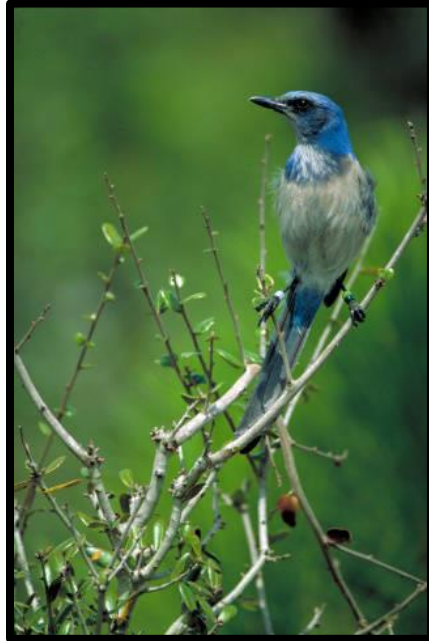


RESULTS FROM A SURVEY OF CONSERVATION BANKING SPONSORS AND MANAGERS



Florida Scrub-jay (Photo credit: USFWS)

DOI OFFICE OF POLICY ANALYSIS

SEPTEMBER 2016

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EXECUTIVE SUMMARY

The U.S. Fish and Wildlife Service (USFWS or Service) requested that the Department of the Interior's (Department, Interior or DOI) Office of Policy Analysis (PPA) conduct a review of data from the USFWS conservation banking program, identify any institutional or other impediments to creating habitat conservation banks, and develop potential options for encouraging the expanded use of conservation banking. The specific questions to be addressed included:

1. What metrics could be used to measure success programmatically and for individual banks?
2. What are the important lessons learned since 1992?
3. What are the characteristics of successful conservation banks?
4. What can be learned from similar programs, such as Wetland Mitigation Banking?
5. Are there technical and institutional obstacles limiting the establishment of additional banks?
6. What additional incentives could spur bank creation and growth?
7. What are the options for reducing the obstacles and providing incentives?

In order to answer these questions, PPA developed a two-stage plan of analysis. The first phase, completed in 2013, included a review of relevant literature, an analysis of conservation banking program data (e.g., Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS) data), and an analysis of data from a survey of USFWS staff. The second phase, described in this report, consisted of a survey of representatives from USFWS habitat conservation banks.

A number of initial conclusions were drawn from the survey results, based on the questions outlined above:

- Bankers supported both ecological and economic measures of conservation bank success, with stronger support for ecological measures.
- Greater ease of access to ecological data for existing banks would assist in future analysis to determine the ecological success of the conservation banking program.
- Survey respondents indicated that weak demand for credits and economic uncertainty/risk were some of the most important technical obstacles hindering conservation bank creation.
- The factors rated as most likely to increase review time included lack of a defined timeline, coordination with other agencies, insufficient staffing, and time for legal review/approval.
- Survey respondents generally supported changes to the current conservation banking guidance or the issuance of more formal conservation banking regulations.
- Survey respondents indicated that establishing timelines and additional staffing could help to reduce delays in conservation bank approval.
- Establishing timelines for agency review and an explicit preference for bank credits over other forms of mitigation were elements of the wetlands banking program that received significant support among survey respondents.

Recommendations from this phase of the analysis include:

- Evaluate processing and approval procedures to determine reasons for and options to address delays.

- Analyze options for integration with state and local governments and other conservation programs such as habitat conservation plans (HCPs) and wetland mitigation banks.
- Establish program tracking metrics at a programmatic level, and at the individual bank level where possible.
- Conduct outreach and education to potential bankers and the public, to improve awareness of the program among key groups and explain its potential benefits.
- Expand training opportunities by publicizing training opportunities and offering additional training options for new and prospective bank managers and sponsors.
- Evaluate guidance and assess potential for new regulations.
- Make data about the conservation banking program publicly available and easily accessible, including the program tracking metrics and other data aggregated from individual banks.
- Gather feedback soon after approval to provide helpful information about how the application and approval process works and how it could be improved.

GLOSSARY

Conservation Bank: Permanently protected lands containing natural resource values that are conserved and permanently managed for species that are endangered, threatened, candidates for listing, or are otherwise species-at-risk. Conservation banks function to offset adverse impacts to these species that occurred elsewhere, sometimes referred to as off-site mitigation.

Habitat Conservation Plans (HCPs): HCPs are planning documents required as part of an application for an incidental take permit. They describe the anticipated effects of the proposed taking; how those impacts will be minimized, or mitigated; and how the HCP is to be funded. HCPs can apply to both listed and nonlisted species, including those that are candidates or have been proposed for listing.

INTRODUCTION

The U.S. Fish and Wildlife Service (USFWS or Service) requested that the Department of the Interior's (Department, Interior or DOI) Office of Policy Analysis (PPA) conduct a review of data from the USFWS conservation banking program, identify any institutional or other impediments to creating habitat conservation banks, and develop potential options for encouraging the expanded use of conservation banking. The specific questions to be addressed included:

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Several policy documents related to mitigation have been released since 2013 that are relevant to conservation banking. The White House issued a Memorandum in November 2015 entitled "Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment." The Department has issued several documents as well, including Secretarial Order 3330 "Improving Mitigation Policies and Practices of the Department of the Interior" in October 2013¹, a mitigation strategy in April 2014², and a Departmental Manual chapter on landscape-scale mitigation policy in October 2015.³ In addition, the USFWS published proposed revisions to its 1981 mitigation policy in the Federal Register in March 2016⁴, and a draft Endangered Species Act (ESA) Compensatory Mitigation Policy in September 2016.⁵ While these items address mitigation policy more generally, they are applicable to conservation banking and may affect the future of the USFWS conservation banking program.

This report presents updated statistics on the conservation banking program, discusses the survey methods used, analyzes the results of a survey of conservation bank sponsors and managers, and

¹ <https://www.doi.gov/sites/doi.gov/files/migrated/news/upload/Secretarial-Order-Mitigation.pdf>

² https://www.doi.gov/sites/doi.gov/files/migrated/news/upload/Mitigation-Report-to-the-Secretary_FINAL_04_08_14.pdf

³ <https://www.doi.gov/sites/doi.gov/files/uploads/TRS%20and%20Chapter%20FINAL.pdf>

⁴ <https://www.fws.gov/ecological-services/pdf/2016-05142.pdf>

⁵ <http://www.regulations.gov/docket?D=FWS-HQ-ES-2015-0165>

provides conclusions and recommendations based on these results and the information obtained in phase 1 of the project.

BACKGROUND

Conservation banks are permanently protected lands that contain natural resource values, which are conserved and permanently managed for species that are endangered, threatened, candidates for listing as endangered or threatened, or are otherwise species-at-risk (USFWS 2012). At the Federal level, conservation banks are regulated by the USFWS for terrestrial and freshwater species and some marine mammals, and by the National Marine Fisheries Service (NMFS) for marine and anadromous species. The agencies approve a specified number of credits to the bank owner in exchange for permanently protecting and managing habitat for the endangered species in question.

The USFWS conservation banking program began in the mid-1990s, approving banks for a number of federally listed species. Many of these banks were set up in cooperation with other Federal agencies or the State of California. In 2003, the Service introduced its “Guidance for the Establishment, Use, and Operation of Conservation Banks” (2003 Guidance) to help USFWS personnel (1) evaluate the use of conservation banks to meet the conservation needs of listed species; (2) fulfill the purposes of the ESA; and (3) provide consistency and predictability in the establishment, use, and operation of conservation banks. In March 2016, the Service issued proposed revisions to its 1981 Mitigation Policy, which addresses some aspects of conservation banking. September 2, 2016, the Service published a draft Endangered Species Act (ESA) Compensatory Mitigation Policy (CMP) (Docket No. FWS-HQ-ES-2015-0165) for public comment. The proposed CMP covers all compensatory mitigation mechanisms including, but not limited to, permittee-responsible mitigation, conservation banking, in-lieu fee programs, habitat credit exchanges and other third party mitigation arrangements that the Service may recommend or require to offset unavoidable adverse impacts to endangered or threatened species (listed species) or other species at risk of being listed as threatened or endangered in the foreseeable future. This new policy replaces the Service’s 2003 Banking Guidance and its 2008 Recovery Crediting Guidance. The survey responses are in the context of the 2003 conservation banking guidance and 1981 Mitigation Policy since the new policies had not been published at the time of the survey.

As of December 2015, USFWS has approved 135 conservation banks (including 111 active, 22 sold out and 2 suspended), with another 21 banks pending approval in 12 states and the Northern Mariana Islands. The combined acreage of all approved banks totals more than 142,000 acres. Geographically, these banks are concentrated in California, accounting for approximately 78% (121 out of 156) of approved, pending and sold-out banks nationwide. Other states with more than 1% of all banks include Florida with 8%, Texas with 4%, and Utah with 2%.

In general, the number of banks approved per year has increased since 2005. Annually, fewer than 15 banks have been approved each year between 1995 and 2015 (Figure 1). The largest number of approved banks occurred in 2014, with 14 banks approved. Until 2002, all approved banks were located in California. The strong state conservation banking program was likely a contributing factor to the early success of the FWS banking program in California. Conservation bank

establishment outside of California has increased in recent years, with 40% of all banks (82% of acreage) approved since 2008 located in other states.

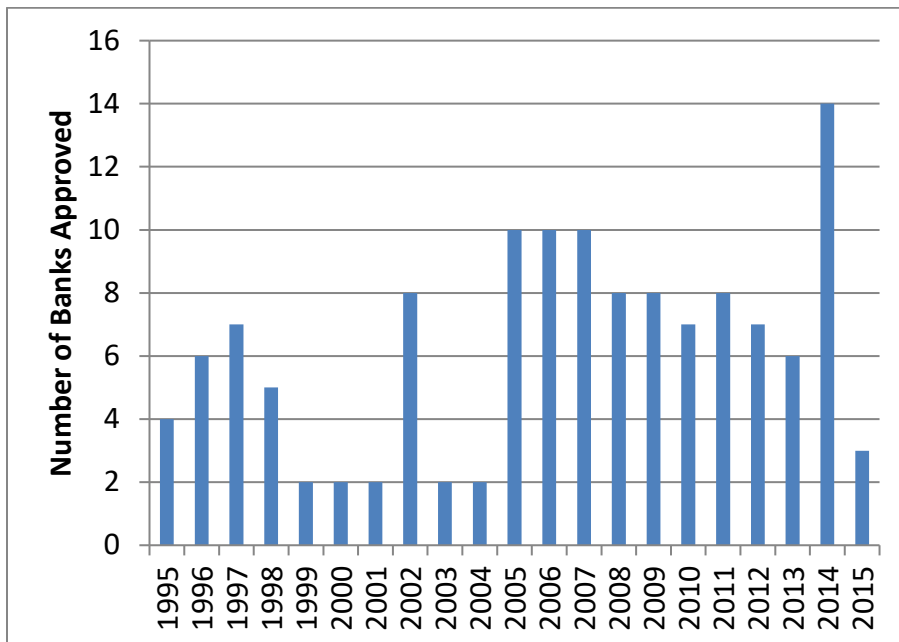


Figure 1. Number of Conservation Banks Approved, 1995-2015

Wetland and stream mitigation banks are regulated by the U.S. Army Corps of Engineers (USACE) and the Environmental Protection Agency (EPA). These banks have a longer history than conservation banks, with the first wetland mitigation bank established in 1984. The wetland mitigation banking program has undergone many changes since its inception, including the promulgation of regulations related to the program in 2008 (Compensatory Mitigation for Losses of Aquatic Resources 2008). Based on the longer history of the wetland mitigation banking program, and the experience of many staff with both programs, comparisons between the two programs are provided to potentially give insight into the conservation banking program.

More detailed information about the history and organization of the USFWS conservation banking program and related mitigation options is available in a separate overview report (DOI Office of Policy Analysis 2013).

METHODS

PPA developed and administered a survey of conservation bank professionals in early 2016 to help identify the existence of and reasons for barriers to establishing additional conservation banks, as well as potential solutions for addressing the barriers. Few previous studies have collected information about the status of conservation banking and the experience of bank owners or managers with the banking process, and most of these were undertaken over a decade ago (Fox and Nino-Murcia 2005, Stratus Consulting 2003). Bunn, Lubell and Johnson (2013) more recently

completed a similar survey for the State of California's conservation banking program. The survey described in this paper provides an updated picture of the opinions of conservation bank sponsors and managers. Notably, this survey collected additional information on conservation bank professionals' opinions on factors that might hinder the creation or impede operations of conservation banks, which was not included in previous studies.

During the survey development, it was determined that it would be useful to ask some questions from the point of view of the organizations sponsoring or owning banks, and others based on the opinion of staff members that work directly in operations and development of individual banks. In order to obtain this range of perspectives, a separate survey was developed for individuals involved in sponsoring/leading conservation bank organizations, and managers that deal with day-to-day operations and development of conservation banks. For some smaller operations with fewer staff, the same individual fills both roles and may have responded to both surveys.

The survey language was carefully developed following standard survey design techniques. Focus group interviews were conducted with nine conservation banking professionals who had significant experience with conservation and wetland mitigation banking. Information from the focus group interviews was used to refine the survey and develop multiple choice options for several of the survey questions.

An internet-based survey was developed to help minimize the cost and time required to implement the survey, as well as to help reduce the burden placed on survey respondents. The on-line survey program SurveyMonkey was used to administer the survey. The internet survey was pre-tested by several Department of the Interior employees in order to help improve clarity. (A copy of the survey instrument is provided in Appendix A).

The survey was administered to sponsors and managers of USFWS conservation banks for 5 weeks during February and March 2016. The survey population consists of sponsors and managers of all USFWS or joint USFWS/NMFS approved, pending, or sold out habitat conservation banks. Representatives from state-approved conservation banks and wetlands or stream mitigation banks were not surveyed.

Prior to the survey implementation, representatives from each sponsoring entity (organization or individuals that sponsored banks) were contacted by phone to identify the appropriate sponsor and manager(s) to fill out the survey. One sponsor and up to 12 managers (1 manager for every 2 banks sponsored by the entity) were identified for each sponsoring entity. Once the potential respondents were identified, they were sent an initial e-mail invitation to fill out the survey, followed by two e-mail reminders.

Contacts were identified for 61 sponsors and 61 managers for entities with pending, approved, or sold out banks listed in the RIBITS database as of December 2015. Responses were obtained from 31 sponsors and 32 managers, for response rates of 51% and 52%, respectively.

SURVEY RESULTS

The results of the sponsor survey and manager survey are presented below. For each survey, the results are organized into several sections, beginning with a summary of respondent (or organization in the case of sponsors) characteristics and background questions related to their general experience with conservation and wetlands mitigation banking. The remaining sections group the survey responses according to the questions posed in the USFWS request as follows: Measuring Success, Obstacles, and Lessons Learned. The sections present the text of each survey question followed by a description of the results, including graphs or tables, a bullet summarizing the results of the question, and a summary of the information covered in the section. The full text of the survey is provided in Appendix A.

SPONSOR SURVEY

The sponsor survey was developed to obtain information from individuals that sponsor a conservation bank or that are involved in the management of a company or organization that sponsors multiple conservation banks. This survey was conducted to obtain information from the perspective of the organization, rather than the perspective of an individual manager. In cases where banks were sponsored by individuals or small organizations, it is likely that the same respondent completed both the sponsor and manager survey. Respondents were asked to provide background information about their organization's experience with conservation banking and obstacles that might affect conservation bank success.

CHARACTERISTICS OF SURVEYED ENTITIES

The entities surveyed had been involved in conservation banking an average of 10.5 years. Many entities surveyed had been involved in banking for over 5 years, with 53% involved for 6-10 years, 20% involved for 11-15 years, and 14% for 16 or more years (Figure 2). Several entities were relatively new to banking, with 13% of respondents involved in banking for 1-5 years.

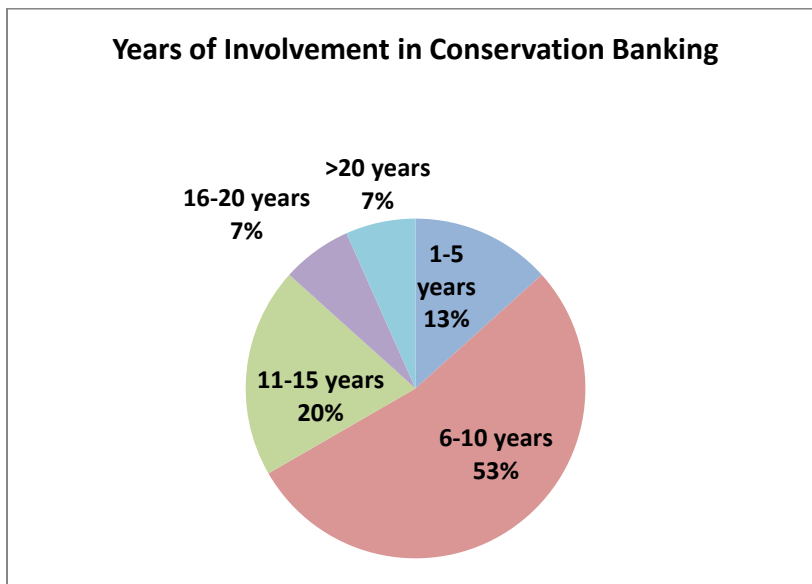


Figure 2. Number of years the organization has been involved in conservation banking

Most of the entities surveyed had a small number of conservation banks approved by the Service (Figure 3). 75 percent of respondents indicated that their organization had 1 or 2 banks approved, while the remaining 25 percent had 3 or more banks approved. Two organizations had more than six banks approved by the Service. Respondents stated the average size of their approved banks was 968 acres and the median size was 252 acres, with a range from 2 to 20,000 acres. The organizations had conservation banks approved in several different states, with 45% in California, 18% in Utah, 11% in Oklahoma, 8% in Texas, 5% each in Florida and Kansas, and 8% in other states (Figure 4). The species and habitats covered in the surveyed organizations were wide-ranging, as shown in Figures 5 and 6.

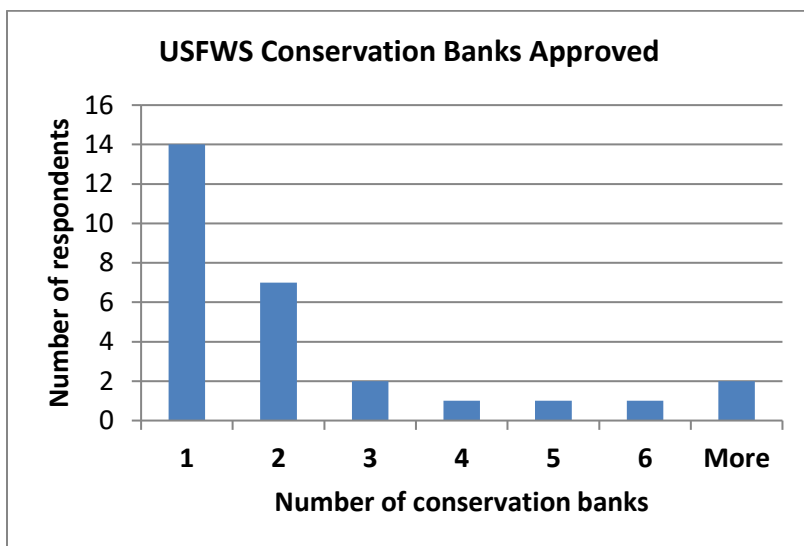


Figure 3. Number of conservation banks the organization had approved by USFWS

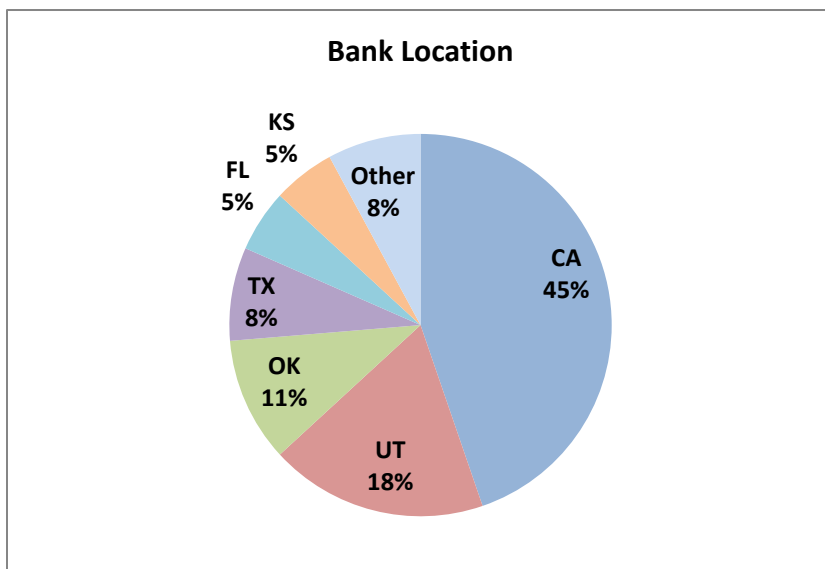


Figure 4. Location of organization's USFWS approved banks

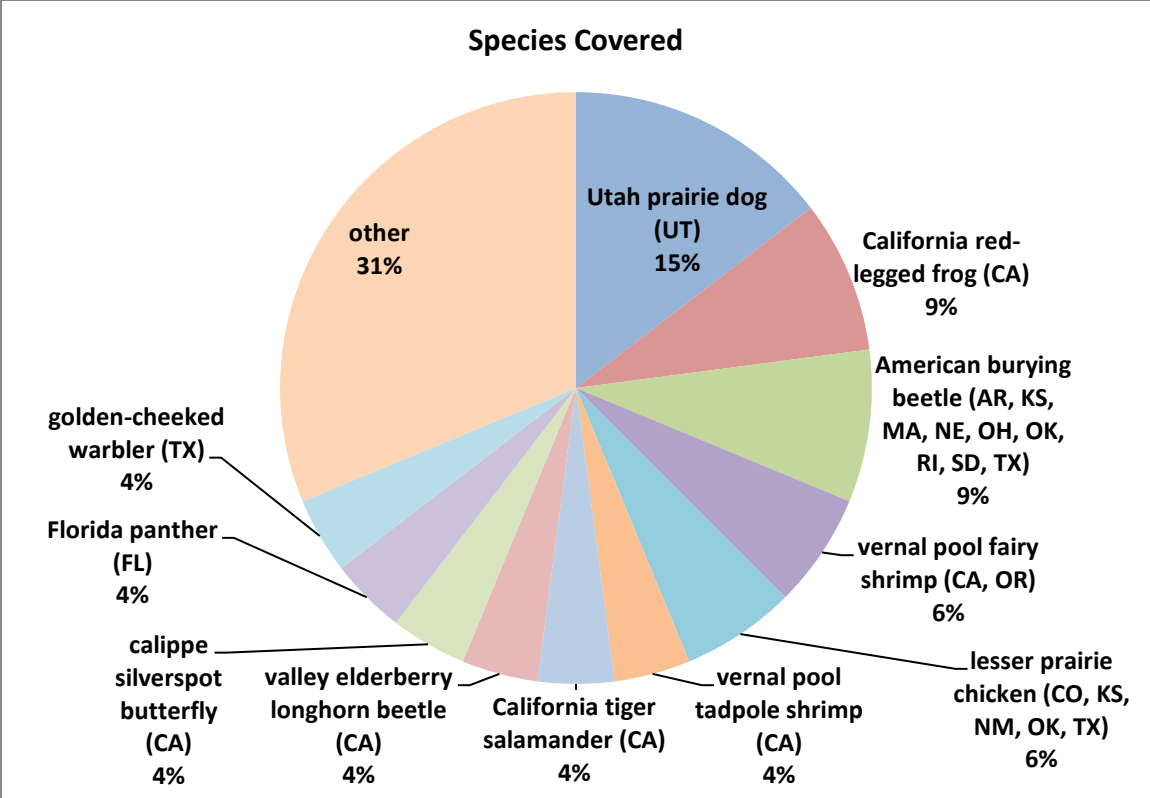


Figure 5. Species covered in surveyed organization banks (States where species are known or believed to occur in parentheses)

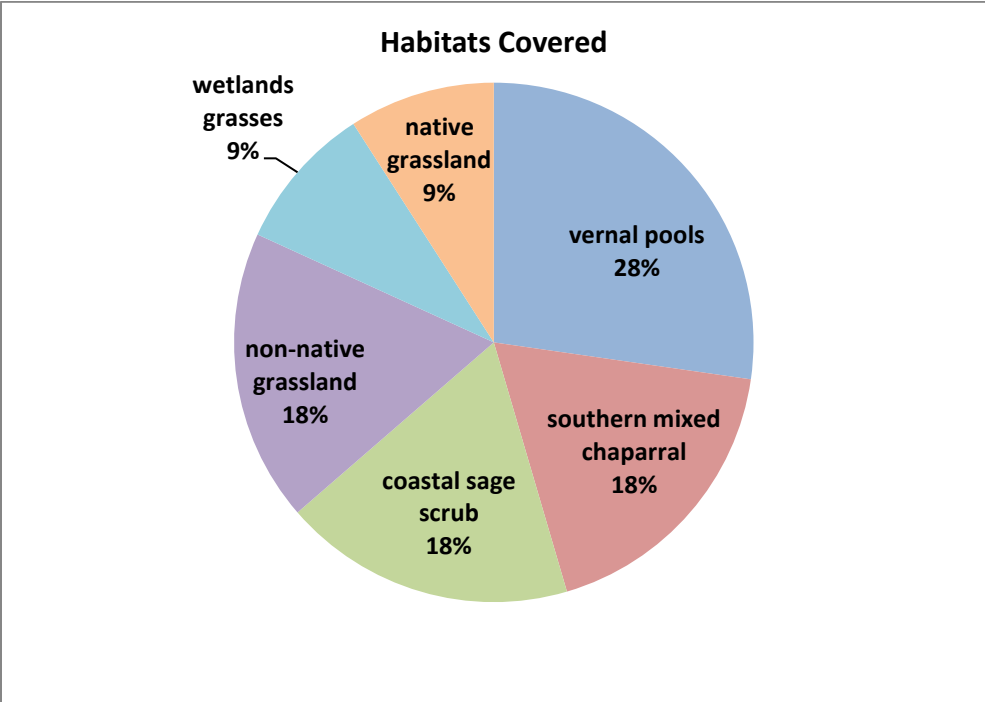


Figure 6. Species covered in surveyed organization banks

BACKGROUND

This section provides background information about the organizations for which the sponsor survey respondents work.

Does your organization require your staff to take conservation banking training? (Survey Question #3)

- **Most organizations do not require their staff to take formal conservation bank training.**

Respondents were asked if their organization required staff to take conservation banking training. The majority (58%) said no, while 16% said yes, and 26% said it depends (Figure 7). Some reasons noted by respondents stating “it depends” included the experience level and background of staff member, the type of training being offered, and the duties of the staff member. One respondent noted that they were a small organization and hired consultants that have been trained to deal with specific aspects of their banks, as needed.

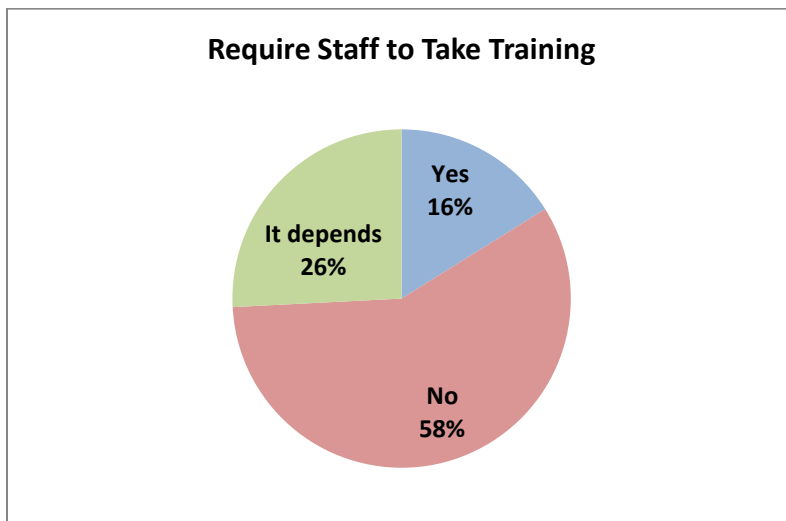


Figure 7. Percentage of organizations that require staff to take conservation banking training

How do you perceive current demand for additional conservation banks in your region(s)? (Survey Question # 12)

- **Estimated current demand varies by USFWS Region. Respondents rated demand to be modest in Regions 4, 5, and 8, and weak in 1, 2, and 6.**

Respondents were asked about their perception of current demand for additional conservation banks in the USFWS regions in which they work. The respondents generally rated current demand

as modest or weak, with a median demand of weak in Regions 1, and 2, and a median demand of modest in Regions 4, 5, 6, and 8 (Table 1). All respondents that answered for Region 3 and Region 7 stated that they had no opinion about the current demand in those regions. The low number of responses for many regions is an indication that few respondents worked in a given region, and not an indicator of overall response rate, since many respondents only responded for the region in which they work.

Table 1. Current demand for additional conservation banks

Region	Median Rating	Mean Rating	Number of Responses
[Rating Scale: 1=No demand; 2=Weak demand; 3=Modest demand; 4=Strong demand; 5=Very strong demand]			
Region 1 (Pacific)	2	2.0	2
Region 2 (Southwest)	2	2.2	5
Region 3 (Great Lakes-Big Rivers)	N/A	N/A	0
Region 4 (Southeast)	3	2.7	3
Region 5 (Northeast)	3	3.0	1
Region 6 (Mountain-Prairie)	3	3.0	6
Region 7 (Alaska)	N/A	N/A	0
Region 8 (California & Nevada)	3	3.0	11

Region 1: ID, OR, WA, HI, Pacific Islands; Region 2: AZ, NM, OK, TX; Region 3: IL, IN, IA, MI, MO, MN, OH, WI; Region 4: AL, AR, FL, GA, KY, LA, MS, NC, PR/VI, SC, TN; Region 5: CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV; Region 6: CO, KS, MT, ND, NE, SD, UT, WY; Region 7: AK; Region 8: CA, NV

OBSTACLES

A number of potential obstacles exist that may affect the creation of additional conservation banks. Future demand for conservation bank credits can influence the development of additional banks, as well as the success of banks that have already been approved. The time required for bank development, particularly for bank approval, is frequently cited as a concern related to new bank development since delays can result in economic costs to the developer. In the sponsor survey, respondents commented on future demand for additional banks and the time for approval of the banks their organization has developed. The results from those questions are discussed in this section.

How do you expect demand for additional conservation banks to change over the next 2-3 years? (Survey Question #13)

- **Anticipated future demand varies by USFWS Region. Respondents anticipate demand to increase in Regions 2, 4, and 8, remain the same in Regions 1 and 5, and decrease in Region 6.**

Respondents to the sponsor survey were asked for their opinion on future demand for additional conservation banks in the areas where they work or expect to work in the future. The multiple choice options for this question included increase (1), stay the same (0), and decrease (-1). Responses indicate that demand is expected to increase in regions 2, 4 and 8 (values near 0); remain the same in regions 1 and 5 (values closer to 1); and decrease in region 6 (values closer to -1). No respondents stated an opinion on future demand in regions 3 and 7.

Table 2. Future demand for additional conservation banks

Region	Median Rating	Mean Rating	Number of Responses
	[Rating Scale: 1=Increase; 0=Stay the Same; -1=Decrease]		
Region 1 (Pacific)	0	0.0	2
Region 2 (Southwest)	1	0.5	4
Region 3 (Great Lakes-Big Rivers)	N/A	N/A	0
Region 4 (Southeast)	0	0.3	3
Region 5 (Northeast)	0	0.0	1
Region 6 (Mountain-Prairie)	0	-0.3	6
Region 7 (Alaska)	N/A	N/A	0
Region 8 (California & Nevada)	0	0.5	11

Region 1: ID, OR, WA, HI, Pacific Islands; Region 2: AZ, NM, OK, TX; Region 3: IL, IN, IA, MI, MO, MN, OH, WI; Region 4: AL, AR, FL, GA, KY, LA, MS, NC, PR/VI, SC, TN; Region 5: CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV; Region 6: CO, KS, MT, ND, NE, SD, UT, WY; Region 7: AK; Region 8: CA, NV

Respondents were asked a series of questions in order to help understand the time required for conservation bank approval and the proportion of that time that is spent waiting for input from USFWS staff. The first questions ask about the total time, and the percent of total time spent waiting, during the planning phase of bank development. The planning phase was defined as the time from the outset of development to submission to USFWS. The second set of questions refers to the final approval stage, which is defined as the time from initial submission to USFWS to final approval of the bank.

How long did each of the following phases of conservation bank development take for the conservation banks you have had approved through the USFWS program? (Please list the length of time for the planning stage and approval stage for each bank below, as well as the percentage of the total time for each phase that was spent waiting for input or a response from USFWS staff) (Survey Questions #6-9)

- **Respondents spent an average of slightly over a year planning their conservation banks, with an average of 38% of that time waiting for input from USFWS.**

Respondents were asked about the amount of time spent during the planning stage for their banks, and the percentage of that time that was spent waiting for input from USFWS. Figure 8 shows the range in timeframes for conservation bank planning.

The mean length of time for planning was 13.6 months and the median was 12 months, with the majority (75%) of respondents spending 12 months or less in the planning phase. Respondents report spending an average of 38% of total planning time waiting for input from the USFWS (Figure 9).

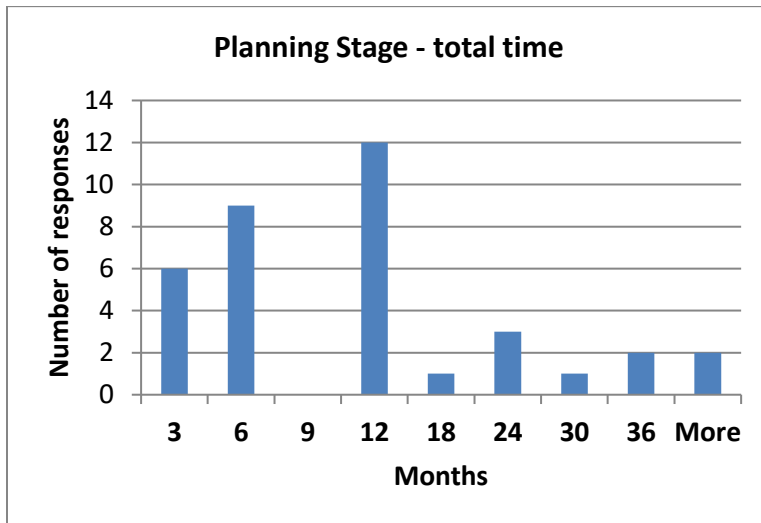


Figure 8. Histogram showing length of time spent in the planning phase for conservation banks

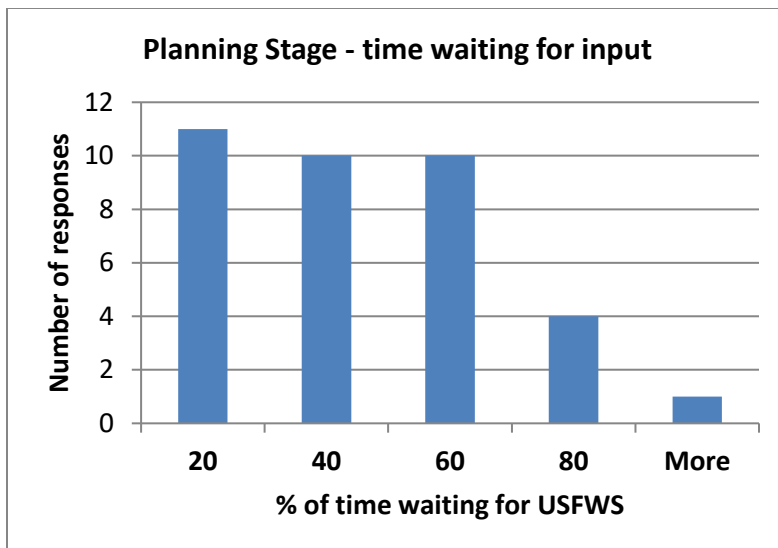


Figure 9. Histogram showing percentage of planning phase time spent waiting for input from USFWS

- **On average, it took respondents slightly over a year and a half from the time they submitted their conservation bank documents until the bank was approved by USFWS, 44% of which was spent waiting for input from USFWS staff.**

The mean time for the final approval stage (defined as the time from initial submission to USFWS to final approval) was 18.6 months and the median was 14.5 months for the sponsors surveyed. 64% of respondents indicated that the total time for the final approval stage was 18 months or less, with 31% taking 6 months or less (Figure 10).

Compared to the planning phase, more respondents reported spending larger amounts of time waiting for input from USFWS during the final approval stage of bank development. Respondents reported spending an average of 44% of total time in the final approval stage waiting for input from the USFWS. 28% of respondents spent 20% or less of the total final approval stage waiting for input from the USFWS, while 22% estimated waiting 20-40% of the final approval stage, and 50% spent over 40% waiting for USFWS input (Figure 11).

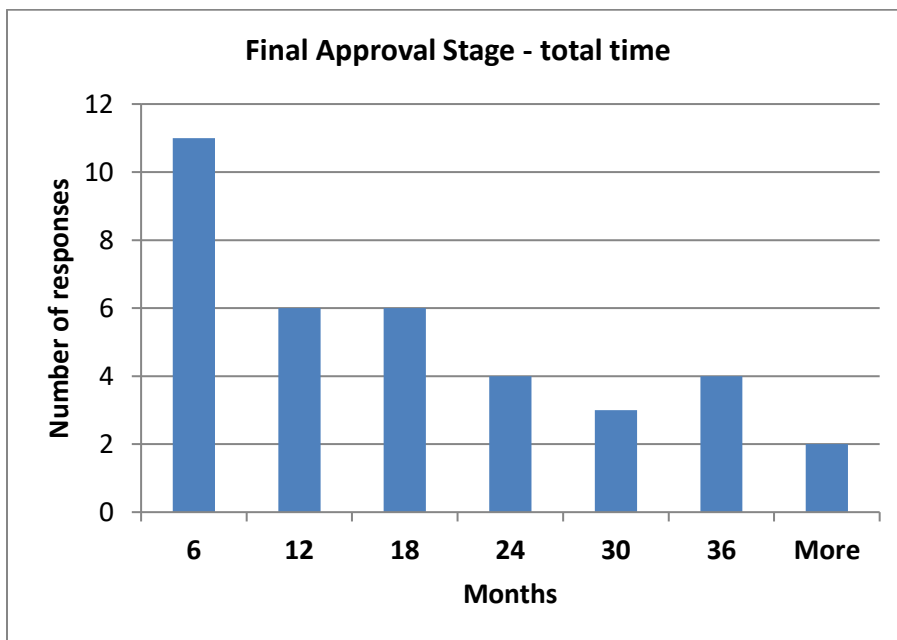


Figure 10. Histogram showing length of time spent in the final approval phase for conservation banks

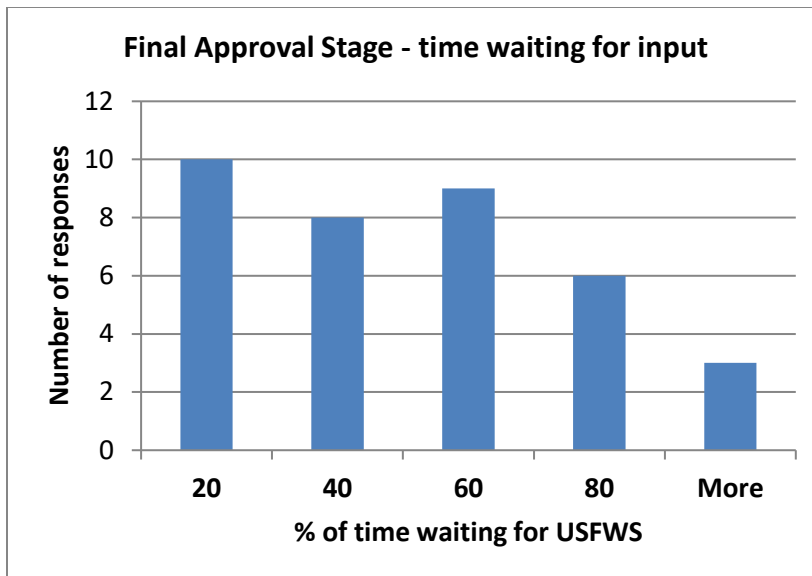


Figure 11. Histogram showing percentage of final approval phase time spent waiting for input from USFWS

LESSONS LEARNED

Based on their experiences with the conservation banking program, respondents to the sponsor survey were asked their opinion on potential changes to current conservation banking guidance. At the time of the survey, the USFWS was using its 2003 conservation banking guidance.⁶ The program has not implemented any formal regulations related to its banking program, such as those that were published for the USEPA/USACE wetlands mitigation banking program in 2008.

Does your organization support changes to the USFWS's current guidance or the adoption of new conservation banking regulations (no regulations currently exist for conservation banking)? If yes, what specific changes does your organization support? (Survey Question #14)

- **The majority of respondents (61%) said their organization supported changes to the current conservation banking guidance and new conservation banking regulations.**

Respondents were asked if their organization supports changes to the current USFWS conservation banking guidance, the development of new conservation banking regulations, or both. Most respondents indicated that their organization would support both changes to the current guidance and the development of new regulations (61%), while the remaining 39% were split evenly between changes to the current guidance only, no changes, and no opinion (Figure 12). None of the respondents supported only the development of new conservation banking regulations.

Respondents suggested numerous specific changes to the guidance including uniform and consistent metrics and requirements, a preference for advance conservation projects, and a

⁶ The USFWS published a draft Compensatory Mitigation Policy in September 2016 that covers conservation banking. Questions and answers in the survey refer to the 2003 conservation banking guidance.

requirement for mitigation for impacts to species. Other recommendations were related to timing and financial aspects of banking including timelines and shortening the approval process, requiring financial assurances, and lowering the cost of banking entitlements. Some recommendations were related to competition with other types of mitigation measures, including Habitat Conservation Plans (HCPs) and allowing conservation credits for wetlands banks. One respondent suggested developing an educational program to explain banking to the public.

Some of these suggested changes have been proposed in the Service’s proposed changes to their Mitigation Policy, and the proposed Compensatory Mitigation Policy (CMP). The revised Mitigation policy states that the Service “prefers compensatory mitigation measures that are implemented and earn credits in advance of project impacts.” The CMP proposes a set of standards that would apply to all compensatory mitigation mechanisms. In addition, the CMP states that metrics “must be science-based, quantifiable, consistent, repeatable, and related to the conservation goals for the species.” In its CMP, the Service does not support the use of timelines, stating “The Service does not have mandated timelines for review of conservation banks, in-lieu fee programs, or other compensatory mitigation projects that are not part of a consultation or permit decision.” The CMP also states that the Service will require financial assurances “in amounts and forms necessary to ensure a high level of confidence that the compensatory mitigation project will have adequate and accessible funding for long-term management, monitoring, reporting, and administrative and other performance requirements for the duration of the mitigation project.”

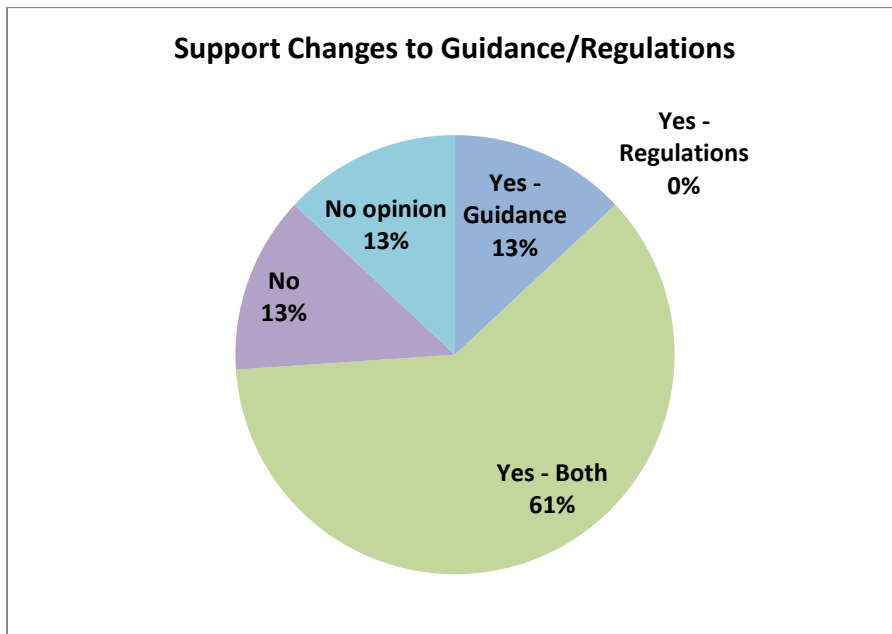


Figure 12. Respondent support for changes to current guidance/development of new regulations

MANAGER SURVEY

The manager survey was developed to obtain information from individuals that are involved in day-to-day development and operation of one or more conservation banks. This survey was conducted in order to obtain information on the experiences of individual managers, rather than the perspective of sponsors or larger conservation banking organizations. In cases where banks were sponsored by individuals or small organizations, it is likely that the same respondent completed both the sponsor and manager survey. Respondents were asked to provide background information about their own personal experience with conservation banking, ways to measure conservation bank success, obstacles that might affect conservation bank success, and opinions on conservation banking as compared to wetlands mitigation banking.

MANAGER CHARACTERISTICS

Respondents were asked which roles they perform in conservation banking. The roles included bank sponsors (who are involved in setting up and financing the bank), landowners, and bank managers (who are involved in day-to-day bank operations and submitting bank documents for review). The most common answer was “bank manager”, which 75% of respondents said was one of their roles, although other roles were very common as well (Figure 13). In fact, 56% of respondents indicated more than one role, suggesting that many banks are self-managed by the landowner or sponsor, or managed by a small number of staff who handle multiple aspects of the banking process.

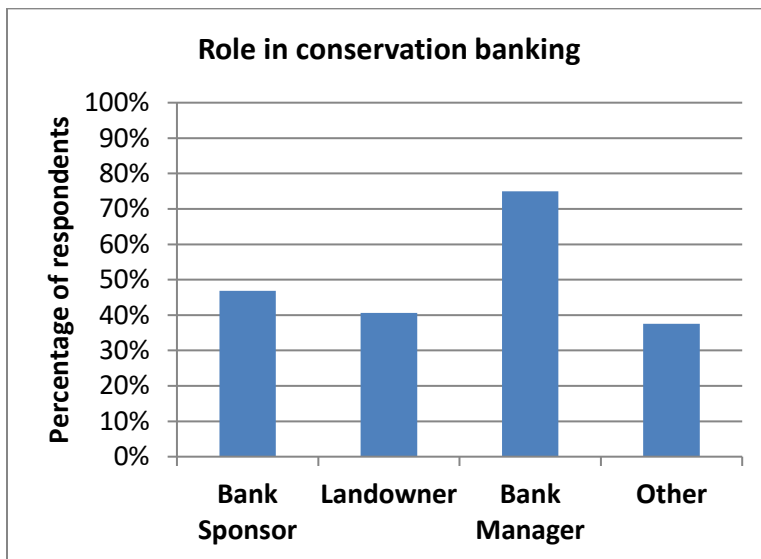


Figure 13. Respondent's role in conservation banking

The managers surveyed had been involved with conservation banking an average of 9 years. The majority (53%) of managers have been involved with conservation banking for 6-10 years, 22% have been involved for 1-5 years, 19% for 11-15 years, and 6% for 16-20 years (Figure 14).

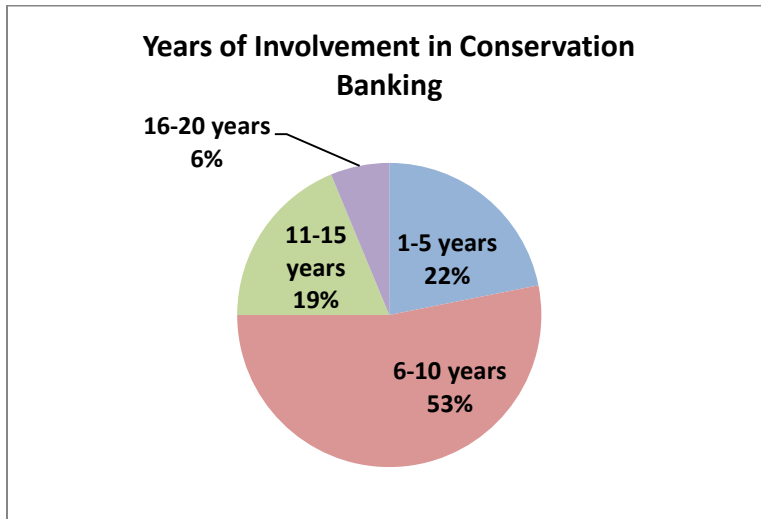


Figure 14. Number of years the manager has been involved in conservation banking

Respondents were also asked about the number of conservation banks that they have helped to develop. The average was just over 5 banks, but as shown in Figure 15, the majority of respondents are responsible for 1 bank or less. Additionally, 77% of respondents helped develop 3 banks or fewer.

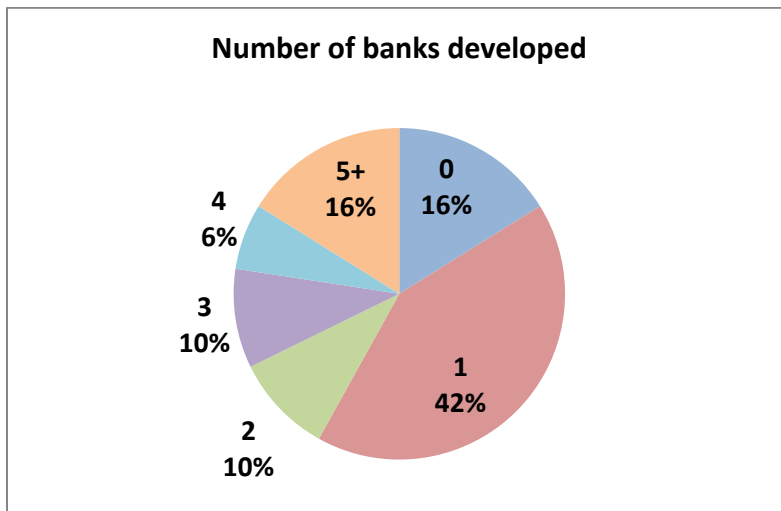


Figure 15. Number of conservation banks developed by survey respondents

BACKGROUND

Respondents to the manager survey were asked background questions related to training and the current USFWS conservation banking guidance.

Have you participated in any conservation banking training (as an instructor or participant)? (Survey Question #5)

- **Slightly over half of the respondents had not participated in conservation bank training.**

Slightly over half of respondents said that they had not participated in any form of conservation banking training (Figure 16). A small number of respondents had been involved in training as instructors, and slightly less than half had participated in conservation bank training. These results accord with the results from the sponsor survey indicating that conservation bank training is not required for many sponsoring organizations.

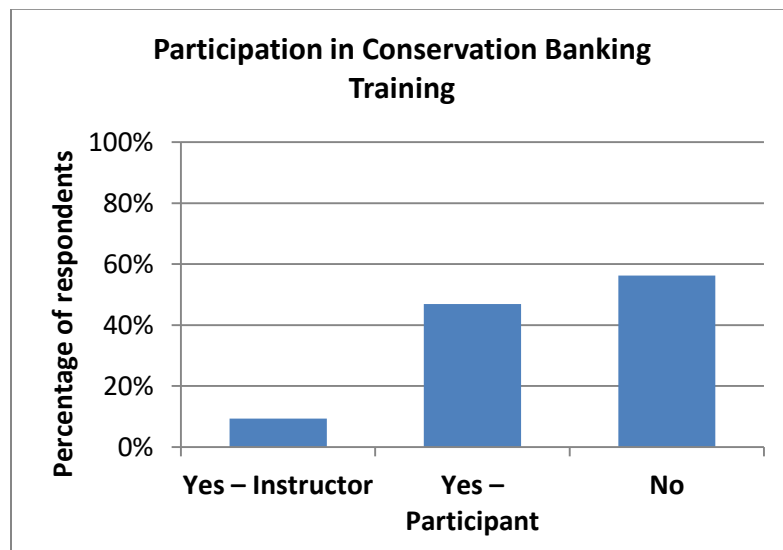


Figure 16. Respondent participation in conservation banking training

How familiar are you with 2003 USFWS "Guidance for the Establishment, Use, and Operation of Conservation Banks"? (Survey Question #6)

- **Most respondents (71%) were somewhat familiar with the USFWS Conservation Banking guidance.**

Respondents were asked about their familiarity with the 2003 USFWS Conservation Banking guidance. An overwhelming majority (71%) indicated that they were somewhat familiar with the guidance, and another 18% indicated that they were very familiar (Figure 17). Only 11% of respondents specified no familiarity with the guidance.

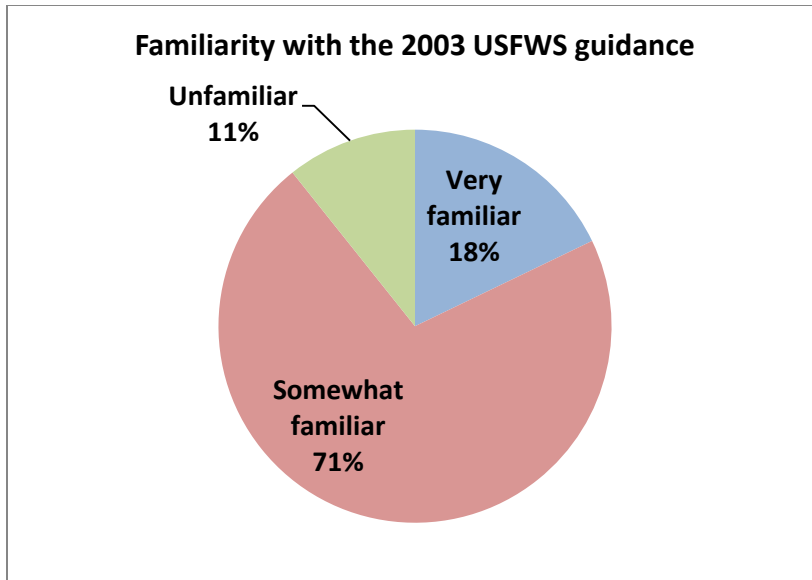


Figure 17. Respondent's familiarity with the 2003 USFWS conservation banking guidance

Currently, the U.S. Fish and Wildlife Service has not issued regulations to govern the development of conservation banks; however, it has issued guidance. Do you feel that changes to the current guidance or the development of new conservation banking regulations are needed? (Survey Question #7)

- **A majority of respondents had no opinion about potential changes to the conservation banking guidance or the development of new regulations. Of those that supported changes, most supported changes to the guidance as well as new regulations.**

Respondents to the manager survey were also asked their opinion on potential changes to the existing USFWS conservation banking guidance or the development of new conservation banking regulations. As shown in Figure 18, a majority (57%) indicated that they had no opinion on the subject, while the most popular opinion among those who expressed one was that both new regulations and revised guidance are necessary (21%). It is of note that a large majority of respondents in the sponsor survey supported changes to the USFWS guidance and/or the addition of conservation banking regulations, which likely indicates that sponsors or leaders in conservation banking organizations are more likely to be aware of regulatory issues related to banking than individual bank managers.

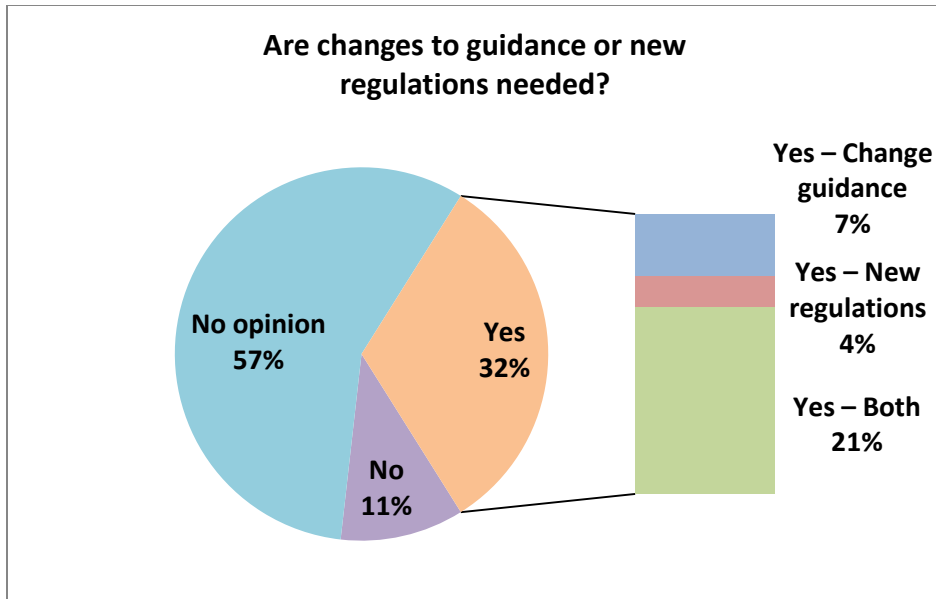


Figure 18. Respondent's opinion about changes to conservation banking guidance or new regulations

MEASURING SUCCESS

Respondents to the manager survey were asked questions related to different possible measures of conservation bank success and ecological performance. They were provided with several different measures and then asked to rate their suitability.

In your opinion, to what extent are the following factors good measures of conservation bank success for your company, for species and for credit purchasers? (Survey Question #13)

- **Respondents generally showed stronger support for ecological measures of success than for business measures, although both types of measures were recognized as potentially good indicators of success.**

Respondents were asked to rate several criteria in terms of the extent to which they are a good measure of conservation success. The possible answers were "Very Good Measure" (2), "Good Measure" (1), "Neutral" (0), "Poor Measure" (-1), "Very Poor Measure" (-2) and "Don't know". The responses are summarized in Table 3.

The factors that most respondents thought were good measures of success were linking existing conservation/natural areas (+1.44) and preserving ecologically valuable private lands (+1.44). Reinvestment of capital in additional banks (+0.65) and minimizing costs to project proponents (+0.68) had the lowest average rating as measures of success. In general, factors that were land- and habitat-related scored better than those that were capital-, cost- or profit-related. All 10 factors received mean opinion scores higher than 0, indicating that respondents viewed them more positively than negatively.

Table 3. Rating of criteria for measuring conservation bank success

Criteria	Median Rating	Mean Rating
	[2=very good measure; 1=good measure; 0=neutral; -1=poor measure; -2=very poor measure]	
Linking existing conservation/natural areas	2	1.44
Preserving ecologically valuable private lands	2	1.44
Increasing the number of acres of “preserved” habitat	1	1.40
Increasing the number of acres of critical habitat	1	1.35
Meeting criteria for recovery plan	1	1.16
Maintaining a stable population/growing the species	1	0.92
Number of credit sales	1	0.88
Conservation bank profitability	1	0.80
Minimizing costs to project proponents	1	0.68
Reinvestment of capital in additional banks	1	0.65

Figure 19 and Figure 20 show the number of responses for each rating for ecological and business measures of success. Ecological measures were generally rated higher than business measures, with more respondents rating the measures as very good or good measures of conservation bank success. Business measures tended to have slightly lower ratings, but most respondents still chose positive or neutral ratings.

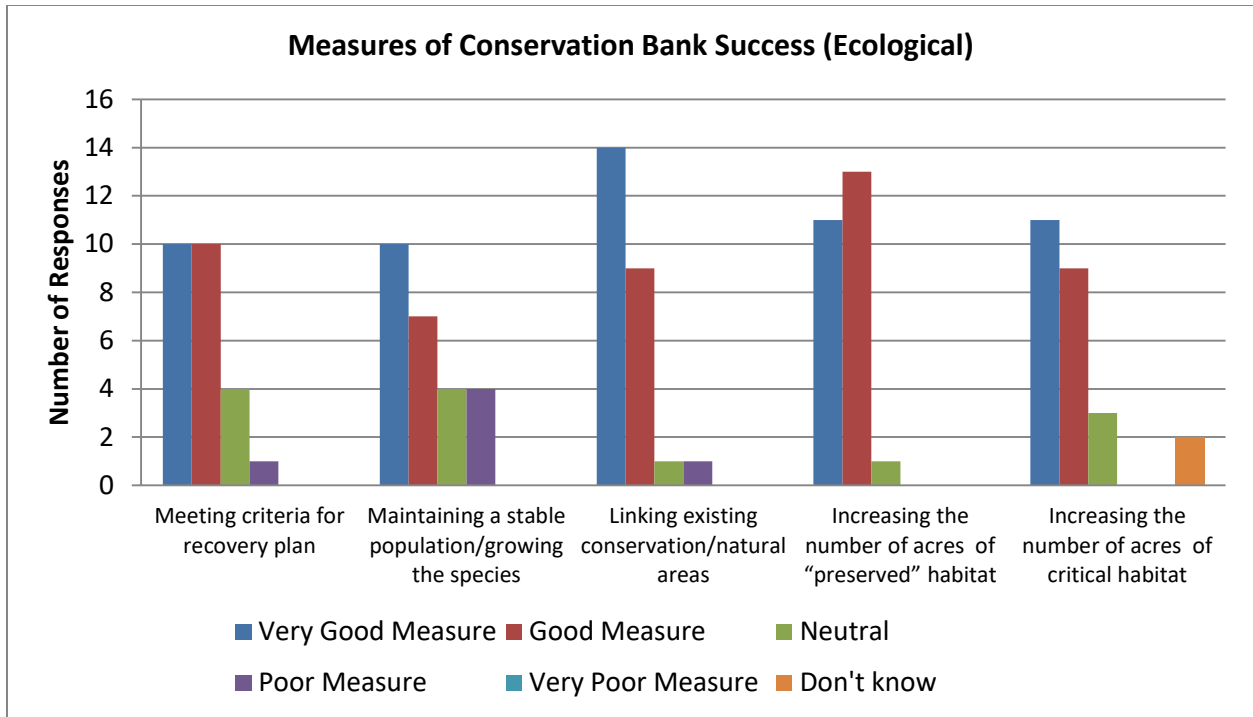


Figure 19. Ratings for ecological measures of conservation bank success

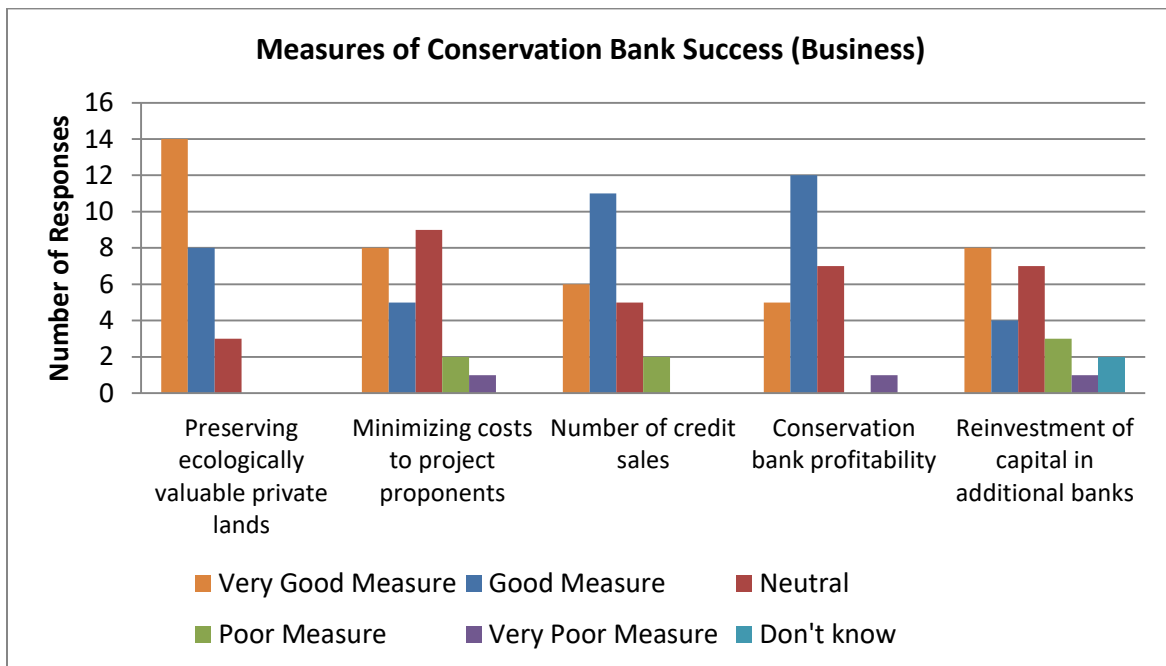


Figure 20. Ratings for business measures of conservation bank success

In your opinion, to what extent is each of the following factors a good measure of conservation bank ecological performance? (Survey Question #14)

- **Respondents rated habitat conditions as the best measure of ecological performance.**

Respondents were also asked to rate several possible measures of conservation bank ecological performance. The possible answers were “Very Good Measure” (2), “Good Measure” (1), “Neutral” (0), “Poor Measure” (-1), “Very Poor Measure” (-2) and “Don’t know/No opinion”. The responses are summarized in Table 4.

By a fairly wide margin, respondents thought the best measure was habitat conditions (+1.65). Ecosystem health (+1.38) and species threats addressed (+1.31) also received relatively strong support. Respondents viewed the number of individuals of a species as the lowest measure (+0.62). However, all six options received a mean opinion score above 0, indicating that respondents viewed them more positively than negatively.

Table 4. Rating of criteria for measuring ecological performance

Criteria	Median Rating	Mean Rating
	[2=very good measure; 1=good measure; 0=neutral; -1=poor measure; -2=very poor measure]	
Habitat conditions	2	1.65
Health of ecosystem	1	1.38
Species threats addressed	1	1.31
Indicator species number and diversity	1	0.92
Index of biological integrity	1	0.90
Number of individuals of the species	1	0.62

As shown in Figure 21, all of the measures were generally viewed as good measures of ecological performance, with most respondents choosing neutral, good, or very good. Interestingly, 16% responded “Don’t know/No opinion” to “Index of biological integrity”, while no one responded “Don’t know/No opinion” to any other factor. This may mean that some respondents simply were not familiar with the concept of an index of biological integrity or did not know the meaning of the term.

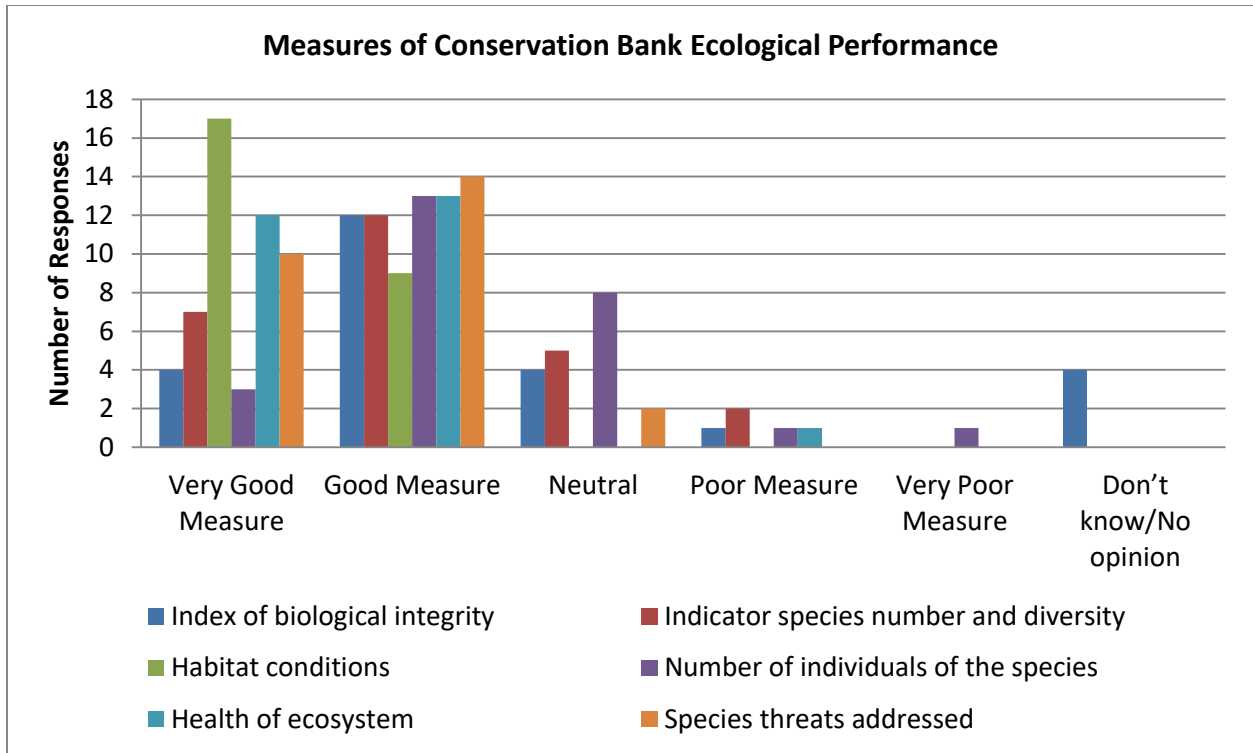


Figure 21. Ratings for measures of conservation bank ecological performance

OBSTACLES

Respondents to the manager survey were asked several questions related to obstacles to conservation banking. Questions related to attitudes toward banking, factors that increase the time for bank approval, factors that hinder conservation bank creation and factors that impede conservation bank operations.

How would you say each of the groups below feels about conservation banks as a tool for conservation? (Survey Question #8)

- **Respondents perceive that most groups have a relatively positive attitude toward conservation banking, with highest level of perceived support from USFWS staff at the National, Field and Regional office levels.**

Respondents were asked about their perception of attitudes on conservation banking by different groups, with a rating scale of “Very positive” (2), “Positive” (1), “Neutral” (0), “Negative” (-1), “Very negative” (-2) or “Don’t know/No opinion.” The results are summarized in Table 5.

These results depict respondents’ perception of *other groups’ opinions* about conservation banking. They are only an indirect measure of those groups’ opinions, and they do not depict respondents’ opinions about the groups themselves.

The groups that respondents described as having the most positive opinion of conservation banking were US Fish and Wildlife Service national offices, field offices, and regional offices. The

groups described as having the least positive opinion were the manufacturing industry and private landowners, followed by real estate developers and local governments. Only the manufacturing industry received a negative mean opinion score, but it also received the highest percentage of “Don’t know/no opinion” responses, indicating that the opinion score represents the views of only a small number of respondents.

Table 5. Respondents' perception of groups' attitudes toward conservation banking

Group	Median Opinion	Mean Opinion	% Don't know/No opinion
	[2=very positive; 1=somewhat positive; 0=neutral; -1=somewhat negative; -2=very negative]		
USFWS – National office	2	+1.38	41%
USFWS – Field office	2	+1.35	7%
USFWS – Regional office	1	+1.18	21%
Energy, mining, related industries	1	+1.07	44%
Other Federal agencies	1	+1.05	26%
Local Non-Government Orgs.	1	+0.90	26%
State agencies	1	+0.88	7%
Shipping/transportation industries	1	+0.73	59%
Local government	1	+0.61	15%
Real estate developers	1	+0.55	26%
Private landowners	1	+0.32	19%
Manufacturing	0	-0.17	78%

Based on your experience, how likely is each of the following factors to lengthen the USFWS review time for banking agreements? (Survey Question #10)

- **Respondents thought institutional factors were more likely to lengthen USFWS review time than technical factors. Lack of a defined timeline, coordination with other agencies, and insufficient staffing were rated as the most likely to increase review time.**

Bank managers were also asked about the likelihood that different factors would increase the review time for banking agreements. The possible answers were “Extremely likely” (2), “Likely” (1), “Neutral” (0), “Unlikely” (-1), “Extremely unlikely” (-2) and “Don’t know/No Opinion”. The responses are summarized in Table 6.

For each of the 10 factors suggested, the average opinion was greater than 0, suggesting that respondents thought these factors were all more likely than unlikely to lengthen the USFWS review time. The factor judged most likely to lengthen the USFWS review process was “Lack of defined timeline,” with a mean opinion of +1.54. This factor also had the smallest standard deviation, suggesting a somewhat greater degree of consensus among those who expressed an opinion. Other factors considered most likely to lengthen the process were coordination with other Federal, State and local agencies (+1.50), insufficient USFWS staffing (+1.42), government legal review and

approval (+1.39) and inexperienced bankers (+1.36). Factors considered least likely (though not unlikely) to lengthen the process were determination of credits (+0.58), and lack of standardized documents/templates (+0.72).

Table 6. Rating of likelihood to increase banking agreement review time

Factor	Median Rating	Mean Rating	% Don't know/No opinion
	[2=extremely likely; 1=likely; 0=neutral; -1=unlikely; -2=extremely unlikely]		
Lack of defined timeline	2	+1.54	8%
Coordination with other Federal, State, or local agencies	2	+1.50	4%
Insufficient USFWS staffing	2	+1.42	4%
Government legal review and approval	2	+1.38	4%
Inexperienced bankers	2	+1.36	19%
USFWS staff not adequately trained	1	+1.24	7%
Long or complex banking agreements	1	+1.08	7%
Unsupportive USFWS management	1	+0.84	7%
Lack of standardized documents/templates	1	+0.72	7%
Determination of credits	0	+0.54	11%

The range of responses for each factor is shown in Figure 22 for institutional factors and Figure 23 for technical factors. Institutional factors, such as those dealing with staffing and coordination, were generally rated extremely likely to increase review time more often than technical factors.

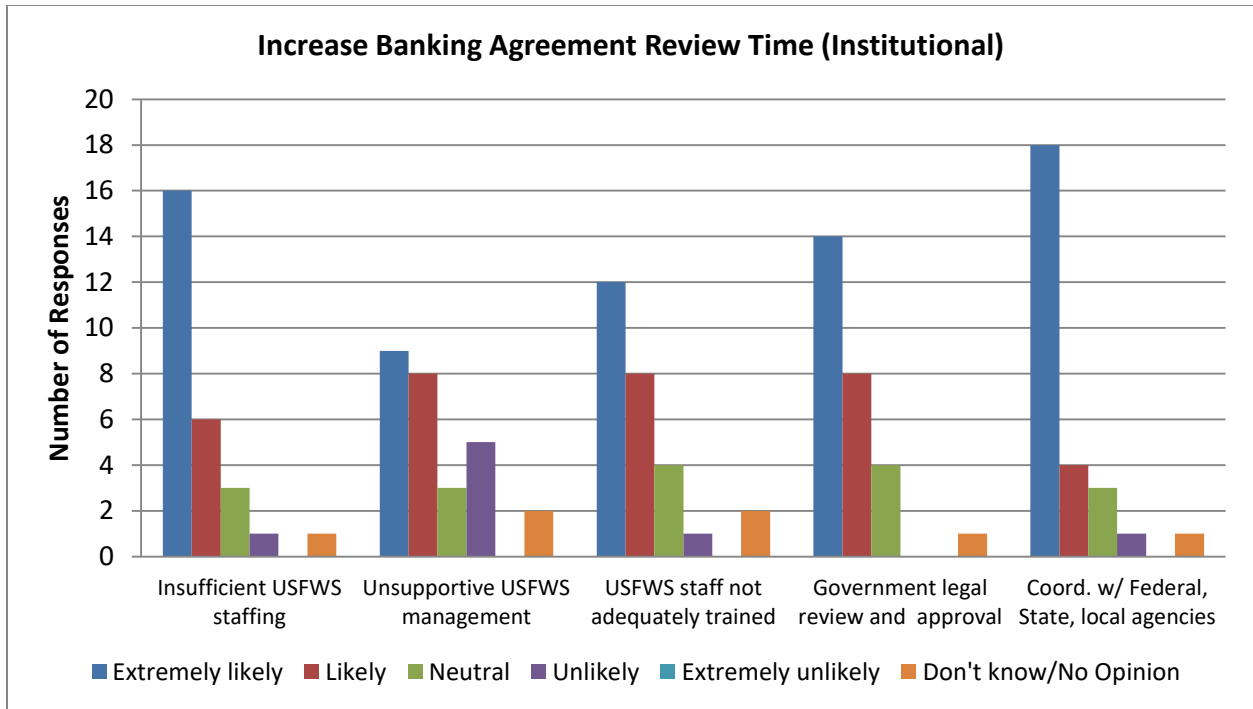


Figure 22. Likelihood of institutional factors to increase banking agreement review time

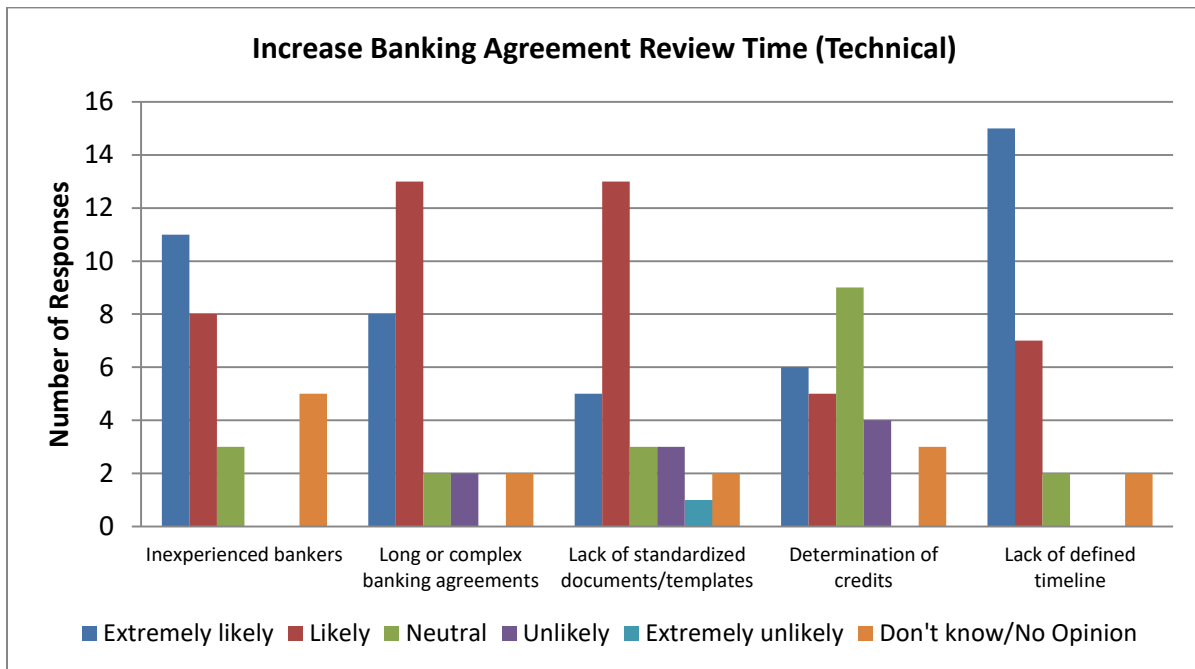


Figure 23. Likelihood of technical factors to increase banking agreement review time

In your opinion, how important are each of the following factors in hindering conservation bank creation? (Survey Question #11)

- **Respondents identified weak demand for credits and lack of clear deadlines for USFWS as the most important factors in hindering conservation bank creation, closely followed by delayed USFWS response and economic uncertainty/risk.**

Respondents were asked to identify the importance of different factors in hindering the creation of conservation banks. The possible answers were “Very important” (3), “Important” (2), “Somewhat important” (1), “Not at all important” (0) and “Don’t know/No opinion.” Table 7 summarizes the mean values of the responses and the percentage of responses that were “Don’t know/No Opinion.”

The factors viewed as most important to hindering conservation bank creation were weak demand for credits, lack of clear deadlines/timelines for USFWS and delayed USFWS response. The remaining factors viewed as important, with little variation in the mean opinion value.

Table 7. Opinion of importance of factors in hindering conservation bank creation

Factor	Median Opinion	Mean Opinion	% Don’t know/No opinion
	[0=not at all important; 1=somewhat important; 2=important; 3=very important]		
Weak demand for credits	3	2.50	4%
Lack of clear deadlines/timelines for USFWS	3	2.50	4%
Delayed USFWS response	3	2.46	4%
Economic uncertainty/risk	2.5	2.42	4%
Lack of start-up funding	2	2.31	4%
Lack of USFWS support	2.5	2.23	4%
Unsuitability of species for banking	2.5	2.22	23%
Lack of USFWS Field Office experience	2	2.19	4%
Lack of species and habitat data	2	2.12	4%
Other mitigation options substitute for banking	2	2.11	4%
Landowners not willing to sell land or easement	2	1.88	7%
Lack of ESA enforcement	2	1.88	7%

To what extent do you agree that each of the following changes to the FWS conservation banking program would make conservation bank creation easier? (Survey Question #12)

- **Respondents expressed the strongest support for having a known timeline after complete submission and an expressed preference by USFWS for advance compensatory mitigation.**

Respondents were also asked whether they agreed with several potential changes to the conservation banking program. They were asked to rank each potential change on a scale with responses of: “Strongly agree” (2), “Agree” (1), “Neutral” (0), “Disagree” (-1), “Strongly Disagree” (-2) and “Don’t know/No opinion.” The responses are summarized in Table 8.

The changes that met with the strongest agreement from respondents were having a known timeline after complete submission (+1.46) and an expressed preference by USFWS for advance compensatory mitigation (+1.35).⁷ The former also had the smallest standard deviation, indicating less variation among the answers. The changes with the weakest level of agreement were approved document templates in all regions (+0.87) and formal conservation banking regulations (+0.83). The latter of those two had the largest standard deviation, indicating more variation among the answers. However, all six options had an average opinion score greater than 0, indicating more agreement than disagreement.

Table 8. Ranking of potential changes to the conservation banking program

Change	Median opinion	Mean opinion	% Don't know/No opinion
	[-2=strongly disagree; -1=disagree; 0=neutral; 1=agree; 2=strongly agree]		
Known timeline after complete submission	2	+1.46	8%
Expressed preference by USFWS for advance compensatory mitigation	2	+1.35	12%
Equivalent standards for all types of compensatory mitigation	1	+1.09	15%
Policy preference for conservation banking above other compensatory mitigation options	1.5	+1.04	8%
Approved conservation banking document templates in use in all regions	1	+0.87	12%
Formal conservation banking regulations	1	+0.83	12%

Figure 24 shows the variation in agreement with possible changes to the program. Known timelines and expressed preference for advance mitigation showed mostly “Strongly agree” or “Agree” responses, while templates and formal regulations showed a greater percentage of neutral or disagree responses.

⁷ The March 2016 proposed revisions to the Service’s 1981 Mitigation Policy state a preference for compensatory mitigation measures that are implemented and earn credits in advance of project impacts, when compensatory mitigation is necessary.

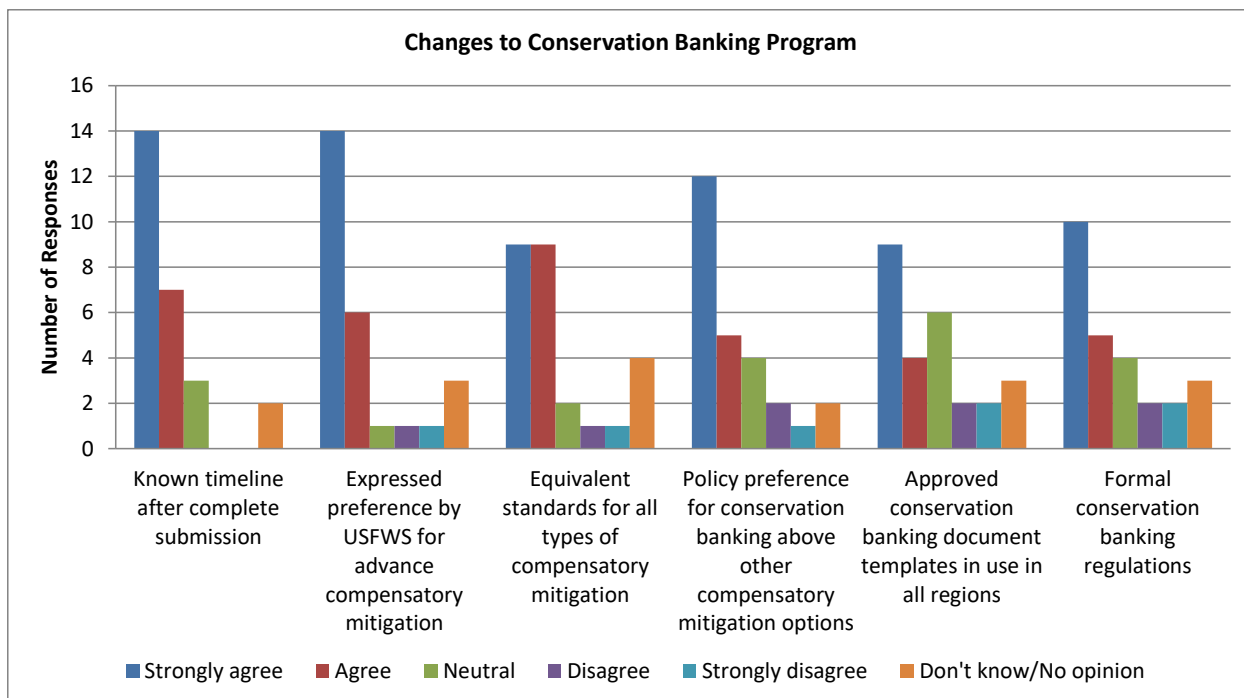


Figure 24. Ranking of potential changes to the USFWS conservation banking program

In your opinion, how important are the following factors in impeding conservation bank operations? (Survey Question #16)

- **Respondents felt the existence of Habitat Conservation Plans without a conservation banking option was the most important factor in impeding conservation bank operations.**

Respondents were asked about the importance of a few particular factors in impeding conservation bank operations. The factors were rated on a four-point scale from “Not at all important” to “Very important.” As shown in Figure 25, the existence of Habitat Conservation Plans (HCPs) without a conservation banking option was ranked as being the most important, followed by state or local agencies being unwilling to accept the use of conservation banks. The reticence of USFWS to publicize was ranked as less important overall, and was ranked as “Not at all important” by a larger number of respondents.

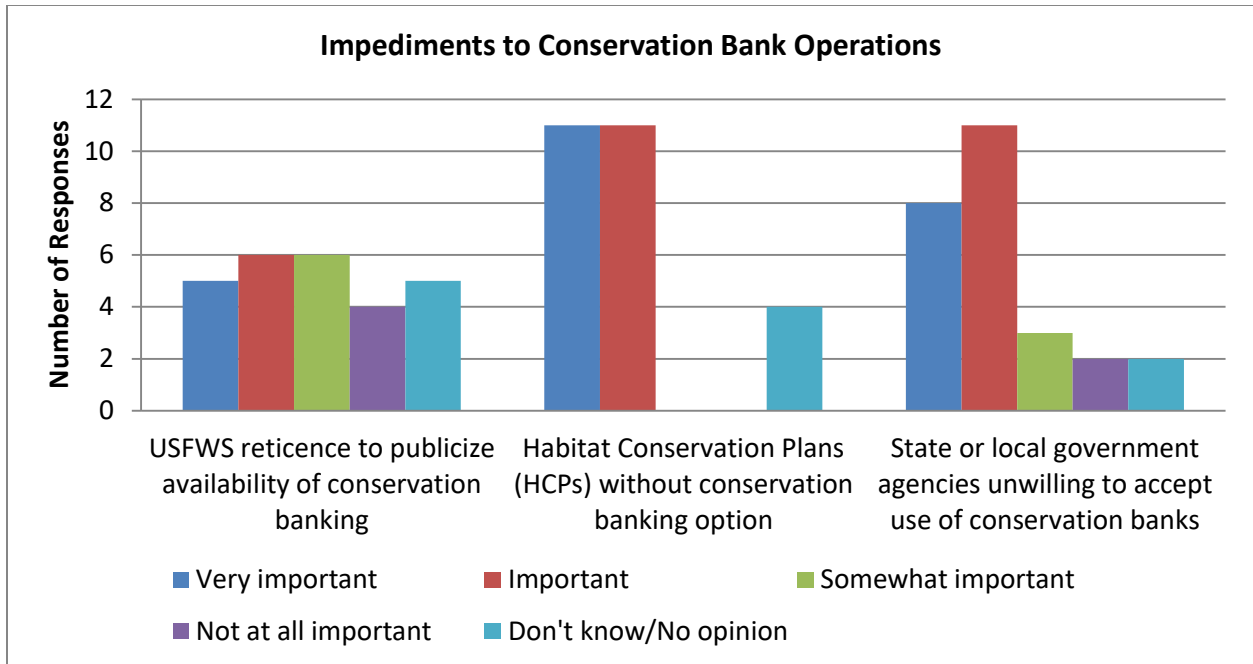


Figure 25. Importance of factors in impeding conservation bank operations

LESSONS LEARNED

Respondents to the manager survey were asked several questions related to their experience from their involvement with conservation or wetlands mitigation banking. They were asked about data availability for species in their region, and were asked a series of questions related to wetlands banking. The questions posed asked them to compare several aspects of conservation and wetlands banking as well as their opinion on incorporating elements of the 2008 USEPA/USACE wetlands mitigation banking rule in conservation banking guidance.

How would you rate the availability of species and habitat data in your USFWS region(s)? (Survey Question #15)

- **Respondents rated species and habitat data availability in Region 8 (Pacific SW) as good or very good. Responses on other Regions were inconclusive.**

Respondents were asked to rate the availability of species and habitat data for the areas in which they work. Responses were generally low for many regions, indicating few respondents working in those areas and/or a lack of knowledge about data availability. Respondents provided the most rankings for Region 8 (Pacific SW), with 12 out of 17 individuals stating an opinion that data availability was “Good” or “Very Good.” Of the five respondents stating an opinion in Region 4 (Southeast), one rated data availability as “Very Good,” two rated it as “Good,” and two rated it as “Neutral.” The remaining regions had too few responses to draw any conclusions about data availability.

How familiar are you with wetlands mitigation banking? (Survey Question #17)

- **Most (81%) of manager survey respondents were very or somewhat familiar with wetlands banking.**

Respondents were asked to judge their level of familiarity with the EPA and US Army Corps wetlands mitigation banking program. As shown in Figure 26, the results indicate a relatively high level of familiarity with the wetlands mitigation banking program: nearly half (46%) indicated they were “Very familiar” with it, and a combined 81% responded either “Very familiar” or “Somewhat familiar.” This level of familiarity may suggest that many conservation bankers are also involved in or well-connected to mitigation banking.

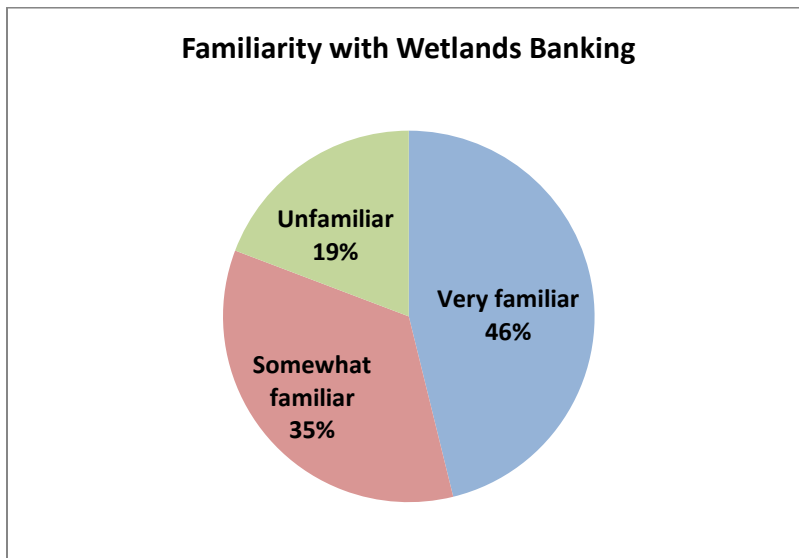


Figure 26. Respondent familiarity with wetlands mitigation banking

In your view, how does conservation banking compare with wetlands mitigation banking in the following areas? (Survey Question #18)

- **Most respondents felt conservation banks performed better or about the same as wetlands banking on several different factors.**

Respondents were asked to compare several areas of conservation banking to wetlands banking. For all items listed, more respondents felt conservation banks performed better or about the same as wetlands banks than those that felt they performed worse (Figure 27). The developer’s cost to establish and monitoring requirements were rated as better than wetlands banking by more respondents than any of the other areas listed. The majority of respondents rated ecological performance and the ability to measure ecological performance as about the same as wetlands banking.

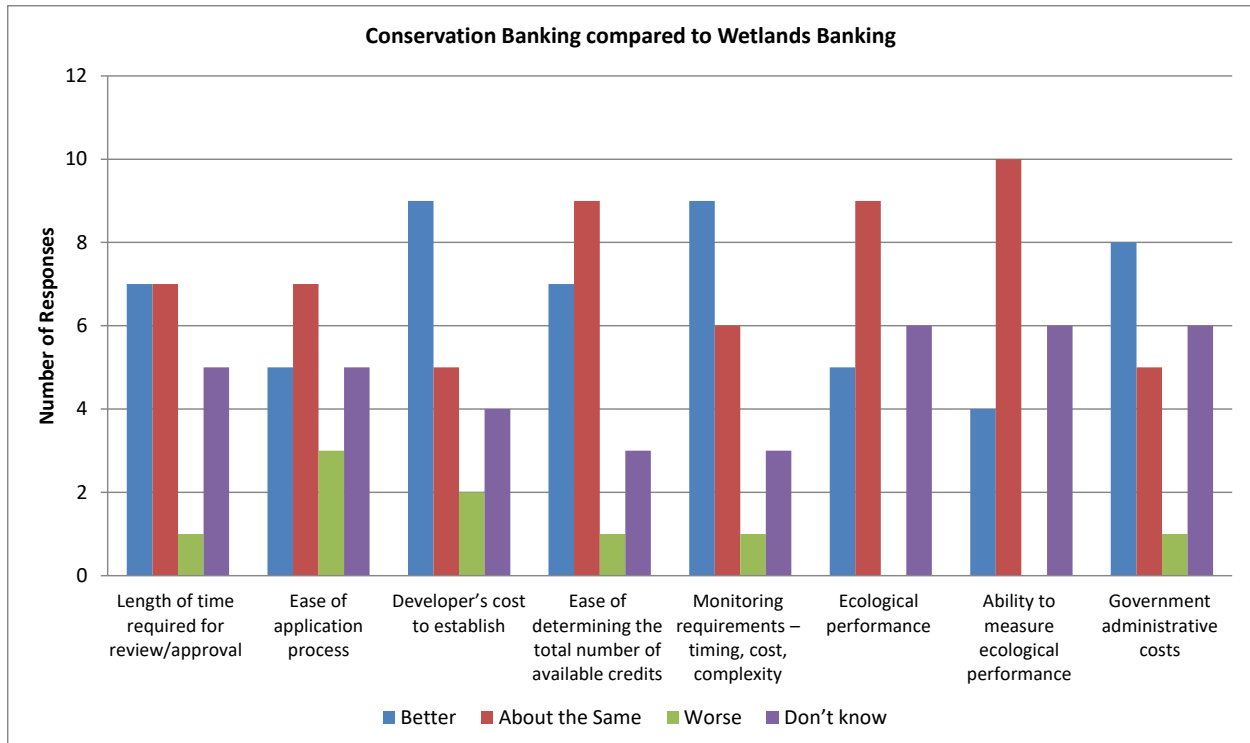


Figure 27. Respondents' comparison of different areas of conservation banking and wetlands banking

How familiar are you with the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency Final Rule related to wetlands mitigation banking? (Survey Question #19)

- **Respondents were about evenly split between very familiar and unfamiliar with the 2008 US EPA/ US Army Corps of Engineers wetlands mitigation banking rule.**

Respondents were also asked to report their familiarity with the 2008 US EPA/US Army Corps of Engineers wetlands mitigation banking rule. As shown in Figure 28, the results indicate that managers are fairly evenly split – most bankers were either familiar (45%) or unfamiliar (40%). Taken together with the earlier results on familiarity with wetlands banking (Question #17, shown above), these results suggest that while most bank managers are at least somewhat familiar with the wetlands mitigation banking program, not all of them are involved with that program closely enough to follow recent regulatory developments.

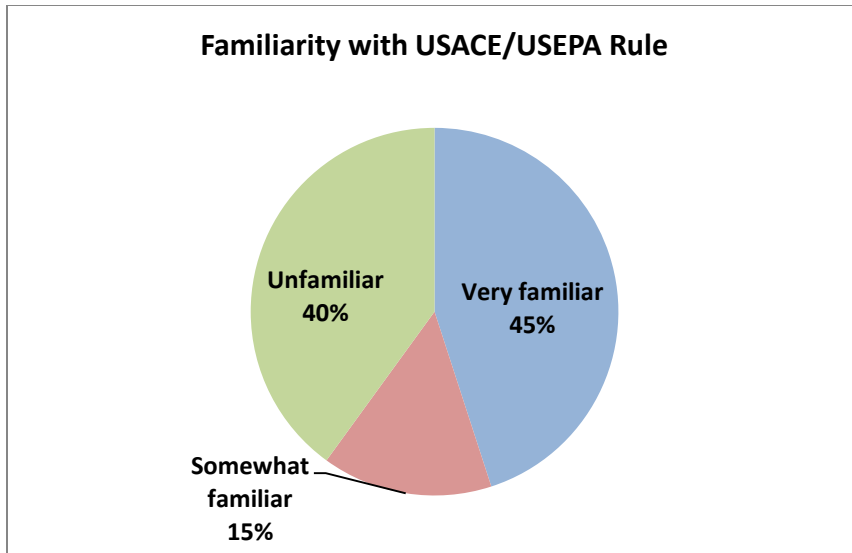


Figure 28. Respondent familiarity with the 2008 USACE/USEPA wetlands banking rule

Do you think any of these elements in the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency Final Rule related to wetlands mitigation banking should be considered for addition to USFWS' conservation banking guidance? (Survey Question #20)

- **Elements of the 2008 US EPA/US ACE wetlands mitigation banking rule that received the most support from survey respondents were establishing timelines for review of bank proposals and establishing an explicit preference for banks over other types of mitigation.**

Respondents were asked if they thought specific elements of the USEPA/USACE wetlands banking rule should be considered for addition to USFWS conservation banking guidance. Of the elements suggested, establishing timelines for agency review of bank proposals and instruments received the most support, followed by establishing an explicit preference for banks over other types of mitigation (Figure 29). Establishing equivalent standards for all mitigation mechanisms, requiring short-term financial assurances, and requiring the establishment of service areas received less support. Some respondents indicated short-term financial assurances and the establishment of service areas already exist. Some comments indicated that these elements are already being implemented in certain regions, so there seems to be some variation in implementation across regions.

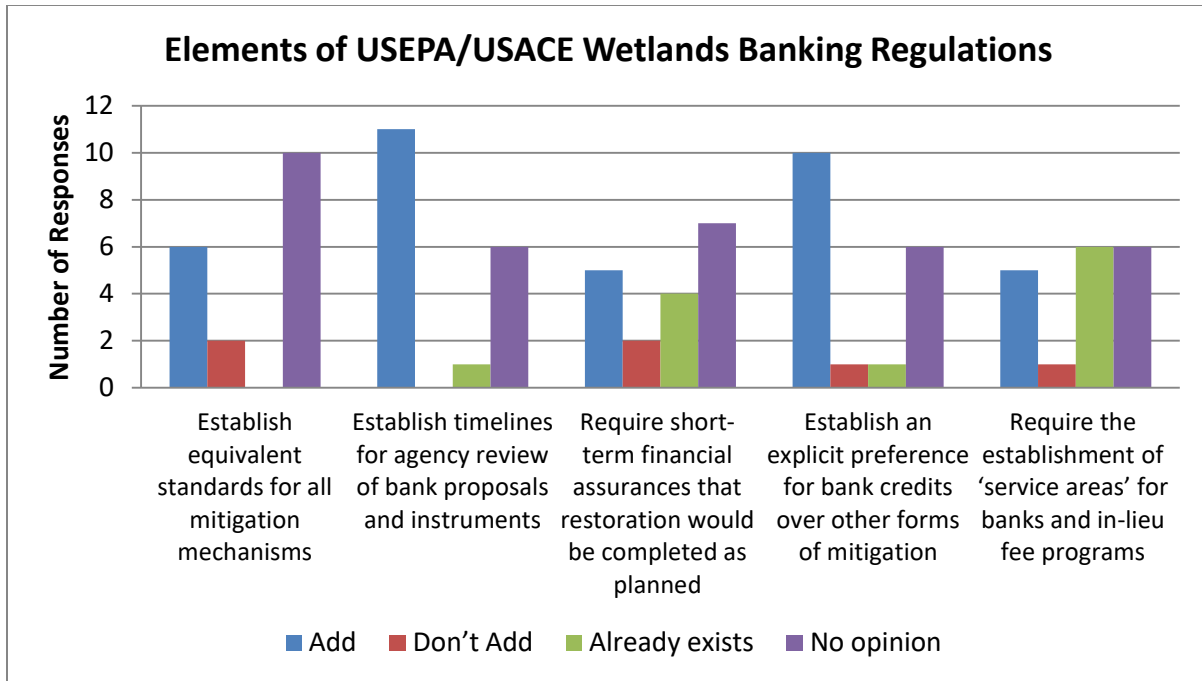


Figure 29. Respondents' attitudes about the addition of certain elements of the 2008 USEPA/USACE wetlands banking rule to USFWS conservation banking guidance

CONCLUSIONS

This analysis was undertaken to evaluate the conservation banking program and potential reasons for slow expansion of the program. Since the 2013 report of survey results of USFWS staff, the banking program has continued to grow and several developments have taken place at the Department of the Interior that might affect conservation banking going forward. An additional 23 banks have been approved since 2013, with a record 14 banks approved in 2014, although it is unclear if they represent a larger trend since only 3 banks were approved in the following year. Conservation banking has also slowly continued to expand geographically since 2013, with two banks approved in Oklahoma and one in Wyoming.

Several mitigation-related documents have been released since 2013 that are relevant to conservation banking. These include a White House memorandum on mitigation released in 2015, a DOI Secretarial Order on mitigation, a DOI mitigation strategy, a DOI Departmental Manual chapter on landscape-scale mitigation policy, proposed revisions to the USFWS 1981 mitigation policy, and a draft Endangered Species Act (ESA) Compensatory Mitigation Policy. While these items address mitigation policy more generally, they are applicable to conservation banking and may affect the future of the USFWS conservation banking program. Specifically, the revised mitigation policy and the CMP speak to many of the on-going issues addressed in the survey and this report.

Following the 2013 survey of USFWS staff, PPA's survey of conservation banking professionals provides additional information to help identify issues related to the success of the conservation banking program, and possible solutions.

This section provides responses to the questions posed by USFWS in the initial request, based on the responses to the survey of conservation bank professionals, as well as information obtained from the prior survey of USFWS employees and literature review.

What metrics could be used to measure success programmatically and for individual banks?

The success of conservation banks can be measured with two types of metrics – ecological and economic. While the ultimate goal of conservation banking is related to providing conservation benefits to endangered species, economic success is also needed for the bank sponsors to continue with their operations.

Bankers showed stronger support for ecological measures of bank success than economic measures, although there was support for economic measures as well. Linking existing conservation/natural areas and preserving ecologically valuable private lands were ranked as the best measures of success. When asked about measures of ecological performance, respondents showed the most support for habitat conditions, health of ecosystem, and addressing species threats. These results are similar to those from the FWS employee survey; both surveys showed stronger support for ecological measures of success, but recognized the business measures as well.

Some information related to conservation bank ecological performance is collected in monitoring reports. While some of this information is available in the RIBITS (Regulatory In-Lieu Fee and Bank Information Tracking System) database maintained by the U.S. Army Corps of Engineers (USACE), it is not comprehensively available or easily accessible. Information on the sale of credits for individual banks is tracked in RIBITS, although other market data for conservation banks is not made publically available. Third party sources have begun to fill the gap for market data availability, such as the State of the Mitigation Markets report available from EcoBlu Analyst (<https://ecoblualanlyst.com/new-2016-state-of-the-mitigation-markets-report/>).

What are the characteristics of the most successful conservation banks?

To date, no comprehensive analysis has been completed to assess economic data for conservation banks to identify factors that lead to economic success. Since much of this data is proprietary or available by subscription, this type of analysis could be undertaken by conservation banking interests or academics in the future.

Ecological metrics of conservation bank success are important in determining whether banks are meeting ecological performance goals. As described in other studies, a significant amount of information is needed to effectively evaluate the ecological performance of conservation banks, including information on individual credit transactions, the project impacts for which the credits were applied, and the comparison of outcomes to other types of mitigation (Fox and Nino-Murcia 2005). While some information is available in RIBITS, including habitat management plans and monitoring reports for certain banks, it is not comprehensively available in an easily accessible format. Greater ease of access to ecological data for existing banks would assist in future analysis.

Are there technical and institutional obstacles limiting the establishment of additional banks?

The factors viewed as most important to hindering conservation bank creation by conservation bank managers in the survey were weak demand for credits, lack of clear deadlines/timelines for USFWS, delayed USFWS response, and economic uncertainty/risk. Technical obstacles to conservation bank creation are generally related to the economic environment and the market for credits. Survey respondents indicated that weak demand for credits and economic uncertainty/risk were some of the most important technical obstacles hindering conservation bank creation. Survey respondents rated current demand for credits as weak (Regions 1, 2, and 6) or modest (Regions 4, 5 and 8). Respondents anticipate future demand to increase in Regions 2, 4, and 8, remain the same in Regions 1 and 5, and decrease in Region 6. In several questions, respondents expressed their desire to incentivize conservation banking relative to other tools for mitigation and conservation; the lack of incentives and the availability of other tools could be a factor in the relatively weak demand.

The delayed approval of conservation banking documents has been mentioned as a potential institutional obstacle in previous studies (Fox and Nino-Murcia 2005, Stratus Consulting 2003). Respondents to the sponsor survey reported varying timelines for bank creation, with average time for planning conservation banks of slightly over a year, and an additional year and a half from the initial submission of the documents until they receive final approval from USFWS. Lengthy timelines for some banks seem to result in part from response time of USFWS staff, with an average of 38% of planning time and 44% of final approval time spent waiting for input from USFWS. When asked about factors that would be likely to delay bank approval, respondents generally believed institutional factors were more likely to cause delays. The factors rated as most likely to increase review time included lack of a defined timeline, coordination with other agencies, insufficient staffing, and time for legal review/approval. Results from the previous USFWS staff survey also identified staffing and solicitor review time as some of the most likely factors behind delays in bank approval (DOI Office of Policy Analysis 2013b).

What additional incentives could spur bank creation and growth?

Respondents generally supported changes to the current conservation banking guidance or the issuance of more formal conservation banking regulations. Some respondents noted the benefit of reduced uncertainty in the conservation banking program, which formal regulations could presumably bring. Some specific changes that could increase the incentives for creating conservation banks include having a known timeline after complete submission, an expressed preference by USFWS for advance compensatory mitigation, uniform and consistent metrics and requirements, and an explicit preference for bank credits over other forms of mitigation. Interestingly, these types of changes to the guidance or additional regulations that received relatively high levels of support among conservation bank professionals received far less support from USFWS staff in the 2013 survey.

What are the options for reducing the obstacles and providing incentives?

A number of options exist to help reduce institutional obstacles that may exist to hinder conservation bank creation. Based on survey responses from conservation bank professionals, establishing timelines and additional staffing could help to reduce delays in conservation bank approval. Additional training for both Service staff and conservation bank professionals could also

help reduce delays due to staff inexperience. Although the use of templates received significant support in the USFWS staff survey in 2013, this option received less support from the conservation bank professionals surveyed.

Ways to help address technical obstacles could include public education programs to help raise awareness of conservation banking in the general public.

What can be learned from similar programs, such as Wetland Mitigation Banking?

Although many respondents felt that conservation banking compared favorably to wetland mitigation banking, there were some elements of the wetland banking program that respondents supported introducing into the conservation banking program. Establishing timelines for agency review of bank proposals and instruments and an explicit preference for bank credits over other forms of mitigation received significant support among survey respondents. Interestingly, the addition of these elements was generally opposed by USFWS staff in the 2013 survey.

What are the important lessons learned since 1992?

As noted in the 2013 report of the survey of USFWS staff, definitive evidence for the ecological and economic advantages of conservation banking is limited to date, due to inadequate data over the course of program. In addition to the conclusions drawn from the earlier survey and literature review, some further conclusions can be drawn from the experiences of conservation banking professionals.

- Periodic systematic consultation with conservation banking professionals could be useful in evaluating the conservation banking program. Some survey respondents cited difficulty in recalling their experiences with banks that had been approved a long time ago, and in some cases, current employees were not involved in the development of early banks.
- Strong support exists among surveyed bank sponsors for the development of conservation banking regulations and/or updates to the 2003 guidance.
- Primary institutional obstacles to conservation banking cited by survey respondents were related to delays in processing and approval of banking instruments. The institution of timelines for approval was often noted as a possible way to address these issues.
- Other technical obstacles continue to exist related to economic risk and markets for credits.

RECOMMENDATIONS

- **Evaluate Processing and Approval:** Survey respondents emphasized that delays in processing and approving bank instruments are a major obstacle. Lack of a defined timeline, coordination with other agencies, and insufficient staffing were identified as primary factors contributing to the delays. USFWS should consider evaluating options to address processing and approval delays. Specifically, this evaluation could assess the feasibility of fixed timelines, an option that was popular with survey respondents but faced skepticism from USFWS staff in the 2013 survey, and the increased use of templates, which received support in the 2013 survey. Additional assessment of banks with shorter time to approval could be conducted to help

identify best practices. While the draft CMP states that the Service does not have mandated timelines for review of conservation banks, additional study of timing of processing and review is warranted.

- **Analyze Options for Integration:** Respondents named coordination with state and local governments as a likely source of delays, and several other responses suggested problems related to competition with other conservation options, such as HCPs and wetland mitigation banks. USFWS should consider analyzing policy options to integrate and harmonize the conservation banking program with other conservation programs at the federal, state and local level. The new policies recently released by USFWS have begun to address this issue. Collaboration and coordination with stakeholders is listed as part of the mitigation framework in USFWS Proposed Revisions to its Mitigation Policy. In addition, the CMP addresses Multiple Agency Review and USFWS involvement in Mitigation Review Teams. However, more could be done to address any problems with coordination across agencies or jurisdictions.
- **Establish Program Tracking Metrics:** Respondents generally preferred ecological metrics for measuring the success of conservation banks. USFWS should consider tracking several metrics at a programmatic level, and at the individual bank level where possible. In particular, USFWS should consider some of the most popular ecological metrics, including habitat linkage (reduction in fragmentation), the acreage and types of rare or valuable habitat conserved, the overall acreage preserved, and the acreage of critical habitat protected. The collection of ecological metrics data would also facilitate the implementation of a recommendation from our 2013 report on the USFWS conservation banking staff survey, calling for a study to evaluate the ecological effectiveness of different mitigation options. In its proposed revisions to the 1981 Mitigation Policy, the Service “encourages, supports, and will initiate, whenever practicable, post action monitoring studies and evaluations to determine the effectiveness of recommendations in achieving the mitigation planning goal.”
- **Conduct Outreach:** Respondents generally said that demand for bank credits was modest or weak, and rated weak demand as one of their most important obstacles. Respondents also reported relatively mixed opinions of conservation banking among several key constituencies, including developers and local governments. USFWS should consider addressing these issues through sustained outreach and education to potential bankers and the public, to improve awareness of the program among key groups and explain its potential benefits. This recommendation echoes the 2013 report on the USFWS staff survey, in which we called for outreach to potential bankers as a way of helping to identifying suitable habitat and species.
- **Expand Training Opportunities:** Most bank managers had not received training on conservation banking, and about half of respondents on the sponsor survey had only been involved in a single conservation bank. USFWS could help address this knowledge and experience gap, and possibly improve the speed and efficiency of the process, by publicizing training opportunities and offering additional training options for new and prospective bank managers and sponsors. We previously recommended additional training for USFWS staff in the 2013 staff survey report; staff training should be coordinated with sponsor and manager training.
- **Evaluate Guidance and Assess Potential for New Regulations:** Among those respondents who expressed an opinion, there was strong support for changes to the 2003 guidance and for

new conservation banking regulations. The 2013 staff survey report also recommended evaluating changes to the guidance and considering formal regulations, although USFWS staff generally did not support the two most popular proposals from this survey. The issuance of the draft CMP in September 2016 is a start in this direction. Additional efforts in this area could include revisions to the draft CMP based on public comments and evaluation of the potential for formal regulations.

- **Make Data Accessible:** Very little ecological and economic data on conservation banks is freely available to the public. USFWS should explore ways to make more data about the conservation banking program publicly available and easily accessible, including the program tracking metrics mentioned above and (to the extent possible) other data aggregated from individual banks.
- **Gather Feedback Following Approval:** Several respondents expressed difficulty recalling their experience with banks that were approved many years in the past. USFWS should consider ways to seek the opinions of bank staff shortly after their banks are approved, while their memories of the process are fresh. A post-approval survey or interview protocol could provide helpful information about how the process works and how it could be improved.

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APPENDICES

APPENDIX A: SURVEY INSTRUMENTS

Survey of U.S. Fish and Wildlife Service Habitat Conservation Bank Sponsors

The U.S. Fish and Wildlife Service (USFWS) and the Department of the Interior's Office of Policy Analysis are undertaking an analysis of the USFWS habitat conservation banking program. As part of this analysis, we are surveying conservation bank sponsors and managers to obtain information on experiences with and opinions of various aspects of the conservation banking program. Your responses as a conservation bank sponsor are critical to our efforts. Responses to the survey are anonymous and will be reported in aggregate form.

If you have any questions or have trouble completing the survey, please contact Sarah Cline, DOI Office of Policy Analysis, at 202-208-6018 or sarah_cline@ios.doi.gov.

Paperwork Reduction Act Statement: This survey is authorized by the Endangered Species Act. It will provide information necessary for us to understand the current performance of the conservation banking program and to identify areas where the program can be improved. Your response is voluntary. We may not conduct or sponsor and you are not required to respond to an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. We estimate that it will take conservation bank sponsors about 10 minutes to complete this survey, which includes time to gather information, read instructions, and complete the survey. You may send comments on any aspect of this information collection to the Information Collection Clearance Officer, U.S. Fish and Wildlife Service, 5275 Leesburg Pike, (Mail Stop BPHC), Falls Church, VA 22041

The questions in this survey pertain to your **organization's** experiences with habitat conservation banking, not wetlands or stream mitigation banking. Please answer the following questions based solely on your organization's experience with habitat conservation banks administered by USFWS or banks jointly administered by USFWS and another agency.

1. Are you involved in the management of a company or organization that sponsors conservation banks?
 - a. Yes
 - b. No

2. How many years has your organization been involved in conservation banking?

3. Does your organization require your staff to take conservation banking training? (Please choose one answer below)
 - a. Yes
 - b. No
 - c. It depends: _____

4. How many conservation banks has USFWS approved for your organization? (Please count only USFWS conservation banks and banks jointly administered by USFWS and another agency)

5. Please list the acreage of each of the banks included in Question Number 4.

6. How long did each of the following phases of conservation bank development take for the conservation banks you have had approved through the USFWS program? (Please list the length of time for the planning stage and approval stage for each bank below, as well as the percentage of the total time for each phase that was spent waiting for input or a response from USFWS staff)

	Planning phase		Final approval phase			
	Total time (enter number of months from outset to initial submission to USFWS)	% of time waiting for input/response from USFWS	Total time (enter number of months from initial submission to USFWS to final approval)	% of time waiting for input/response from USFWS	State	Species/Habitat
Bank 1						
Bank 2						
Bank 3						
Bank 4						
Bank 5						
Bank 6						
Bank 7						
Bank 8						
Bank 9						
Bank 10						
Bank 11						
Bank 12						
Bank 13						
Bank 14						
Bank 15						
Bank 16						
Bank 17						
Bank 18						
Bank 19						
Bank 20						
Bank 21						

Bank 22						
Bank 23						

7. How do you perceive current demand for additional conservation banks in your region(s)?
(Please answer for each region in which your company works)

Region	No demand	Weak demand	Modest demand	Strong demand	Very strong demand	Don't know/No opinion
1 (Pacific)						
2 (Southwest)						
3 (Great Lakes- Big Rivers)						
4 (Southeast)						
5 (Northeast)						
6 (Mountain- Prairie)						
7 (Alaska)						
8 (California & Nevada)						
Region 1: ID, OR, WA, HI, Pacific Islands; Region 2: AZ, NM, OK, TX; Region 3: IL, IN, IA, MI, MO, MN, OH, WI; Region 4: AL, AR, FL, GA, KY, LA, MS, NC, PR/VI, SC, TN; Region 5: CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV; Region 6: CO, KS, MT, ND, NE, SD, UT, WY; Region 7: AK; Region 8: CA, NV						

8. Do you expect demand for additional conservation banks to change over the next 2-3 years?
(Please answer for each region in which you work or expect to work in the future)

Region	No	Decrease	Increase	Don't know/No opinion
1 (Pacific)				
2 (Southwest)				
3 (Great Lakes-Big)				

Rivers)				
4 (Southeast)				
5 (Northeast)				
6 (Mountain-Prairie)				
7 (Alaska)				
8 (California & Nevada)				
Region 1: ID, OR, WA, HI, Pacific Islands; Region 2: AZ, NM, OK, TX; Region 3: IL, IN, IA, MI, MO, MN, OH, WI; Region 4: AL, AR, FL, GA, KY, LA, MS, NC, PR/VI, SC, TN; Region 5: CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV; Region 6: CO, KS, MT, ND, NE, SD, UT, WY; Region 7: AK; Region 8: CA, NV				

9. Does your organization support changes to the USFWS’s current guidance (“Guidance for the Establishment, Use, and Operation of Conservation Banks”) or the adoption of new conservation banking regulations (no regulations currently exist for conservation banking)? (Please select one answer below)

- a. Yes – Changes to current guidance
- b. Yes – Development of new regulations
- c. Yes – Both changes to guidance and development of new regulations
- d. No
- e. No opinion

10. If yes, what specific changes does your organization support?

11. Is there anything else you would like to add that was not addressed in the questions above?

Thank You!

Thank you for participating in our survey! Your responses are very valuable for our analysis of the USFWS conservation banking program.

Please click "Done" to submit your responses.

If you have any questions or comments about the survey, please contact Sarah Cline at the DOI Office of Policy Analysis: sarah_cline@ios.doi.gov, phone: 202-208-6018.

Survey of U.S. Fish and Wildlife Service Habitat Conservation Bank Managers

The U.S. Fish and Wildlife Service (USFWS) and the Department of the Interior's Office of Policy Analysis are undertaking an analysis of the USFWS habitat conservation banking program. As part of this analysis, we are surveying conservation bank sponsors and managers to obtain information on experiences with and opinions of various aspects of the conservation banking program. Your responses as a conservation bank manager are critical to our efforts. Responses to the survey are anonymous and will be reported in aggregate form.

If you have any questions or have trouble completing the survey, please contact Sarah Cline, DOI Office of Policy Analysis, at 202-208-6018 or sarah_cline@ios.doi.gov.

Paperwork Reduction Act Statement: This survey is authorized by the Endangered Species Act. It will provide information necessary for us to understand the current performance of the conservation banking program and to identify areas where the program can be improved. Your response is voluntary. We may not conduct or sponsor and you are not required to respond to an information collection unless it displays a currently valid Office of Management and Budget (OMB) control number. We estimate that it will take conservation bank managers about 15 minutes to complete this survey, including time to gather information, read instructions, and complete the survey. You may send comments on any aspect of this information collection to the Information Collection Clearance Officer, U.S. Fish and Wildlife Service, 5275 Leesburg Pike, (Mail Stop BPHC), Falls Church, VA 22041

The questions in this survey pertain to your **direct professional** experiences with habitat conservation banking, *not* wetlands or stream mitigation banking. Please answer the following questions based solely on your experience with habitat conservation banks administered by the U.S. Fish and Wildlife Service or jointly by the USFWS and another agency.

1. Are you involved with the development and/or management of individual conservation banks (preparing and submitting banking documents, land management, etc.)?

- a. Yes
- b. No

2. What is your role in conservation banking? (Please choose all that apply)

- a. Bank Sponsor
- b. Landowner
- c. Bank Manager
- d. Other: _____

3. How many years have you been involved in conservation banking?

4. How many banks have you helped develop?

5. Have you participated in any conservation banking training (as an instructor or participant)? (Please select all that apply)

- a. Yes – Instructor
- b. Yes – Participant
- c. No

6. How familiar are you with 2003 USFWS "[Guidance for the Establishment, Use, and Operation of Conservation Banks](#)"? (Please select one answer below)

- a. Very familiar
- b. Somewhat familiar
- c. Unfamiliar

7. Currently, no regulations exist to guide the development of conservation banks. Do you feel that changes to the current guidance (mentioned in Question 6) or the development of new conservation banking regulations are needed? (Please select one answer below)

- a. Yes – Changes to current guidance
- b. Yes – Development of new regulations
- c. Yes – Both changes to guidance and development of new regulations
- d. No
- e. No opinion

8. In your opinion, what is the perception of conservation banks as a conservation tool for each of the different groups listed below? (Please select one response for each item below)

	Very negative	Somewhat negative	Neutral	Somewhat positive	Very positive	Don't know/No opinion	List Field/Regional Office
USFWS - Field office							
USFWS - Regional office							
USFWS - National office							
Other Federal agencies							
State agencies							
Local government							
Local Non-Governmental Organizations							
Energy, mining & related industries							
Manufacturing							
Shipping/transportation industries							

Real estate developers							
Private landowners							

9. Based on your experience, how likely is each of the following factors to lengthen the USFWS review time for banking agreements? (Please select one response for each item below)

	Extremely unlikely	Unlikely	Neutral	Likely	Extremely likely	Don't know/No Opinion
Insufficient USFWS staffing						
Unsupportive USFWS management						
USFWS staff not adequately trained						
Government legal review and approval						
Inexperienced bankers						
Long or complex banking agreements						
Lack of standardized documents/templates						
Determination of credits						
Coordination with other Federal, State, or local agencies						
Lack of defined timeline						
Other: _____						

10. In your opinion, how important are each of the following factors in hindering conservation bank creation? (Please select one response for each item below)

	Not at all important	Somewhat important	Important	Very important	Don't know/No opinion
Unsuitability of species for banking					
Weak demand for credits					
Lack of start-up funding					
Landowners not willing to sell land or easement					
Economic uncertainty/risk					
Other mitigation options substitute for banking					
Lack of USFWS support					

Lack of USFWS Field Office experience					
Lack of clear deadlines/timelines for USFWS					
Delayed USFWS response					
Lack of ESA enforcement					
Lack of species and habitat data					
Other: _____					

11. To what extent do you agree that each of the following changes to the FWS conservation banking program would make conservation bank creation easier? (Please select one response for each item below)

	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Don't know/No opinion
Known timeline after complete submission						
Expressed preference by USFWS for advance compensatory mitigation						
Equivalent standards for all types of compensatory mitigation						
Policy preference for conservation banking above other compensatory mitigation options						
Approved conservation banking document templates in use in all regions						
Formal conservation banking regulations						
Other: _____						

12. In your opinion, to what extent are the following factors good measures of conservation bank success for your company, for species and for credit purchasers? (Please select one response for each item below)

	Very Poor Measure	Poor Measure	Neutral	Good Measure	Very Good Measure	Don't know
Meeting criteria for recovery plan/Accomplishing conservation goals						
Maintaining a stable population/growing the species						

Linking existing conservation/natural areas						
Increasing the number of acres of “preserved” habitat						
Increasing the number of acres of critical habitat secured						
Preserving ecologically valuable private lands						
Minimizing costs to project proponents						
Number of credit sales						
Conservation bank profitability						
Reinvestment of capital in additional banks						
Other: _____						

13. In your opinion, to what extent is each of the following factors a good measure of conservation bank ecological performance? (Please select one response for each item below)

	Very Poor Measure	Poor Measure	Neutral	Good Measure	Very Good Measure	Don't know/No opinion
Index of biological integrity						
Indicator species number and diversity						
Habitat conditions						
Number of individuals of the species						
Health of ecosystem						
Species threats addressed						
Other: _____						

14. How would you rate the availability of species and habitat data in your region(s)? (Please answer for each region in which you work)

Region	Very poor	Poor	Fair	Good	Very good	Don't know/No opinion

1 (Pacific)						
2 (Southwest)						
3 (Great Lakes- Big Rivers)						
4 (Southeast)						
5 (Northeast)						
6 (Mountain- Prairie)						
7 (Alaska)						
8 (California & Nevada)						
Region 1: ID, OR, WA, HI, Pacific Islands; Region 2: AZ, NM, OK, TX; Region 3: IL, IN, IA, MI, MO, MN, OH, WI; Region 4: AL, AR, FL, GA, KY, LA, MS, NC, PR/VI, SC, TN; Region 5: CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV; Region 6: CO, KS, MT, ND, NE, SD, UT, WY; Region 7: AK; Region 8: CA, NV						

15. In your opinion, how important are the following factors in impeding conservation bank operations? (Please select one response for each item below)

	Not at all important	Somewhat important	Important	Very important	Don't know/No opinion
USFWS reticence to publicize availability of conservation banking					
HCPs without conservation banking option					
State or local government agencies unwilling to accept use of conservation banks					
Other: _____					

Wetlands Mitigation Banking

The questions in this section pertain to your experiences with wetlands and stream mitigation banking only, not habitat conservation banking. Please answer the following questions based solely on your **direct professional** experience with wetlands and/or stream mitigation banking only.

16. How familiar are you with wetlands mitigation banking? (Please select one answer below)
- a. Very familiar
 - b. Somewhat familiar
 - c. Unfamiliar

If you answered c, skip to Question 19

17. In your view, how does conservation banking compare with wetlands mitigation banking in the following areas? (Please select one response for each item below)

	Worse	About the Same	Better	Don't know
Length of time required for review/approval of conservation banks				
Ease of application process for conservation banks				
Developer's cost to establish conservation banks				
Ease of determining the total number of available credits for conservation banks				
Monitoring requirements – timing, cost, complexity for conservation banks				
Ecological performance of conservation banks				
Ability to measure ecological performance of conservation banks				
Government administrative costs of conservation banks (including oversight)				

18. How familiar are you with the [U.S. Army Corps of Engineers and U.S. Environmental Protection Agency Final Rule \(2008\)](#) related to wetlands mitigation banking? (Please select one answer below)
- a) Very familiar
 - b) Somewhat familiar
 - c) Unfamiliar.

19. Do you think any of these elements in the [U.S. Army Corps of Engineers and U.S. Environmental Protection Agency Final Rule \(2008\)](#) related to wetlands mitigation banking should be considered for addition to USFWS' conservation banking guidance? (Please select one response for each item below)

	Add	Already Exists	Don't Add	No opinion
Establish equivalent standards for all mitigation mechanisms				
Establish timelines for agency review of bank proposals and instruments				
Require short-term financial assurances that restoration would be completed as planned (usually through bonds, letters of credits, or escrow funds)				
Establish an explicit preference for bank credits (when available) over other forms of mitigation				
Require the establishment of 'service areas' for banks and in-lieu fee programs. Service areas are defined as the geographic area within which impacts can be mitigated at a specific bank or in-lieu fee program				
Other: _____				

20. Is there anything else you would like to add that was not addressed in the questions above?

Thank You!

Thank you for participating in our survey! Your responses are very valuable for our analysis of the USFWS conservation banking program.

Please click "Done" to submit your responses.

If you have any questions or comments about the survey, please contact Sarah Cline at the DOI Office of Policy Analysis: sarah_cline@ios.doi.gov, phone: 202-208-6018.

APPENDIX B: DATA APPENDIX

This Data Appendix includes a full summary of the responses to each survey question (responses to open-ended questions are not included).

SPONSOR SURVEY

1. Are you involved in the management of a company or organization that sponsors conservation banks?

Frequency	
Yes	29
No	2
N=	31

2. How many years has your organization been involved in conservation banking?

N=	30
Mean	10.5
Median	10
Mode	10
Standard Deviation	5.4
Minimum	2
Maximum	25

3. Does your organization require your staff to take conservation banking training? (Please choose one answer below)

Frequency	
Yes	5
No	18
It depends	8
N=	31

4. How many conservation banks has USFWS approved for your organization? Please count only USFWS conservation banks and banks jointly administered by USFWS and another agency

N=	28
Mean	3.1
Median	2
Mode	1
Standard Deviation	5.1
Minimum	0
Maximum	26

5. Please list the acreage of each of the banks your organization manages (banks included in Question Number 4).

N=	103
Mean	968
Median	252
Mode	80
Standard Deviation	2,355
Minimum	2
Maximum	20,000

6. How long did each of the following phases of conservation bank development take for the conservation banks you have had approved through the USFWS program? (Please list the length of time for the planning stage and approval stage for each bank below, as well as the percentage of the total time for each phase that was spent waiting for input or a response from USFWS staff)

Planning stage – Total time (enter number of months from outset to initial submission to USFWS)

N=	36
Mean	13.6
Median	12
Mode	12
Standard Deviation	12.4
Minimum	1
Maximum	50

Planning stage (%) % of planning stage time spent waiting for input/response from USFWS

N=	36
Mean	37.8
Median	31.5
Mode	50
Standard Deviation	24.2
Minimum	2
Maximum	100

Final approval stage (Total time) (enter number of months from initial submission to USFWS to final approval)

N=	36
Mean	18.6
Median	14.5
Mode	6
Standard Deviation	16.6
Minimum	1
Maximum	84

Final approval stage % of final approval stage time spent waiting for input/response from USFWS

N=	36
Mean	44.3
Median	45
Mode	50
Standard Deviation	28.6
Minimum	2
Maximum	100

Please list the location of each bank (state).

	Frequency
CA	17
UT	7
OK	4
TX	3
FL	2
KS	2
WV	1
CO	1
OR	1
N=	38

Please list the species/habitat(s) for which you sell credits for each bank.

Species	Frequency	Habitat	Frequency
Utah prairie dog	7	vernal pools	3
California red-legged frog	4	southern mixed chaparral	2
American burying beetle	4	coastal sage scrub	2
vernal pool fairy shrimp	3	non-native grassland	2
lesser prairie chicken	3	wetlands grasses	1
vernal pool tadpole shrimp	2	native grassland	1
California tiger salamander	2		
valley elderberry longhorn beetle	2		
calippe silverspot butterfly	2		
Florida panther	2		
golden-cheeked warbler	2		
other	15		
N=	48	N=	11

7. How do you perceive current demand for additional conservation banks in your region(s)?
(Please answer for each region in which your company works)

Region	Very strong demand	Strong demand	Modest demand	Weak demand	No demand	Don't know/No opinion
Region 1 (Pacific)	0	0	1	0	1	3
Region 2 (Southwest)	0	1	0	3	1	1
Region 3 (Great Lakes-Big Rivers)	0	0	0	0	0	3
Region 4 (Southeast)	0	0	2	1	0	2
Region 5 (Northeast)	0	0	1	0	0	2
Region 6 (Mountain-Prairie)	1	1	1	3	0	3
Region 7 (Alaska)	0	0	0	0	0	3
Region 8 (California & Nevada)	1	3	2	5	0	3
N= 23						
Region 1: ID, OR, WA, HI, Pacific Islands; Region 2: AZ, NM, OK, TX; Region 3: IL, IN, IA, MI, MO, MN, OH, WI; Region 4: AL, AR, FL, GA, KY, LA, MS, NC, PR/VI, SC, TN; Region 5: CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV; Region 6: CO, KS, MT, ND, NE, SD, UT, WY; Region 7: AK; Region 8: CA, NV						

8. How do you expect demand for additional conservation banks to change over the next 2-3 years? (Please answer for each region in which you work or expect to work in the future)

Region	Increase	Stay the same	Decrease	Don't know/No opinion
Region 1 (Pacific)	1	0	1	3
Region 2 (Southwest)	3	0	1	2
Region 3 (Great Lakes-Big Rivers)	0	0	0	3
Region 4 (Southeast)	1	2	0	2
Region 5 (Northeast)	0	1	0	2
Region 6 (Mountain-Prairie)	2	2	2	3
Region 7 (Alaska)	0	0	0	3
Region 8 (California & Nevada)	5	6	0	3
N= 23				
Region 1: ID, OR, WA, HI, Pacific Islands; Region 2: AZ, NM, OK, TX; Region 3: IL, IN, IA, MI, MO, MN, OH, WI; Region 4: AL, AR, FL, GA, KY, LA, MS, NC, PR/VI, SC, TN; Region 5: CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV; Region 6: CO, KS, MT, ND, NE, SD, UT, WY; Region 7: AK; Region 8: CA, NV				

9. Does your organization support changes to the USFWS's current guidance or the adoption of new conservation banking regulations (no regulations currently exist for conservation banking)? (Please select one answer below)

Value	Frequency
Yes - Guidance	3
Yes - Regulations	0

Yes - Both	14
No	3
No opinion	3
N=	23

MANAGER SURVEY

1. Are you involved with the development and/or management of individual conservation banks (preparing and submitting banking documents, land management, etc.)?

	Frequency
Yes	30
No	2
N=	32

2. What is your role in conservation banking? (Please choose all that apply)

	Frequency
Bank Sponsor	15
Landowner	13
Bank Manager	24
Other	12
N=	32

3. How many years have you been involved in conservation banking?

N=	32
Mean	8.8
Median	8
Mode	10
Standard Deviation	4.5
Minimum	20
Maximum	1

4. How many banks have you helped develop?

N=	31
Mean	5.0
Median	1
Mode	1
Standard Deviation	10.5
Minimum	50
Maximum	0

5. Have you participated in any conservation banking training (as an instructor or participant)?
(Please select all that apply)

	Frequency
Yes – Instructor	3
Yes – Participant	15
No	18
N=	32

6. How familiar are you with 2003 USFWS "Guidance for the Establishment, Use, and Operation of Conservation Banks"? (Please select one answer below)

	Frequency
Very familiar	5
Somewhat familiar	20
Unfamiliar	3
N=	28

7. Currently, the U.S. Fish and Wildlife Service has not issued regulations to govern the development of conservation banks; however, it has issued guidance (mentioned in Question 6). Do you feel that changes to the current guidance or the development of new conservation banking regulations are needed? (Please select one answer below)

	Frequency
Yes – Change guidance	2
Yes – New regulations	1
Yes – Both	6
No	3
No opinion	16
N=	28

8. How would you say each of the groups below feels about conservation banks as a tool for conservation? (Please select one response for each item below)

	Very positive	Somewhat positive	Neutral	Somewhat negative	Very negative	Don't know/No opinion
USFWS - Field office	15	8	1	1	1	2
USFWS - Regional office	10	8	2	2	0	6
USFWS - National office	10	2	4	0	0	11
Other Federal agencies	7	8	4	1	0	7
State agencies	10	6	5	4	0	2
Local government	6	7	6	3	1	4
Local Non-Governmental Organizations	6	8	4	2	0	7

Energy, mining & related industries	5	6	4	0	0	12
Manufacturing	0	1	4	0	1	21
Shipping/transportation industries	4	2	4	0	1	16
Real estate developers	3	10	3	3	1	7
Private landowners	4	8	3	5	2	5
N= 28						

9. Based on your experience, how likely is each of the following factors to lengthen the USFWS review time for banking agreements? (Please select one response for each item below)

	Extremely likely	Likely	Neutral	Unlikely	Extremely unlikely	Don't know/No Opinion
Insufficient USFWS staffing	16	6	3	1	0	1
Unsupportive USFWS management	9	8	3	5	0	2
USFWS staff not adequately trained	12	8	4	1	0	2
Government legal review and approval	14	8	4	0	0	1
Inexperienced bankers	11	8	3	0	0	5
Long or complex banking agreements	8	13	2	2	0	2
Lack of standardized documents/templates	5	13	3	3	1	2
Determination of credits	6	5	9	4	0	3
Coord. w/ Federal, State, local agencies	18	4	3	1	0	1
Lack of defined timeline	15	7	2	0	0	2
N= 27						

10. In your opinion, how important are each of the following factors in hindering conservation bank creation? (Please select one response for each item below)

	Very important	Important	Somewhat important	Not at all important	Don't know/No opinion
Unsuitability of species for banking	10	5	4	1	6
Weak demand for credits	16	7	3	0	1
Lack of start-up funding	12	10	4	0	1
Landowners not willing to sell land or easement	5	11	8	1	2

Economic uncertainty/risk	13	11	2	0	1
Other mitigation options substitute for banking	9	9	8	0	1
Lack of USFWS support	13	8	3	2	1
Lack of USFWS Field Office experience	11	10	4	1	1
Lack of clear deadlines/timelines for USFWS	16	8	1	1	1
Delayed USFWS response	15	9	1	1	1
Lack of ESA enforcement	10	7	3	5	2
Lack of species and habitat data	11	8	6	1	1
N= 27					

11. To what extent do you agree that each of the following changes to the FWS conservation banking program would make conservation bank creation easier? (Please select one response for each item below)

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know/No opinion
Known timeline after complete submission	14	7	3	0	0	2
Expressed preference by USFWS for advance compensatory mitigation	14	6	1	1	1	3
Equivalent standards for all types of compensatory mitigation	9	9	2	1	1	4
Policy preference for conservation banking above other compensatory mitigation options	12	5	4	2	1	2
Approved conservation banking document templates in use in all regions	9	4	6	2	2	3
Formal conservation banking regulations	10	5	4	2	2	3
N= 26						

12. In your opinion, to what extent are the following factors good measures of conservation bank success for your company, for species and for credit purchasers? (Please select one response for each item below)

	Very Good Measure	Good Measure	Neutral	Poor Measure	Very Poor Measure	Don't know
Meeting criteria for recovery plan	10	10	4	1	0	0
Maintaining a stable population/growing the species	10	7	4	4	0	0
Linking existing conservation/natural areas	14	9	1	1	0	0
Increasing the number of acres of "preserved" habitat	11	13	1	0	0	0
Increasing the number of acres of critical habitat	11	9	3	0	0	2
Preserving ecologically valuable private lands	14	8	3	0	0	0
Minimizing costs to project proponents	8	5	9	2	1	0
Number of credit sales	6	11	5	2	0	0
Conservation bank profitability	5	12	7	0	1	0
Reinvestment of capital in additional banks	8	4	7	3	1	2
N= 25						

13. In your opinion, to what extent is each of the following factors a good measure of conservation bank ecological performance? (Please select one response for each item below)

	Very Good Measure	Good Measure	Neutral	Poor Measure	Very Poor Measure	Don't know
Index of biological integrity	4	12	4	1	0	4
Indicator species number and diversity	7	12	5	2	0	0
Habitat conditions	17	9	0	0	0	0
Number of individuals of the species	3	13	8	1	1	0
Health of ecosystem	12	13	0	1	0	0
Species threats addressed	10	14	2	0	0	0
N= 25						

14. How would you rate the availability of species and habitat data in your USFWS region(s)? (Please answer for each USFWS region in which you work)

Very good	Good	Fair	Poor	Very poor	Don't know/No opinion
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Region 1	0	0	1	0	0	12
Region 2	0	0	0	1	0	11
Region 3	0	0	0	0	0	12
Region 4	1	2	2	0	0	8
Region 5	0	0	0	0	0	12
Region 6	1	1	1	0	0	10
Region 7	0	0	0	0	0	11
Region 8	2	10	5	0	0	7
N= 26						
Region 1: ID, OR, WA, HI, Pacific Islands; Region 2: AZ, NM, OK, TX; Region 3: IL, IN, IA, MI, MO, MN, OH, WI; Region 4: AL, AR, FL, GA, KY, LA, MS, NC, PR/VI, SC, TN; Region 5: CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT, VA, WV; Region 6: CO, KS, MT, ND, NE, SD, UT, WY; Region 7: AK; Region 8: CA, NV						

15. In your opinion, how important are the following factors in impeding conservation bank operations? (Please select one response for each item below)

	Very important	Somewhat important	Not at all important	Don't know/No opinion
USFWS reticence to publicize availability of conservation banking Habitat Conservation Plans (HCPs) without conservation banking option	5	6	6	5
State or local government agencies unwilling to accept use of conservation banks	11	11	0	4
	8	11	3	2
N= 26				

16. How familiar are you with wetlands mitigation banking? (Please select one answer below)

	Frequency
Very familiar	12
Somewhat familiar	9
Unfamiliar	5
N= 26	

17. In your view, how does conservation banking compare with wetlands mitigation banking in the following areas? (Please select one response for each item below)

	Better	About the Same	Worse	Don't know
Length of time required for	7	7	1	5

review/approval				
Ease of application process	5	7	3	5
Developer's cost to establish	9	5	2	4
Ease of determining the total number of available credits	7	9	1	3
Monitoring requirements – timing, cost, complexity	9	6	1	3
Ecological performance	5	9	0	6
Ability to measure ecological performance	4	10	0	6
Government administrative costs	8	5	1	6
N= 20				

18. How familiar are you with the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency Final Rule related to wetlands mitigation banking? (Please select one answer below)

	Frequency
Very familiar	9
Somewhat familiar	3
Unfamiliar	8
N= 20	

19. Do you think any of these elements in the U.S. Army Corps of Engineers and U.S. Environmental Protection Agency Final Rule related to wetlands mitigation banking should be considered for addition to USFWS' conservation banking guidance? (Please select one response for each item below)

	Add	Don't Add	Already exists	No opinion
Establish equivalent standards for all mitigation mechanisms	6	2	0	10
Establish timelines for agency review of bank proposals and instruments	11	0	1	6
Require short-term financial assurances that restoration would be completed as planned	5	2	4	7
Establish an explicit preference for bank credits over other forms of mitigation	10	1	1	6
Require the establishment of 'service areas' for banks and in-lieu fee programs	5	1	6	6
N= 18				