historically, mitigation focused on "user days," particularly in the context of large water development projects
- Wetlands banking guidance favors measures of wetland function, but acres often act as a surrogate.
- Some California banks use a complex scoring system that weights credits (acres) according to many variables (relative location; number of rare species; size, etc.)
- Some endangered species banks use occupied breeding territories (i.e., the loss of one occupied breeding territory must be compensated for by the creation of one-or more-occupied breeding territories elsewhere).
- Note that is question is the same, whether mitigation is by banking or otherwise.

Okay, currency, that is quantifying credits and debits, what is being traded here again. Just a bit of history when I talked earlier about the Fish and Wildlife Coordination Act, this old federal law that tried to ensure that impacts of major water resource development projects on wildlife were mitigated. Early in the history of that mitigation, the focus was on user days, that is to say a dam is going to flood some river, it might be some number of user days of trout fishing on that stream bank...stream stretch. And the purpose of mitigation was to provide additional thousand user days somewhere else.

Well, that historically where it all started but by modern conceptions that's not a very useful assessment of valued ecological resources so wetland banks have never really embraced user days as a proper criteria.

Instead I'll try to measure wetland management and functions, try to quantify the value of restored wetland or for that matter a lost wetland in terms of its contributions to flood control and water quality, habitat provision and so forth, but again as I said a moment ago, because that is probably beyond the capability of what can be known, so instead are simply converted to acres.

In California under the 1995 banking policy, they have some banks that use a rather complex scoring system.

Most of the California banks by the way, are preservation banks. That is the banker has simply agreed to preserve existing habitat, he may typically will also agree to manage in some ways and protect it from trespassers and what have you, but he has fundamentally protected what's already there and I'll get your question in just a minute.

In California in determining how many credits that bank is worth, they sometimes use a complex scoring system that takes into account acres, relative location of the bank relative to, for example, parks or preserves or protected areas, a number of rare species that use bank park land, size of the bank.

Whether that scoring system is really worth the paper it's written on I don't know but nevertheless, it is an illustration of the potential complexity of trying to value what is in the bank.

Let me be clear, the question was earlier I said preservation was frowned on but here I'm talking about preservation. In the wetlands mitigation banking policy, the preservation of existing habitat is disfavored. Other contexts, in the endangered species context in particular, there is no policy on the subject and preservation is the practice to date.

There are some endangered species banks that try to use the number of occupied breeding territories in the bank as the measure of credits there.

So for example, if a landowner is going to develop a piece of property that results in the loss of one breeding territory of red cockaded woodpeckers, he has to buy a credit from a bank and deliver a credit to the bank with the function of breeding territories of red cockaded woodpeckers established in the bank.

These are complex questions but the last little note on here is that they are really no more complex in the banking context than they are in any other mitigation context.

That is to say, forget about banking just try to ask the question, how do we mitigate the loss of any particular resource? You have to ask the same questions. How do you value the resources being impacted and how do you value of the mitigation being proposed.

So the questions aren't fundamentally different when you shift the banking context but you are forced here to face them at the outset.

## How should mitigation ratios be set?

- **Greater than one-to-one ratios often justified on the basis of uncertainty about comparability of values and prospects for long-term success**

How should mitigation ratios be set? Well, I discussed this some earlier. It's often not just one-to-one and the reason it's often not just one-to-one is because of uncertainty about culpability of value. One way to adjust for that is to put a hedge in the mitigation ratio so the loss of one acre of land may require the restoration or enhance the two acres of land in the bank.

Back when impacts were measured in terms of user days, one of the common strategies for the government at least, was to mitigate for impacts of its own projects, it's water development projects was to acquire high quality habitat I imagine for users for hunters, fisherman, and so forth. And thus, the user days would balance out, there would be no net loss of user days. But federal as I've already said, federal wetlands mitigation banking policy disfavors preservation on existing habitat as a basis for credit in the bank, but I do not believe that that disfavoring of preservation in the wetlands context necessarily is an appropriate policy in other contexts, for example, endangered species.

And that's because in the endangered species context there are often existing sites where simply putting a fence around the sides to preserve what's in there today is no guarantee of its long term success and if you want me to cover that, it may be important to have what I call preservation banks with management in the endangered species context and as you are preserving what's there you are also committing to repressing those threats with this exotic species or other things that may, over time, degrade the habitat of what's there.

You cannot assume any endangered species context that because they're there they will remain there without any further management so it seems to me that when the Fish and Wildlife Service does develop an endangered species mitigation banking policy it is not likely to have the same disfavoring of preservation that is characteristic of the wetland policy and as I pointed out.

In California where most endangered species banking has been done, the reality is most of that banking is preservation banking.

One question is, in the endangered species context, how does critical habitat relate to all of this?

I'll be honest with you, I'm not entirely sure and the reason why I'm not entirely sure is because from my vantage point it is not entirely clear of what the rules in general are going to be with respect to critical habitat. I would suggest, however, that a workable mitigation banking policy for endangered species will have to be one that isn't encumbered by critical habitat concerns. In other words, it shouldn't matter where the critical habitat is or isn't involved.

Another question is: in the wetland context is the disfavoring of preservation of existing wetland mitigation banks a function of the goal of assuring no net loss of wetland and the answer is yes, to a large degree it's the function of that goal?

If you think about it, to allow the loss of some existing wetlands in return for attempting to preserve other existing wetlands and that result is, you've got less protected land. So that then is the reason for that.

Now we're also asking, shouldn't one be concerned about the same consequence for endangered species? Is that the question? Okay, so the question is, if you disfavor preservation then you run the risk of allowing most or all of the existing natural wetlands if you will, to be block development that has to be replaced?

I suppose in theory that risk exists. The propensity of banking efforts at present doesn't project that that is an imminent concern to environmentalists, and secondly, the wetlands policy in addition to disfavoring preservation it favors restoration over creation. Restoration is the restoring of wetlands that previously existed and that is better established than trying to create new habitat. You may have restored wetlands, replacing if you will, natural wetlands but whether there are any differences between restored wetlands and natural wetlands is certainly agreeable and probably not as sharp as it is between created wetlands and natural.

**Should preservation of existing habitat generate credits?**

- Historically, much mitigation consisted of public acquisition of existing high quality habitat
- Federal wetland banking guidance disfavors it.
- Risk to species from edge effects, succession, exotics, etc., may warrant a different outcome for endangered species.
- Most California endangered species banks are preservation banks.
- Preservation has fewer technical uncertainties than creation, restoration, and enhancement activities.

**Should credits ever be used before the success of mitigation is established?**

- Advance credit sales are contrary to the definition of a bank, and conflict with the principal benefit claimed for banking.
- Nevertheless, federal wetland banking guidance allows limited advance credit sales.
- Note that this issue does not arise in the context of preservation banks.

Should credit ever be used before the success of mitigation is established?

Well I found out earlier it's contrary to the fundamental definition of a bank which is the you first have to have it in the bank before you have anything to sell. Nevertheless, the wetland policy allows limited use of credits, and the question I guess, in another context what should the rules be?

There aren't any rules in another context is forming the wetlands context that has clear rules. If, as I suggested a moment ago, preservation is a strategy that will be looked for with more favor in the endangered species context, then that doesn't encompass your important issues because as soon as you are committed to preserve the area, basically there's not much left to develop.

Whereas if what you are committed to restore habitat and you want credit in advance to have some income to pay for the cost of restoration that will be problematic. If, in the endangered species context, most of the banking activities are focused on preservation of existing habitat and this question thus becomes not quite as difficult.

However, one can't disregard altogether, all I can really say about that is that in the wetland context there is generally been skepticism of some of the restoration efforts, because of their scale and complexities, do entail a lot and the practical matter is that unless there is some way to raise some of the capital by means of advance credit sales they won't enter the business and that's why it's been allowed in that context and there may be some situations in the endangered context where the similar result should follow but as a general matter, outside of preservation I think it's problematic because it's on conflict with the varied definition of the bank.

**Should activities on public land generate credits?**

- Federal wetland banking guidance says credits should be based "solely on ... values ... that are supplemental to the public program(s) already planned or in place."
- FWS refuge policy prohibits use of refuges for mitigation banks.

This question too, has to be faced in designing a bank. Should activities on public land generate credit? Again, to the federal wetland guidance says yes but only to the extent that what the bank does to enhance values that supplement, supplement what is already intended or planned for that publicly owned land. The Fish and Wildlife Service does have the clear policy on wetland that no mitigation, mitigation or mitigation bank take place on national wildlife refuge land. The answer to this question, should they be allowed on public lands, other public lands. My own view is probably, particularly if there are no private parties that are anxious to get into this business as entrepreneurs, to have a rule that says you can't use public lands, County lands or other lands and no interests in the private sector for banking is too limiting.



The question is, the next question, do you give credit only for permanent protected habitat?

Again, in general the wetlands policy says only permanent protection accepted in exceptional circumstances. And the California banking policy is quite clear, as soon as you sell a credit from a bank site you have to convey a permanent easement on that bank site so in California this permanent protection is necessary.

**Should credits only be given for permanently protected habitat?**

- **Federal wetland mitigation banking guidance requires permanent protection.**
- **California banking policy requires that a permanent conservation easement be conveyed at the time of first sale or use of credits.**
- **ESA practice favors permanent protection, but if habitats to be mitigated are transitory, should that justify less-than-permanent mitigation?**

In the endangered species context where again because there's no written policy, one can't answer the question definitively. However, the practice to date has been to require permanent protection through easements or deed transfers, eventual deed transfers in order to recognize credits for the bank.

However, just as a matter for the Service to at least think about, because many endangered species habitats are rather transitory, they are in the early successional stages in some cases such that the habitats that are currently occupied by endangered species may not be expected to occupy those sites in ten or twenty or so years.

So the question is, if development is taking those habitats is it necessary in order to ensure comparability to have permanently protected habitat in the bank? That may be a reason for treating endangered species differently but my guess is the Fish and Wildlife Service is unlikely to embrace less than permanent commitments in banks very often.

I guess that's the conclusion of this, these are informational sources once again but let me just wrap up and I'll open this up to discussion, questions and so forth.

Again, as I tried to say at the outset, I think that conservation banking and mitigation banking can sometimes play a useful role involving some of these natural resource conflicts, endangered species or other habitats that need special protection under state, federal or local agencies, but then I'm not necessarily a cheerleader for this.

I believe that there are important and difficult questions that have to be resolved and I don't want to mislead any of you into thinking this is an easy thing to do or that is guaranteed to produce a high rate of return and as a lady asked earlier, it is a risky business and the risk in part depends upon the fact that there are uncertain issues like the question of critical habitat that was raised – uncertainty about consistency of enforcement, uncertainty about the clarity of rules.

In the wetlands context there has tended to be over time, enough consistency and clarity of the rules that banking can function because the risks are not so great but they are in the endangered species context. In other arenas it's not clear but essential prerequisites for having a functioning banking system that will work very often in very many places.

Nevertheless, this group or many members of this group have been engaged in a long process to figure out some local solutions to the resource issues here. Perhaps and I hope that some of this....some of the learning here will be of use to you.

That's all for my presentation and I will be happy to answer questions from anyone. Thank you.

Any other questions? All right, I'll be sticking around for a bit so if there are questions that any of you want to ask me personally, feel free.

Thank you.



## **Information sources:**

- **Environmental Law Institute**
  - Wetlands Mitigation Bank Study in progress
  - Preliminary results at <http://www2.eli.org/wmb/>
- **Army Corps of Engineers**
  - National Wetlands Mitigation Banking Study (nine reports)
  - <http://www.iwr.usace.army.mil/iwr/Services/PDCPNWetlandsM.htm>
- **State of California**
  - <http://www.dfg.ca.gov/hcpb/conplan/mitbank/mitbank.shtml>

## **Definitions of Key Terms**

- **Mitigate**
- **Mitigation (or Conservation) Banking**
- **In-lieu Mitigation**

# Mitigate

- General Dictionary Definition

to cause to become less harsh or hostile; to make less severe or painful

Mitigate suggests a moderating or countering of the effect of something violent or painful

- In an Environmental Context

Avoiding, minimizing, compensating for, or rectifying detrimental impacts to a particular resource (e.g., wetlands, other natural communities, endangered species, etc.)

## **Mitigation (or Conservation) Bank**

- **For wetlands ...**

**“A site where wetlands and/or other aquatic resources are restored, created, enhanced, or in exceptional circumstances, preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.”**

- **In general ...**

**“A site where particular natural resources are restored, created, enhanced, or preserved expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.”**

## **Types of Mitigation (or Conservation) Banks**

- **Single-user banks (banker banks credits for its own later use)**

**e.g. State DOTs**

- **Entrepreneurial banks (banker banks credits for later sale to third parties)**

**e.g., numerous privately owned wetland banks**



## **In Lieu Mitigation**

- The collection of fees in lieu of requiring a developer to compensate for resource losses through on-site mitigation or acquiring credits from a mitigation bank.
- Fees transferred to a fund managed by a designated resource agency or private organization for use in mitigation projects.
- Differs from mitigation banking in that mitigation occurs after permitted impacts, not before.
- Many regional HCPs are essentially in-lieu mitigation arrangements (i.e., landowners mitigate by paying a fee that goes into a fund for conserving reserving resources elsewhere)

## **Other examples of in-lieu mitigation arrangements**

- **NFWF funds for Houston toad, red-cockaded woodpecker**
- **Several wetland programs**

# **Definitions of Related Terms**

- Sequencing of mitigation
- On-site mitigation
- Off-site mitigation
- In-kind mitigation
- Out-of-kind mitigation

## **Sequencing of mitigation**

- **First avoid**
- **Then minimize**
- **Then compensate**
- **And sometimes, rectify**

## **On-site mitigation**

- Occurs at or very near the site of the activity to be mitigated
- Federal wetlands mitigation policy generally favors on-site mitigation

## **Off-site mitigation**

- Occurs away from the site of the activity to be mitigated
- Banking and “in-lieu” mitigation are always off-site mitigation

## **In-kind mitigation**

- **Compensates for the loss of particular resources by creating, restoring, or preserving resources of the same basic kind (e.g., ironwood forest habitat for ironwood forest habitat)**
- **Federal wetlands mitigation policy strongly favors in-kind mitigation**

# **Out-of-kind mitigation**

- **Compensates for the loss of particular resources by creating, restoring, or preserving a different kind of resource (e.g., ironwood forest habitat for cienega habitat)**
- **Query why out-of-kind mitigation should be disfavored if it provides a means of trading the loss of relatively more common habitats for creation, restoration, enhancement or preservation of relatively rarer habitats?**



# **Laws Requiring Mitigation**

- **Fish and Wildlife Coordination Act**
- **Clean Water Act**
- **Endangered Species Act**
- **Others (e.g. local tree planting ordinances, impact fees, etc.)**

# **Mitigation Policies**

- **Clean Water Act**
- **Endangered Species Act**
- **California**

## **Clean Water Act Mitigation Policies**

- **Federal Guidance on Mitigation  
Banks and the Section 404  
Program published November 28,  
1995**
- **Federal policy on in-lieu  
mitigation in CWA published  
November 7, 2000**

## **Federal Guidance on Mitigation Banks and the Section 404 Program**

- **Favors small service areas**
- **Allows preservation only in exceptional circumstances**
- **Limits the use of public lands**
- **Allows limited advance crediting**
- **Allows less-than-permanent protection in exceptional circumstances**

## **Federal policy on in-lieu mitigation in CWA**

- **Generally tries to impose standards for in-lieu arrangements similar to banking standards**
- **Restoration favored over preservation**
- **Funds should be used to replace lost resource functions and values, not for education, research, etc.**
- **Funds collected should ensure a minimum of one-for-one acreage replacement**
- **Land acquisition and initial physical improvements should be completed by first full growing season following initial collection of funds**

## **ESA Mitigation Policies**

- **No written policies re banking or in-lieu mitigation as such; however, both are addressed in the FWS/NMFS HCP Handbook, pages 3-19 to 3-26**

# **California Mitigation Policies**

- **Official Policy on Conservation Banks  
published April 7, 1995**
- **Applies to wetlands, endangered species,  
environmental sensitive habitat areas, and  
other resources**

# **What Do Conservation Banks have to Offer?**

- **From the Government's Perspective**
- **From the Banker's Perspective**
- **From the Regulated Community's Perspective**



## **From the Government's Perspective**

- **An opportunity to enlist non-federal landowners in conservation efforts on voluntary basis while providing regulated interests additional mitigation options**
- **An assurance that mitigation efforts are successful before impacts are authorized**

## **From the Banker's Perspective**

- **An opportunity to generate income from in investing in conservation on suitable land**

# **From the Regulated Community's Perspective**

- **An opportunity to choose among a greater variety of mitigation options**
- **Predictability of Mitigation Requirements**
- **Transfer of responsibility for success of mitigation to a third party (the banker)**
- **Potentially an opportunity to reduce the costs of mitigation**

## **Major Issues for Conservation Banks**

- **How does a mitigation (or conservation) bank get established?**
- **What should be included in a mitigation banking agreement?**
- **What is a bank “service area”?**
- **What is the currency for credits and debits (i.e., what is being traded)?**
- **How should mitigation ratios be set?**
- **Should the preservation of existing habitat generate credits?**
- **Should credits ever be used before the success of mitigation is established?**

## **How does a mitigation (or conservation) bank get established?**

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