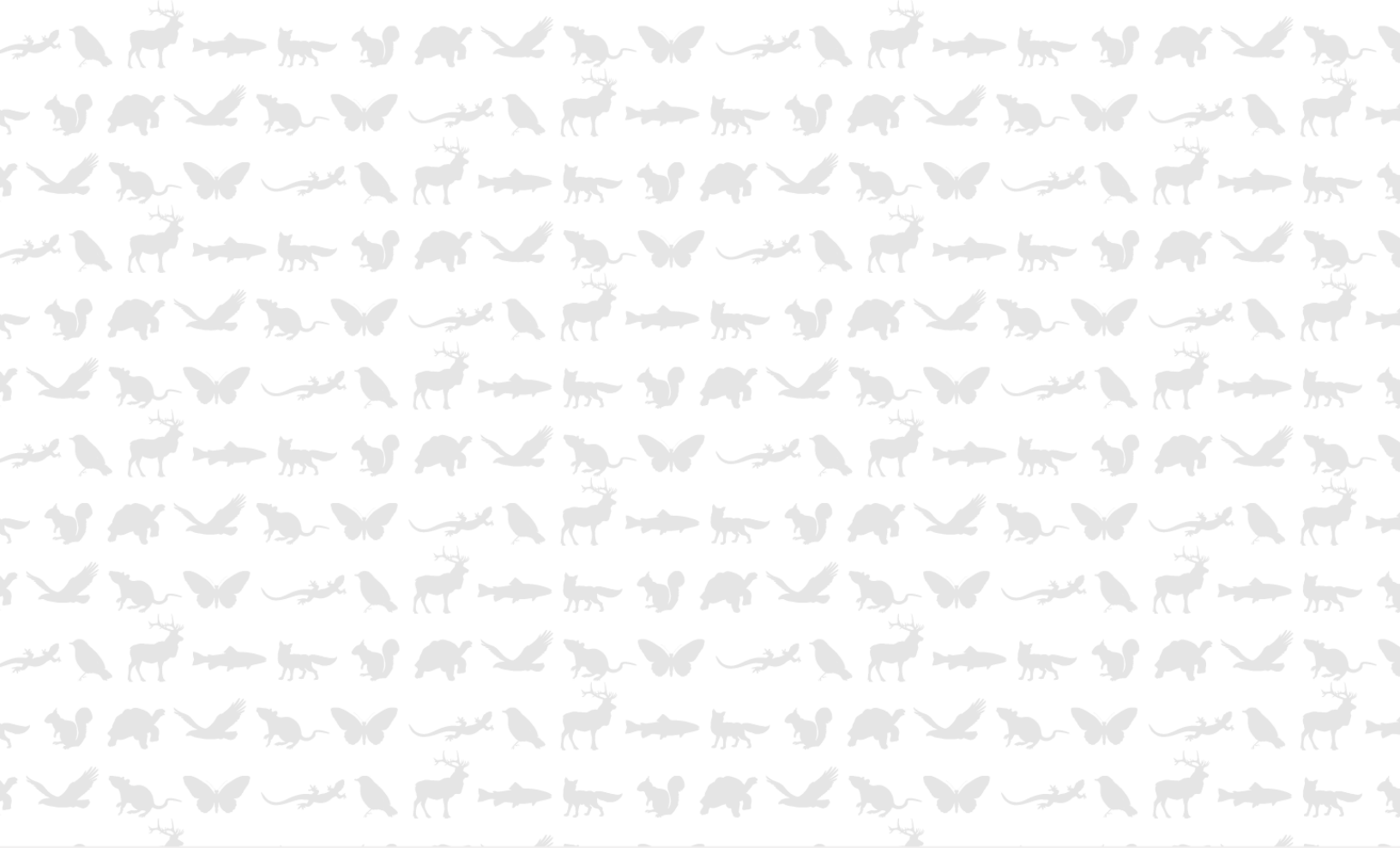


Conservation Banking in California

A Review of California Department of Fish and
Wildlife Approval Timelines and Insights from
Stakeholders



ENVIRONMENTAL POLICY
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CENTER



About EPIC

The Restoration Economy Center, housed in the national nonprofit Environmental Policy Innovation Center (EPIC), aims to increase the scale and speed of high-quality, equitable restoration outcomes through policy change.

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Conservation Banking in California: A Review of CDFW Approval Timelines and Insights from Stakeholders

Executive Summary



BACKGROUND

When rare species and habitats are threatened by development, environmental regulations provide several pathways for developers to avoid, minimize, and mitigate impacts. Consolidated mitigation like conservation banks creates mitigation in-advance of impacts and has been recognized in state and federal policies as a preferred alternative to 'postage stamp' offset projects (CDFW 1995, USACE 2008, USFWS 2023). The regulatory process of establishing a conservation bank in California is currently hindered by inefficiencies and regulatory 'green tape' however, resulting in delays beyond the state-mandated deadline of 270 days.

The Environmental Policy Innovation Center (EPIC) launched a research effort to investigate what speeds and slows conservation bank approval timelines, and what ecological and economic consequences come from delayed processes. This effort supports Governor Newsom's 2020 Cutting Green Tape Executive Order, which aims to "increase the pace and scale of environmental restoration and land management efforts by streamlining the State's process to approve and facilitate these projects." EPIC analyzed 'timestamp' data of the approval process for 12 CDFW conservation banks and compared this to alternate data. EPIC also conducted 13 informational interviews with restoration providers and buyers, but was unable to conduct interviews with CDFW staff. Nine CDFW staff members from seven Regions provided input in the form of one collective response to three key questions.

Caveat: due to the differing methods of information-gathering as well as timing (CDFW input was provided the week prior to the original publication date), the report has much more nuance and detail from the perspective of conservation bank sponsors and buyers as opposed to CDFW staff.

IS THE APPROVAL PROCESS MEETING THE 270-DAY TIMELINE?

EPIC discovered that CDFW does not have a way to evaluate its own timeline based on the 'timestamp' data it records. This is problematic. Currently, the review time that CDFW is responsible for cannot be disaggregated from the time spent on the process by all actors including CDFW, the sponsor, the interagency review team, and external agencies.

The average timeline from US Army Corps of Engineers timeline data on joint Clean Water Act/state species banks in California is 1,337 days. A survey of seven California CDFW bank sponsors found an even higher average total timeline banks approved by CDFW: 1,740 days. This alternative data indicates that CDFW data may underestimate the total approval timeline by as much as half.

The average total timeline from CDFW data is 761 days. This average, however, is much lower than alternate data sources.

"We could do 10x more restoration if CDFW stuck to their timelines" -Anonymous interviewee

Total time to permit a CDFW conservation bank

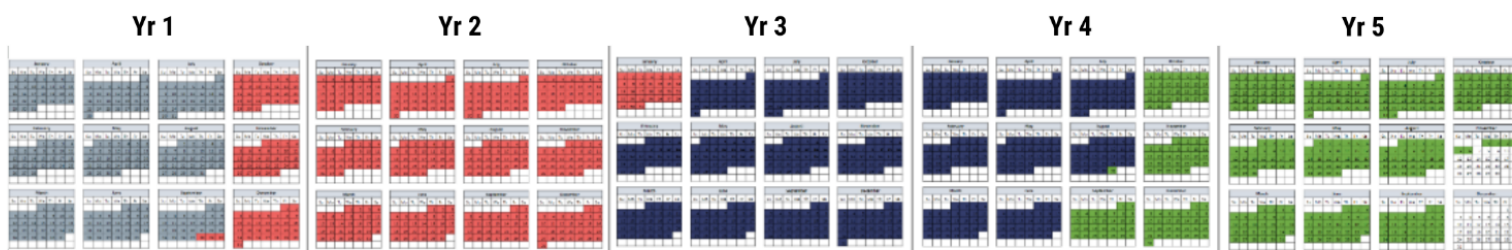
761 - 1,740 days

270 days CDFW processing required in CA Code

Average total time (CDFW data)

Average total time (USACE data)

Average total time (bank sponsor data)



This page summarizes feedback primarily from conservation bank sponsor and credit buyer interviews, with similarities with CDFW input highlighted in green. CDFW input is provided in full on the following page.

BOTTLENECKS

This figure shows the top bottlenecks that bank sponsors and credit buyers wanted to change.

There's a mentality of searching for no rather than searching for yes."
-Anonymous interviewee

CONSEQUENCES

Interviewees indicated that if bank credits are unavailable, permittees must create their own mitigation, which means there is a temporal loss of the benefits of restoration and conservation, sometimes for years after the impact occurs. High-quality habitat is lost because landowners get a better offer while an application is stalled out in the approval process. There are also economic consequences: permittees and staff spend 10-20x more time on one-off mitigation projects; the financial cost of supporting consultants and lawyers gets passed on to consumers and taxpayers; and delays mean it is hard to get beneficial projects like renewable energy approved.

The full scale of outstanding mitigation obligations in California is unknown and "could be one of the biggest conservation failures in the state in this decade" -Anonymous interviewee

RECOMMENDATIONS

1. Address data issues and develop a meaningful way to track and report on performance on meeting the 270-day deadline in the annual report to the legislature. CDFW should refine data entry during the bank agreement review period so that CDFW review time can be disaggregated from time spent on the process by CDFW, the sponsor, the interagency review team, and potentially external agencies. This should enable evaluation of the 270-day deadline, which should be reported annually.

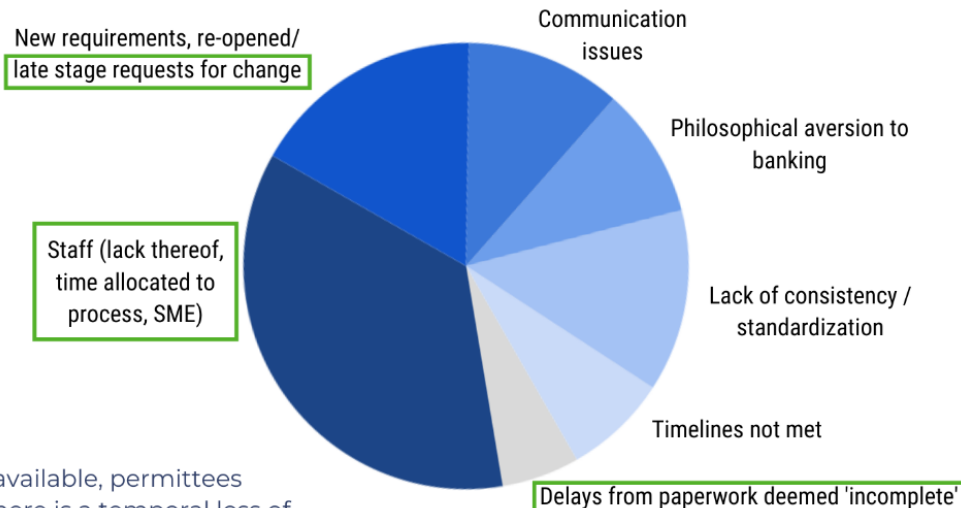
2. Prioritize conservation bank approval reviews and create accountability for sticking to the timeframe. Leadership keeping staff accountable to timelines along with having more champions of conservation banking were seen as means to improve accountability. Holding IRT members accountable for their review deadlines is another option to improve accountability to timelines.

3. Hire and retain staff dedicated to conservation bank approval reviews. Many interviewees experienced 2-5 different CDFW project managers over the timeframe of their bank approvals. Turnover and lack of sufficient staffing create an inefficient start-and-stop review process, compounding issues with timelines. This is also a top CDFW recommendation (see below).

4. Identify opportunities to limit the addition of new requirements and re-opened or late-stage requests for change in the approval process. Interviewees hoped that CDFW (and IRT) staff could focus on requests within the agency's authority, and requests that meaningfully added value to the species to reduce time and resources spent on non-essential activities. CDFW could also emphasize clauses in the banking agreement that reduce risk so that reviews are not striving for perfection / zero-risk. See CDFW preference for addressing concerns earlier in the process below.

5. Both CDFW and sponsors want to keep templates, but sponsors would like **increased objectivity in templates to improve standardization and consistency in the review process.** CDFW creates templates and other guidance so that sponsors can have some predictability that adherence will lead to a faster approval process. They are not currently experiencing this. CDFW could also allow a bank agreement to stay 'grandfathered' in whatever version was current at the time the prospectus was submitted.

6. Apply and expand California's Cutting Green Tape opportunities to the conservation banking review process. Although projects that create restoration for compliance purposes are eligible, banks have not benefited to date.



This page provides CDFW input in full, with **similarities with conservation bank sponsor and credit buyer input highlighted in green.**

TOP THINGS CDFW IS DOING WELL TO FACILITATE BANK PROCESSING

- Internal collaboration/coordination on a monthly basis and ongoing as needed
 - Collaborating with staff skilled in various review areas:
 - Land Agents, Land Surveyors, Species Experts, Land Attorneys, etc. their review results in thorough review of banks.
- External collaboration/coordination with other state and federal agencies on a monthly basis and ongoing, as needed.
- **Prioritization of projects** in order of importance or addressing tasks that need immediate attention.

TOP CHANGES TO FACILITATE BANK PROCESSING

- Bank Sponsors submitting complete and accurate packages.
- Bank Sponsors addressing all comments provided by the signatory agencies.
- Updating Fish and Game Code legislation governing timelines, so they are more realistic (negotiation between parties' delay timelines implemented in the legislation)
- **More staff to help review and implement banking program.**
- Bank proposal with a limited number of encumbrances on the title of the property.
- **Address concerns earlier to reduce the number of changes at the bank agreement stage.**
- **Less staff turnover among the IRT agencies.**

THINGS CDFW WOULD NOT WANT TO CHANGE

- **Elimination of the IRT process.**
- **Elimination of the banking program templates.**
- The level of review to ensure a successful project which may include assistance from species experts, legal review, and real estate package review.
- Project scrutiny prior to establishment.

CDFW-Approved Banks

Numbers are CDFW regions, green = approved, blue = sold-out, gray = closed, orange = credits not for public sale.



WHAT ELSE IS IN THE REPORT?

The report provides additional detail on the following:

- Background and the methodology of the analysis
- An external review of CDFW's approval process timelines, including an analysis on a sample of CDFW timeline data
- Insights from informational interviews on the factors that speed and slow the CDFW bank approval process, synthesized from interviewees' Top 3 responses and full transcripts
- Insights on ecological and/or economic impacts of delayed approval timelines, including a case study of lost conservation
- Top environmental permitting bottlenecks, opportunities to save time and resources in the CDFW conservation bank approval process, and other opportunities to improve ecological and economic outcomes.

NEXT STEPS

Interviews with CDFW staff &/or dialogue between CDFW staff and stakeholders could provide additional insight and highlight the best opportunities for change. **An analysis of the full approval timeline dataset** is another potential follow-on step. See additional detail in the full report.

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Background, Objective and Approach

When endangered and threatened species and habitat may be impacted by development and maintenance projects in the state of California, two species protection laws come into play - the federal Endangered Species Act (ESA) and the California Endangered Species Act (CESA). Both prohibit harm to species (technically called ‘take’) but provide a permitting pathway for projects that may unintentionally harm a species while carrying out an otherwise lawful activity. Both ESA and CESA steer projects to avoid, minimize, and then mitigate impacts to species. Mitigation can occur either by the project proponent (called permittee responsible mitigation, or PRM) who generally restores and/or protects species habitat after an impact occurs, or mitigation can be created in advance through conservation or mitigation banks that provide a credit that can be used to fulfill regulatory requirements. CDFW notes that "a conservation bank generally protects threatened and endangered species and habitat" whereas "a mitigation bank protects, restores, creates, and enhances [water resources and] wetland habitats." While there are a few mitigation banks for water resources included in this research, for simplicity's sake, this report will use the term 'conservation bank' since that is the predominant bank type analyzed in our data. In the US, California has the longest history and largest volume of conservation banks.

There were a total of 92 banks approved by the California Department of Fish and Wildlife (CDFW) as of June 2023. Table 1 shows the banks per CDFW region by status, and Figure 1 shows the location of banks. Banks may have service areas extending beyond the CDFW region noted. Appendix C has a table listing all banks. Note that CDFW does not indicate [pending banks](#).

Table 1. Banks per CDFW Region by Status

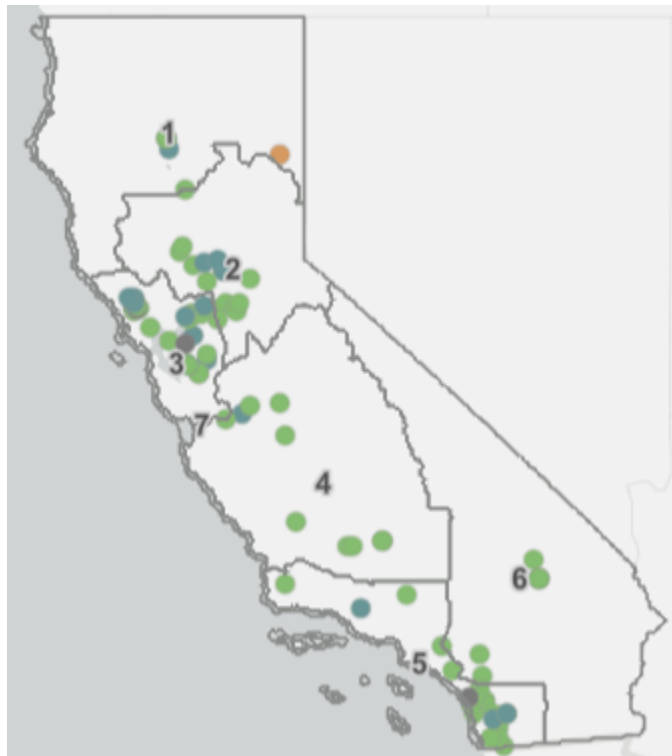
Note: 'CDFW Region' is the region listed as having oversight of the bank on CDFW's webpage "Conservation and Mitigation Banks Established in California by CDFW."

Region	Approved	Sold Out	Other	Region Total
R1	2	1	1*	4
R2	12	3		15
R3	24	9	2**	35
R4	10	1		11
R5	15	3	2**	20
R6	7			7
All Region:	70	17	5	92

*Credits not for sale to the public

**Closed

Figure 1. Map of CDFW-Approved Banks



Numbers are CDFW regions, green = approved, blue = sold-out, gray = closed, orange = credits not for public sale.

Background on Approval Timelines for CDFW-Approved Conservation Banks

In 2012, the state of California enacted legislation in 2012 ([SB 1148](#), adopted in [California Code - FGC § 1799.1\(d\)](#)) that adopted a maximum timeline of 270 days for the review of California Fish and Wildlife-approved conservation banks (see Appendix A, for additional detail on the timeline). The bill also required data tracking and regular reports to the Legislature about banks in the approval process, fees collected, and whether timelines were met. Notably, California code does *not* require regular reports to the legislature on whether the *full* 270-day timeline is being met, but instead requires tracking by portions of the process. Over the last five years, *missed* timelines have steadily increased. In 2017, 39% of timelines were not met. The most [recent report](#) (for 2021) indicates that intermediate timelines are not being met for **72%** of documents reviewed. Anecdotally, we have heard from conservation bankers in California that approval timelines may be longer than is reported in CDFW's reports to the legislature but to date this has not been confirmed by an external analysis.

Objective and Approach

The **objective** of this report is to provide an external review of the approval process timelines, the factors that influence timelines for conservation banks in California that are overseen by CDFW, and potential ecological and/or economic impact of delayed bank approvals. Our goal is to identify environmental permitting bottlenecks and opportunities that could save both CDFW and bank sponsor staff time and resources, and other opportunities to improve ecological and economic impacts associated with approval timelines. Results provide insight for adaptive management of the approval process &/or potential policy adjustments. This effort supports [Governor Newsom's 2020 Cutting Green Tape Executive Order](#), which aims to “increase the pace and scale of environmental restoration and land management efforts by streamlining the State’s process to approve and facilitate these projects.”

The **approach** of the research involved:

- Data collection on conservation banks in California from RIBITS and CDFW.
- Gathering approval process timeline data from multiple sources: CDFW's most [recent report](#) to the legislature on conservation and conservation banking (January 2022, for the year 2021), a Public Records Act (PRA) request to CDFW on timelines of approved and pending CDFW banks, internal records of timelines from 4 California conservation bankers, US Army Corps of Engineers ORM data on timelines of 7 banks that involved CDFW approval, and best professional estimates of the average and/or range of timelines from 7 California conservation bankers.
 - The researchers conducted an analysis on a sample of PRA data for 12 approved banks and compared this to the other data sources (see details on the methodology below). A full quantitative analysis of the PRA request was beyond the scope of this report due to resource constraints, but could be the subject of future research.
- Conducting in-depth informational interviews (a total of 13, 60-90 minute interviews) with conservation bank developers (n=7), consultants who work on conservation bank development (n=2), and users of conservation bank credits - some of whom also create advance mitigation or permittee-responsible mitigation (n=4). For more information on

themes covered in the informational interviews, see Appendix B, Additional Detail on the Approach and Themes Covered in Informational Interviews.

- From informational interviews, identification of the following: Top 3 factors that speed or slow the approval timelines of conservation banks; insight about ecological and/or economic impact of delayed approval timelines; and case studies.

Caveat: *Due to the differing methods of information-gathering as well as timing (CDFW input was provided the week prior to the original publication date), the report has much more nuance and detail from the perspective of conservation bank sponsors and buyers as opposed to CDFW staff.*

Guide to the Report

1. **Research Findings** summarizes:
 - 1.1 An external review of CDFW's approval process timelines, including an analysis on a sample of CDFW timeline data;
 - 1.2 Insights from informational interviews on the factors that speed and slow the CDFW bank approval process, synthesized from interviewees' Top 3 responses and full transcripts; and
 - 1.2 Insights on ecological and/or economic impacts of delayed approval timelines, including a case study of lost conservation.
2. **Discussion** highlights the top environmental permitting bottlenecks found in the data analysis and expressed informational interviews, outlines opportunities to save time and resources in the CDFW conservation bank approval process, and identifies other opportunities to improve ecological and economic outcomes. Next steps are also noted.
3. **Appendix** provides additional detail from the research.

1. Research Findings

This section summarizes an external review of CDFW’s approval process timelines, including an analysis on a sample of CDFW timeline data; reviews insights from informational interviews on the factors that speed and slow the CDFW bank approval process, synthesized from interviewees’ Top 3 responses and full transcripts; and reviews insights on ecological and/or economic impacts of delayed approval timelines.

1.1 External Review of CDFW Approval Process Timelines

One goal of this report is to provide an external review of the approval process timelines. The only data about timelines noted in CDFW’s most [recent report](#) to the legislature (for 2021 activity), is that “Twenty eight percent of the documents were reviewed on time,” and “CDFW review was on time for 28% of 25 timelines.” CDFW includes additional information required by California code: the number of bank applications received, reviewed, determined complete vs incomplete and acceptable vs unacceptable. However, the report does not include the specific timelines (e.g., 28 days to review this document, 44 days for this document, or summary statistics). The report does not provide data to understand the extent to which the 72% of documents were delayed (e.g., 1 day beyond the deadline or 100 days beyond the deadline?). As noted in the Background section, California code does not require CDFW to report the actual average number of days that reviews are taking. Thus, the 270-day deadline cannot be evaluated from the report itself.

As mentioned in the Approach section above, researchers sought other information to identify the approval process timeline. A Public Records Act (PRA) request to CDFW yielded timelines of 23 approved banks that had enough data to analyze, 6 approved bank amendments, 22 pending banks, and 13 pending bank amendments. An additional 12 approved banks were indicated in the PRA, but either had no data or incomplete data. Five CDFW Regions are represented in the PRA data (CDFW Region 1 is not represented).¹ Although the information is an excellent source for externally reviewing CDFW approval timelines, CDFW was only able to provide the information as screenshots of records due to the proprietary nature of their database (Figure 2).

Figure 2. Example of Bank Timeline Data Screenshot Provided from a Public Records Act Request

Note: Author redacted identifying information

	Activity	Notes	Date
Edit	Notification of Bank Agreement - Acceptable		10/31/2019
Edit	Bank Agreement Extension Requested	Sponsor making changes with USACE	4/1/2019
Edit	Bank Agreement Extension Requested	Mutually agreed upon timeline extension until April 30, 2015	3/12/2015
Edit	Notification of Bank Agreement Package - Complete	Incorrect date, should be 7/15/2014 (corrected by [REDACTED] 9/2/14)	7/15/2014
Edit	Bank Agreement Package Document Received		6/17/2014
Edit	Bank Agreement Package Fee Received	Payment: \$ [REDACTED] Balance = 0	6/17/2014
Edit	Notification of Prospectus - Acceptable		7/3/2013
Edit	Notification of Prospectus - Complete		5/13/2013
Edit	Prospectus Document Received		4/16/2013
Edit	Prospectus Fee Received	Payment: \$ [REDACTED]	4/16/2013

Significant manual data entry would be necessary to create an analyzable dataset from this non-machine readable format. Due to the scope of this project, researchers were only able to conduct an analysis on a sample of the full dataset of approved banks. The sample included 12 banks in the five Regions represented in the PRA data. Eleven of the banks were sponsored by companies that

¹ CDFW’s conservation and mitigation banking webpage shows that Region 1 has three conservation banks, one of which is sold out, and one of which does not provide credits to the public.

participated in the interviews,² and one bank was chosen from an unrepresented region. Of the 12 banks in the sample, 10 had enough information to analyze. For three of the banks, CDFW timestamp data were compared to internal records that conservation bankers provided anonymously.

Some data challenges encountered were:

1. **'Timestamp' data were often missing in CDFW data.** For example, four records were missing the date when the banking agreement was deemed complete, even though these banks are listed on CDFW's [website](#) as approved banks. Other missing timestamps include the following: the draft prospectus review date, the prospectus 'incomplete' notification, the date a revised prospectus is received, the prospectus 'acceptable' notification, and an indication of when a timeline extension ended. In all, six of the 12 records had missing data; 10 records could still be analyzed, despite some missing data, 2 records could not.
2. **The time interval between when a bank agreement is deemed complete and when it is deemed acceptable is problematic.** The time interval is often lengthy - the average was 301 days and two records were over 500 days,³ which exceeds the total required timeline for approval of 270 days. Additionally, the data do not indicate who is working on the approval process in this time interval (see Table 2). This does not affect being able to analyze the total timeline, but creates a challenge for categorizing time intervals that are CDFW's responsibility vs. external agencies' responsibility vs. the bank sponsor's responsibility. This means it is not currently possible to analyze whether CDFW is meeting its 90-day timeline for the bank agreement package review.
3. **Conservation bank sponsors' internal data did not fully match with CDFW data.** Although we were only able to compare three bank sponsors' timeline data with CDFW data, we note that in two of the cases, bank sponsors indicated milestones such as document submissions to CDFW that were not reflected in CDFW data (submission of a banking agreement, three revised banking agreement submissions, and a review of a revised banking agreement). This finding provides an indication that there may be multiple revisions within the lengthy time interval between determination of a complete bank agreement to an acceptable decision that are not captured in CDFW data. **Data that do appear to align well** are initial documentation submission, timestamps for receipt of fees, and final 'acceptable' determination of the banking agreement.

Table 2. Summary Statistics of the Bank Agreement Package Review Timeline (n=10)

Note: Calculated as the time interval between the date of notification of a complete bank agreement package through the date of notification that bank agreement package is acceptable

	Days	Months
Minimum	49	1.6
Average	301	10.0
Median	286	9.5
Maximum	549	18.3

² These banks were chosen due to the potential to compare PRA data with bank sponsor-collected data (if available).

³ One of these records indicated three time extensions, the other had no notes in the CDFW data but a sponsor's interview about the bank indicated significant staff turnover was occurring.

From the analysis of the data sample, researchers determined that **CDFW data in its present form do not provide the ability to analyze whether the agency is meeting its total 270-day deadline.** This is problematic. The 270-day timeline is required in California’s Fish and Game Code ([SB 1148](#), adopted in [California Code - FGC § 1799.1\(d\)](#)), but the system for collecting data and reporting on performance does not allow for evaluation. The biggest challenge to overcome is to refine data entry during the bank agreement review period such that CDFW review time can be disaggregated from time spent on the process by all actors including CDFW, the bank sponsor, the interagency review team, and potentially external agencies. The data may also inconsistently track when a bank sponsor puts the approval process ‘on hold.’ Three of the 12 records in the sample indicated time extensions for external agency review, but it is possible that other records omitted this data.

Total Approval Timelines

The approval process start and end date⁴ appeared to be consistently entered and therefore the *total* timeline for approval was possible to analyze (Table 3). The average total timeline from CDFW data is 761 days. This average, however, is much lower than our alternate data sources. Based on data from US Army Corps of Engineers on the timeline for approval of Clean Water Act banks in California that offer CDFW-approved conservation credits, the average timeline is 1,337 days (Table 4). A survey of seven conservation bank sponsors found an even higher average total timeline banks approved by CDFW: 1,740 days (Table 5). The lengthier sponsor-reported timeline could incorporate time invested in gathering information and preparing the prospectus before the first timestamp is recorded by CDFW. Overall, alternative data indicates that **CDFW data may underestimate the total approval timeline by as much as half.**

Table 3. Summary Statistics of the Total Bank Approval Time from CDFW Data (n=10)

From a sample of CDFW timeline data from approved banks

	Days	Months
Minimum	339	11
Average	761	25
Median	608	20
Maximum	1,676	56

Table 4. Approval Timelines of Banks from US ACE Data (n=7)

Obtained via a FOIA request in previous research

	Days	Months
Minimum	590	20
Average	1,337	45
Maximum	1,791	60

Table 5. Best Professional Estimate of Total Approval Timelines from Surveys of Conservation Bank Sponsors (n=7)

	Days	Months
Minimum	1,260	42
Average	1,740	58
Maximum	2,700	90

⁴ Start date = the date the draft prospectus fee was received or the date the draft prospectus document was received, if later; or, if a draft prospectus was not submitted, the date the prospectus fee was received or document was received, if later. End date= bank agreement deemed acceptable.

While the above analysis is not a comprehensive review, it provides insight beyond what is noted in the CDFW report to the legislature for 2021 activity. Dialogue with CDFW could point to opportunities to adjust timeline data entry so that the program could be analyzed, while acknowledging that data entry tasks should not add undue burden to an agency that is already under-staffed (noted in [CDFW's report to the legislature](#)). CDFW could also consider creating an automated flag within their data entry system that could prevent the data gaps we identified in the test analysis. Along with start and stop dates, the data appears to do a good job tracking timestamps for receipt of fees, which are associated with the review of various documentation. Further research could both expand the data sample and investigate the deadlines for different time intervals that CDFW is responsible for (e.g., the 30-day, 60-day, or 90-day turnaround times on the review of different documentation). Additionally, only the timeline of the initial bank approvals were analyzed. An expanded analysis could review the timeline of amendments, and early timeline intervals of banks and amendments currently under review.

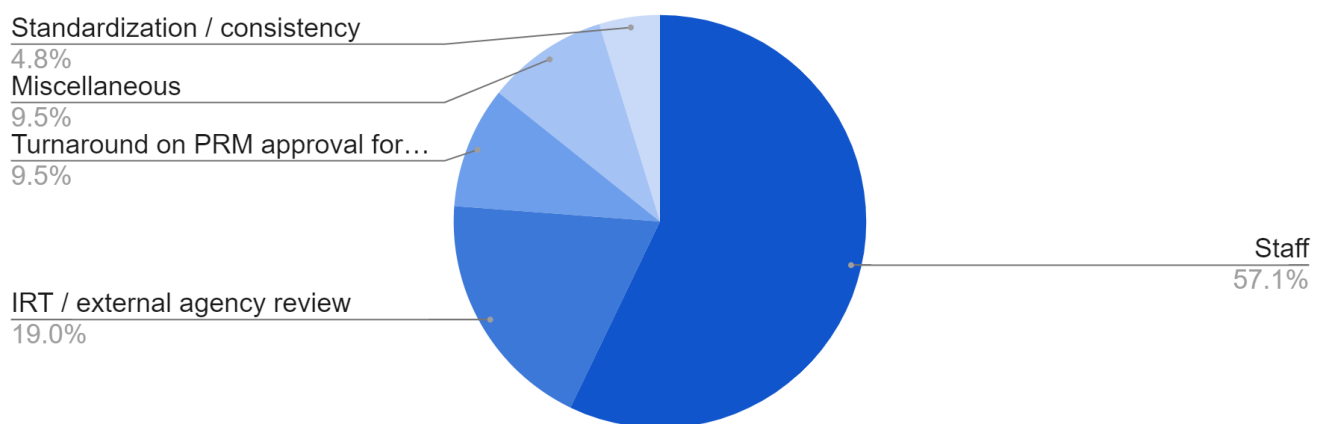
1.2 Insights from Informational Interviews on Factors that Influence Timelines

The second goal of this report was to identify environmental permitting bottlenecks and opportunities that could save both CDFW and conservation bank staff time and resources. Researchers conducted a total of 13, 60-90 minute interviews with conservation bank developers (n=7), consultants who work on conservation bank development (n=2), and users of conservation bank credits - some of whom also create advance mitigation or permittee-responsible mitigation (n=4). For more information on themes covered in the informational interviews, see Appendix B.

1.2.1. Top 3 Things That Speed the Approval Process

Participants were asked to identify their Top 3 things their Region is doing well to speed approval timelines. The top themes are noted below.

Figure 3. Top 3 Things That Speed the Approval Process



When bank sponsors, consultants, and CDFW credit buyers who developed permittee-responsible mitigation (PRM) or advance mitigation were asked to list the Top 3 things going well in their Region to speed the approval process, they had a hard time coming up with three responses. There was an average of 1.4 ideas noted per interviewee, in comparison to 4.1⁵ ideas of things to change noted per interviewee.⁶

Staff encompasses an appreciation for responsiveness, open dialogue, a collaborative approach to work built on trust, subject matter expertise (SME), dedication to the resource, experience, senior staff engagement, efficiency with their workload, staff recognition of a good quality site, and appreciating low staff turnover in one particular approval process. One interviewee highlighted that CDFW staff was diligent in circulating notes and getting IRT responses within a week.

Multiple interviewees highlighted aspects of the **IRT process** that speed the process, including: the efficiency of being able to have weekly meetings with the IRT, having an IRT that was able to add agenda items without a long lead time, seeing that IRT members worked well with each other and other agencies, and having a CDFW staff member that was a good facilitator with the IRT.

⁵ If interviewees mentioned more than 3 ideas, researchers did not ask interviewees to remove ideas.

⁶ Similar research conducted by EPIC at the national level with wetland and stream mitigation bank sponsors yielded an average of 2.2 top things going well, and 3.0 top things to change in US ACE Districts.

Two interviewees mentioned that the **turnaround time for PRM approvals were relatively fast**. The downside mentioned by one interviewee was that this could create an incentive to propose PRM rather than conservation banks.

The **miscellaneous** comments were related to a smooth mitigation and monitoring process, and a timely release of a financial bond.

With regards to **standardization / consistency**, one interviewee expressed that templates were generally a good thing, particularly in light of the unpredictable nature of approvals prior to development of templates.

Additional Factors that Speed the Approval Process

In addition to categorizing interviewee’s Top 3 responses, the researchers also combed through interview transcripts and identified additional factors that speed the approval process, from the perspective of conservation bank sponsors, consultants, and CDFW credit buyers.

Several interviewees mentioned that their **approvals went faster or were informally prioritized when:**

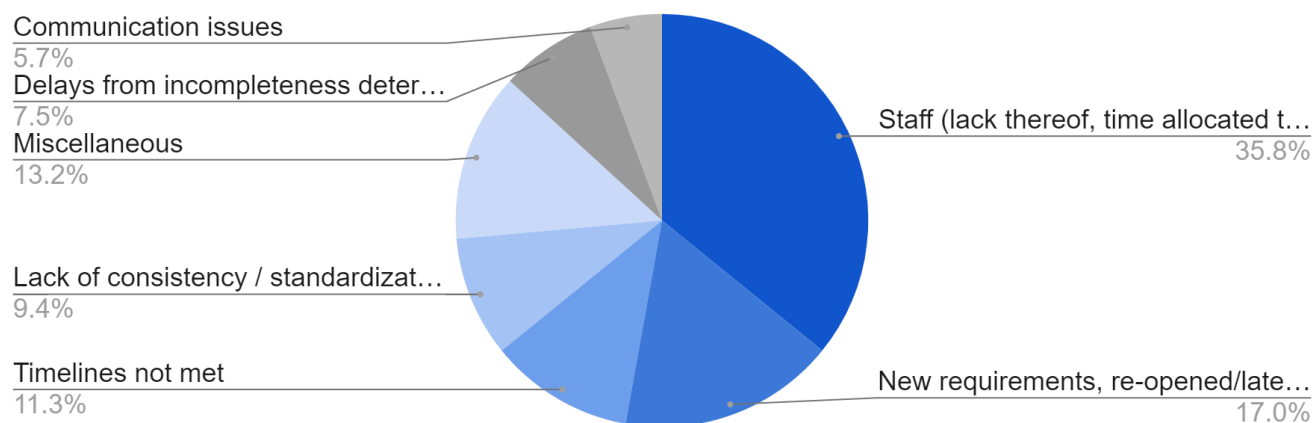
- CDFW liked the site or proposed it as mitigation - had stake in seeing the site restored;
- There were no credits available for the species; or
- Another state or federal agency needed the credits from their bank.

Finally, one interviewee noted that the approval process was easier and faster if the bank sponsor adhered to the templates.

1.2.2. Top 3 Changes to Speed the Approval Process

Participants were asked to identify their Top 3 things their Region could change to help speed the approval timeline. The top themes are noted below.

Figure 4. Top 3 Changes to Speed the Approval Process



Increase staffing along with related themes such as reducing turnover, was a change cited for speeding up the approval process in the majority of interviewees’ Top 3. This aligns with the CDFW’s self-analysis in their most [recent report](#) to the legislature, where they noted: “Some review timelines were not met due to high workload demands on limited staff resources, [and] staff turnover...”

Regarding turnover, many interviewees experienced 2-5 CDFW project managers over the timeframe of their bank approvals. Improved compensation and opportunity for advancement was an option noted by an interviewee to reduce turnover of staff who would leave their role after gaining expertise and speeding the approval process. Regarding workload, one interviewee mentioned that in their Region, one CDFW staff member was on the IRT of 11 banks in the approval process and additionally oversaw more than 20 established banks. One interviewee pointed out that heavy staff workload from insufficient staffing meant an inefficient start-and-stop review process.

Several interviewees mentioned hearing from CDFW that their proposal could not be addressed, but was #6 or #8 'in the queue.' Interviewees noted that CDFW staff did not have the time to even open a new prospectus for a year (one example noted), rather than the 30 days required in California code. This time is not indicated in CDFW timeline data.

Other comments related to staff included: fill vacant positions, increase staff time dedicated to the approval process (and make this a staff priority), increase funding for staffing, and provide training to staff to increase their expertise in conservation banking. One interviewee commented on the need for CDFW conservation banking staff to have access to other staff with niche expertise.

“There are biologists doing real estate issues.”

Some interviewees speculated that less experienced staff may make more requests for details or changes to reduce the risk of making a mistake, whereas more experienced staff approached proposals more pragmatically.

Some interviewees thought delayed timelines were less about staffing levels and more about recurring requests for changes. **Limiting the addition of new requirements and re-opened or late-stage requests for change** in the approval process was identified as a major opportunity to speed up the approval process by multiple interviewees. Interviewees described revising already submitted proposals in a recursive process that added time and labor costs to the approval process.

“Any edit or recommendation [staff] put in the plan is a dollar sign.”

Some of these requests were characterized as:

- New topics that were not 'on the checklist,' but were added in comments provided in multiple incomplete determinations.
- Requests that added to the timeline but did not add value to the species, or were requests outside the agency's authority.
- Late-stage and detailed CDFW and IRT counsel reviews and comments. One interviewee suggested that if there was going to be significant involvement by counsel, early engagement could be preferred.
- Staff turnover was noted as playing a key factor contributing to this dynamic as institutional knowledge of the project was lost. Interviewees noted that new staff did not pick up where their predecessor left off. Rather, new staff generally meant new reviews and new comments, including on issues that had previously been discussed and resolved.

Multiple interviewees expressed frustration at 'another bite of the apple' and 're-opened comments,' particularly if these created delays when the bank sponsor felt psychologically close to the finish line. One interviewee commented, "It would be good to have a 'no surprises' clause."

Multiple interviewees thought that many aspects of the bank agreement were generally growing and taking more time, including:

- Requiring more details earlier in the process
- Increasing financial security requirements
- Increasing requirements from the lands group
- A significant increase in the documentation needed
- New mapping requirements
- Other aspects that added time outside of the approval process (e.g., longer performance monitoring, longer credit release schedules).

One interviewee recognized that CDFW staff may see themselves as the “last line of defense; their job is to save the habitat from human impacts” and could be a factor in the perceived added level of detail requested.

“Everything is taking longer... it’s 5x more emails, more phone calls, more revisions of a document.”

Sticking to timelines and creating accountability for doing so was another common comment from interviewees. One interviewee pointed out that “We’re under pressure from our clients” who are waiting on mitigation for their permits. Tracking where a bank was in the process was an idea for increasing accountability to timelines. Currently, all interviewees indicated that they were driving the timelines by keeping track of deadlines and sending reminders, rather than CDFW staff taking that role. One interviewee noted that CDFW fees were high, but not a problem if the process was held to the timeline. Interviewee desired the CDFW to require timely comments from IRT members or to move on if an IRT member was holding up the process. Several interviewees brought up the Lake and Streambed Alteration ‘OpLaw’ (Operation of Law letter) clause that automatically approves a permit if it had not been approved “within 60 days from the date of notification is [sic] complete.” ([Fish and Game Code section 1602\(a\)\(4\)\(D\)](#)).

“The agency may claim they are meeting their timeframe of commenting in 30 days, but when there are gray areas in negotiating issues, there is no defined timeline and they can take as long as they deem necessary.”

Related to timelines, several interviewees thought that **incomplete determinations** were used to ‘buy time’ for overloaded staff and/or to improve the appearance of CDFW’s performance on timelines. Multiple interviewees experienced repeat (or seven or five) incomplete notices. Interviewees expressed various opinions about incomplete determinations, including that they were used as a tool to stall banks, they were quite subjective - two different staff could issue complete and incomplete based on their review because there are multiple ways to interpret the checklist (some more costly and time consuming than others), and that the comments coming back from incomplete determinations were really comments related to acceptability rather than completeness.

“Staff issue [incomplete determinations] right at day 30 and there is no way to talk to them to resolve something - not even something that could take five minutes to resolve.”

Interviewees commented that **early, constructive communication** could reduce delays and misunderstandings of expectations. Some interviewees noted instances where CDFW staff expressed they could not provide feedback until the formal process and deposit of associated fees had transpired.

One interviewee suggested an opportunity for quick feedback in between formal process steps. Several interviewees wished for a more collaborative approach to developing the conservation bank, with one interviewee noting that dialogue with staff was not as collaborative as it was in the past.

“There’s a mentality of searching for no rather than searching for yes.”

A perceived **lack of consistency and standardization** was mentioned as contributing to delays. One interviewee mentioned that despite there being templates, guidance and checklists, “Everything is a negotiation.” In one situation, an IRT member edited CDFW’s established templates. Interviewees mentioned examples where they hoped to reduce delays by providing information as requested in templates or as had been approved in previous similar banks, only to be asked for deviations from templates or previously-approved proposals. Changing templates was another source of frustration mentioned by three interviewees. Long timelines could also mean that templates were updated during that timeframe and a document would have to be updated to meet the new template, prolonging the application process in another recursive manner. Multiple interviewees expressed frustrations that additional phases described in an approved bank agreement would be subject to a lengthy amendment process, even though the plan for the new phase had already been reviewed in the original bank agreement. Interviewees also expressed an understanding that every property and every species is different and there will be aspects that deviate from templates or previously developed credit quantification.

The **miscellaneous** category included the following Top 3 ideas:

- Encourage CDFW staff to have empathy for bank sponsors and their pressures.
- Changing what was perceived as a zero-risk mentality in CDFW was a Top 3 idea mentioned by one interviewee but also expressed in five other interviews. An interviewee pointed out that “We’re not suggesting risky mitigation,” but a reminder that the agency has clauses in the banking agreement: “if you don’t perform, you don’t get credits, or your bank could go into default.” Another suggestion was training for staff to gain comfort with risk and return.
- Address concerns of staff who have a philosophical aversion to conservation banking. Interviewees speculated that some staff view conservation banks as ushering in additional development and impacts, or could be seen as competition to non-profits, or could disempower staff who would like to influence where restoration and conservation is sited. Another interviewee noted that the term ‘bank’ has a strong negative connotation.
- Reduce staff time spent on RCIS (CDFW’s Resource Conservation Investment Strategy), which one interviewee thought resulted in restoration that has more ecological risk, less durability, and temporal loss in comparison to conservation banks. Another interviewee mentioned that RCIS was a good idea in context, but was poorly executed.
- Deposit funds for staff review in escrow as is done with permits in other agencies.
- Create accountability that fees paid for the approval process are providing adequate staffing levels.
- Face the issue of the gap in credit supply and slow down development proposals until the gap has closed.

- Consider charging a fee when bank credits are not available and setting up an in-lieu fee program or Request for Proposals to fulfill the credit demand.

Additional Factors that Slow the Approval Process

In addition to categorizing interviewee's Top 3 responses, the researchers also combed through interview transcripts to identify other factors that could change or speed up the approval process, from the perspective of conservation bank sponsors, consultants, and CDFW credit buyers.

Several interviewees thought that the **bank approval process could be prioritized by CDFW leadership**. PRM was noted as being approved faster in their experience, but banks could be prioritized due to their greater ecological benefit and reduced staff time per unit of mitigation. One interviewee commented that conservation banks could help achieve the restoration goals of the Governor's [30x30 initiative](#). Some interviewees thought there were fewer champions of conservation banking than there were in the past. Credit buyers interviewed expressed concern about a looming lack of supply of mitigation while impacts were still being permitted, with a Letter of Credit required and uncertainty when the mitigation would be implemented.

“What I don’t understand is they’re not cranking out mitigation [approvals] but they’re still permitting projects.”

Complexity was acknowledged as a factor in longer timelines, including addressing issues such as: public access, hazardous materials, federal endangered species, and a conservation bank site spanning more than one agency region.

“There’s low supply. All the easy sites are gone - everything’s got hair on it.”

External agency reviews added to timelines. Five interviewees hoped for better coordination with federal partners, with four specifically highlighting challenges in species crediting or performance standards for multiple agencies. One interviewee commented that timelines were held up by the slowest responding IRT agency and hoped that CDFW staff could hold the IRT to timelines better. Water board reviews were mentioned as adding to timelines in two interviews, with one interview saying that their regional board objects to anything except onsite mitigation. Any projects that may impact flood control or relate to timing of flooding on the floodplain could indicate additional review time by the regional flood protection board. Finally, there were two cases of a County creating a bottleneck in the review process.

Two interviewees also noted the **challenge of establishing species presence** and/or abundance within the timescale of the approval process: “...you can’t guarantee that species will be there when you go out to look for it.” This issue is related to credit quantification and so can be a sticking point in the review process.

Finally, interviewees noted that **inexperienced conservation bank sponsors** take up staff time, and noted instances where bank sponsors pushed back on agency requests or made requests that would be challenging to approve despite the potential increase in approval time.

1.3. Ecological and/or Economic Impact of Delayed Approval Timelines

Another goal of this research was to identify the potential ecological and/or economic impact of delayed bank approvals. The following are consequences of conservation bank approval delays identified in the 13 informational interviews conducted in this research. None of the interviewees highlighted speedy approval processes and the benefits thereof.

“Inaction is still a choice and it has consequences for the environment.”

Opportunities to invest in Nature are lost. High-quality habitat is lost because landowners get a better offer while an application is stalled out in the approval process. Three interviewees specifically mentioned land that was sold to a developer because the project was ‘in the queue’ and couldn’t be reviewed in a timely manner (see two case studies below). One organization mentioned they could increase their investment in restoration by 10x. There is also an opportunity cost where the money is tied up in a delayed conservation bank approval process and could go to another project. A particular note of concern included several anecdotes indicating that bank sponsors are now shying away from including CDFW credits in banks (e.g., they are only seeking federal species and/or wetland credits), or are not seeking a bank amendment to be able to sell ‘pre-transfer’ credits to entities anticipating future mitigation needs.⁷ Extensive delays are creating a disincentive to create CDFW credits and will exacerbate the dwindling supply.

Another organization shared an anecdote that a culvert replacement / fish passage project was not pursued - despite funding being available - because riparian credits weren’t available to offset temporary impacts and the organization didn’t want to deal with that perceived bottleneck. Two interviewees mentioned that their projects could alleviate sea level rise, but those benefits did not beneficially factor into the review or hasten the timeline. One interviewee emphasized that not all conservation banks are run by big companies - some are landowners who might not be able to absorb the financial costs of delays.

“We could do 10x more restoration if CDFW stuck to their timelines.”

There is a temporal loss of ecological benefits. If bank credits are unavailable, permittees must create their own mitigation (PRM), which means there is a temporal loss of the benefits of restoration and conservation, sometimes for years after the impact occurs. Permittees often have the same mitigation ratio (ex. 3 units of mitigation required for every 1 unit of impact) whether they create their own mitigation after impacts or use credits that are already established and approved at conservation banks. Three interviewees had heard of CDFW permits that had been issued 5-10 years prior that had not completed mitigation. While there were some anecdotes of permits being held up, increasingly interviewees noted that CDFW permits would be granted without secured mitigation, given that the permittee provided financial assurances that funds would be available to pay for the mitigation in the future. The full scale of outstanding mitigation obligations in California is unknown at this time. EPIC

⁷ Pre-transfer credits allows banks to sell ownership of credits (released or expected to be released from a bank but not yet available) to a project proponent, who then holds them. The credits are then transferred to a project, with agency approval, during the project’s permitting process. This allows a project proponent to purchase in bulk ahead of time and have potentially suitable mitigation available for use before the impact occurs. CDFW’s 2021 BEI template includes this / allows this but existing banks have to amend their BEI to the new template to get this opportunity. CDFW’s 2021 [BEI template](#) includes this / allows this but banks have to amend their BEI to the new template to get this opportunity.

has submitted a Public Records Act request to CDFW to identify the scale of permitted impacts to species and habitat in California that have not yet been mitigated. The information is forthcoming and could be the subject of future research.

Outstanding mitigation obligations "...could be one of the biggest conservation failures in the state in this decade."

The whole time the approval process is stalling, the property is not being managed to optimally benefit the species or restore habitat for endangered and threatened species. Restoration projects may also mitigate the effects of climate change and these benefits are also on hold during delays.

"We spent seven years arguing about restoration and we could have been helping the population get restored."

Opportunities to maximize the benefits of restoration are lost. One interviewee described a near-miss of taking advantage of once-in-a-generation climate conditions that provided a brief window for restoration because of a drawn-out approval process.

Mitigation developed by permittees (PRM) takes more time and money for both permittees and CDFW staff, with costs ultimately borne by consumers and taxpayers. If bank credits are unavailable, permittees must create their own mitigation, which can take the permittee *and* CDFW staff 10-20x more work. Two interviewees noted that there is no template for PRM, and CDFW staff have asked them to use banking templates. An interviewee noted that it was like CDFW was approving numerous "postage stamp" mini-banks that are ecologically inferior but not permitting actual high-quality banks.

There is a financial cost of supporting consultants and lawyers to push a project through to approval, and that cost increases for the conservation banker the longer the process goes on, and the costs are passed on to consumers and taxpayers. Some conservation banks have decided to opt-out of CDFW approval, and create only federal-level mitigation. This means that a permittee may have to buy a credit that only fulfills a federal mitigation obligation and then have to create state-level mitigation, even when the bank could have created a credit that would fulfill both obligations. Permittees also have to pay for financial assurances until the mitigation is complete. One interviewee pointed out that it was a shame that money was going to large financial firms rather than Nature.

"All that money wasted on J.P. Morgan."

Delays mean it is hard to get beneficial projects approved if there is not a supply of existing credits from approved conservation banks. This consequence refers to both delays in the approval of the conservation bank, but also delays in approvals of credit releases. There is an opportunity cost of infrastructure not being built or repaired. The state may be delayed in meeting renewable energy goals, and completing the high-speed rail project if mitigation is unavailable. Californians continue to utilize crumbling infrastructure if mitigation cannot be secured for infrastructure upgrade and maintenance projects. One interviewee estimated that the lost value of delayed infrastructure repairs or construction was a 100x multiple of the economic impact to conservation bankers.

"Demand (for credits) has exceeded supply. We're not even sustainably replenishing the supply of restoration credits in California."

Case Study of Lost Conservation: Richmond Ranch



Photo credit: [The Chickering Company](#)

Two interviewees mentioned the lost potential of the same site - Richmond Ranch. Publicly available information shows that this was a 3,700-acre undeveloped working cattle ranch in San Jose county that sold for [\\$25 million in 2017](#) to a Chinese developer, Z&L Properties (it has since been [resold](#) to a Bay area developer). The real estate listing for the property notes “natural springs,” “exceptional wildlife habitat,” an adjacency to “the San Felipe Ranch (owned by the Hewlett-Packard families), which is protected from development and enhances important wildlife corridors in the region.” The interviewees indicated that there was serious potential for conservation banking on the property, but the opportunity fell through in part due to the long ‘queue’ of projects awaiting review by CDFW.

2. Recommendations to CDFW

This section highlights the top environmental permitting bottlenecks found in the data analysis and expressed in informational interviews, outlines opportunities to save time and resources in the CDFW conservation bank approval process, and identifies other opportunities to improve ecological and economic impacts associated with delays in the approval process. Next steps are also noted.

A great deal of information and insights were captured in the data analysis and informational interviews. Below are highlights from insights with conservation bank sponsors, consultants, and CDFW credit buyers. Facilitate faster reviews was noted in the previous section.

Top CDFW Environmental Permitting Bottlenecks

1. The average *total* timeline of CDFW conservation bank approvals from CDFW data is 761 days, while the average total timeline from other data sources ranged from 1,337 - 1,740 days, indicating that **CDFW data may underestimate the total approval timeline by as much as half**. Indeed, informational interviews frequently mentioned hearing that a conservation bank document was 'in the queue' and might not even be opened up for months or over a year.
2. **Lack of staff and other staffing issues** such as staff turnover, staff time dedicated to the approval process, and training new staff to increase their expertise in conservation banking.
3. **The addition of new requirements and re-opened or late-stage requests for change** in the approval process was identified as a major permitting bottleneck.
4. **Lack of prioritization and accountability** of keeping to conservation bank review timelines. Delays by external agency reviews is a related bottleneck.
5. **Lack of consistency and standardization**. As one interviewee noted, despite there being templates, guidance, and checklists, "Everything is a negotiation."
6. **A perceived zero-risk mentality by CDFW** towards reviews of conservation banks.

Additional detail on bottlenecks and other insights about what speeds and slows the CDFW bank approval process can be found in Section 1.2.

Opportunities to Save Time and Resources in the CDFW Conservation Bank Approval Process

Apply and expand California's Cutting Green Tape opportunities to aspects of the conservation banking review process. [Cutting Green Tape](#) (CGT) is a statewide initiative encompassing "numerous state executive orders, legislation, permitting and grant program procedure changes, that sets a laudable goal of expediting restoration projects" ([EPIC, 2023](#)). Some aspects of CGT exclude restoration that provides compensatory mitigation or projects over a certain size (CESA Restoration Consistency Determination, CA Habitat Restoration and Enhancement Act). The CA Statewide Restoration [General Order for 401 Certification](#) (April 2023) is an example of a streamlined process available for net benefit habitat restoration projects with no size limit, and for any purpose - compliance restoration is eligible. Even with this greenlight, only two interviewees had attempted to use this or other CGT streamlined processes (unsuccessfully, to date) and other interviewees did not even try, hearing that CDFW would not use CGT for compensatory mitigation.

Prioritize conservation bank approval reviews and create accountability for sticking to the timeframe. Long approval timelines shift incentives away from conservation banks and towards permittee responsible mitigation (PRM). However, reviews of PRM can take 10-20 times longer per unit of mitigation than conservation banks. Leadership keeping staff accountable to timelines along with having more champions of conservation banking were seen as means to improve accountability. Tracking where a bank was in the process was another idea. Although CDFW staff track timestamps of certain milestones in the approval process (see below), all interviewees indicated that they were driving the timelines by keeping track of deadlines and sending reminders, rather than CDFW staff taking that role. This is something that Virginia's Department of Environmental Quality has done with the online, transparent PEEP platform (Permitting Enhancement and Evaluation Program, see Environmental Policy Innovation Center's case study: [If You Can Track a Pizza, You Can Track a Permit](#)). A related suggestion noted below is to develop a meaningful way to track and enable evaluation of the 270-day deadline. Holding IRT members accountable for their review deadlines is another option to improve accountability to timelines. The most dramatic option for accountability to timelines mentioned would be to adopt something akin to the '[OpLaw](#)' clause (Operation of Law letter) used in CDFW Lake and Streambed Alteration permits that automatically approves a permit if it had not been approved "within 60 days from the date of notification is [sic] complete."

Hire and retain staff dedicated to conservation bank approval reviews. Many interviewees experienced 2-5 different CDFW project managers over the timeframe of their bank approvals. Turnover and lack of sufficient staffing create an inefficient start-and-stop review process, compounding issues with timelines.

Identify opportunities to limit the addition of new requirements and re-opened or late-stage requests for change in the approval process. Interviewees hoped that CDFW (and IRT) staff could focus on requests within the agency's authority, and requests that meaningfully added value to the species to reduce time and resources spent on non-essential activities. When turnover occurs, new staff are assigned to banks in the process of review, creating an almost entirely new review with new comments and requests and re-opening of issues that had been discussed and addressed. CDFW would benefit from investigating how to manage succession better during turnover. CDFW could also emphasize clauses in the banking agreement that reduce risk so that reviews are not striving for perfection / zero-risk. As one interviewee commented: "don't let the perfect be the enemy of the good." Another suggestion was for more early, constructive communication that could reduce delays and misunderstandings of expectations.

Increase objectivity to improve standardization and consistency in the review process. For example, the review of items like prospectus checklists (for completeness) were described as being subjectively reviewed and really more about acceptability rather than completeness. CDFW creates templates and other guidance so that bank sponsors can have some predictability that adherence will lead to a faster approval process. They are not currently experiencing this. Interviewees also expressed an understanding that every property and every species is different and there will be aspects that deviate from templates. CDFW could also allow a bank agreement to stay 'grandfathered' in whatever version was current at the time the prospectus was submitted. This issue could partly be resolved if approvals were adhering to the 270-day timeline. While bank sponsors were not forced to update to a new template, they felt that it was implied that if they did not update, their approval would be delayed even longer.

Additional detail on bottlenecks and other insights about ecological and economic impacts can be found in Section 1.3.

Ecological and Economic Impacts Associated with Delays in the Approval Process

1. Opportunities to invest in nature are lost.
2. There is a temporal loss of ecological benefits.
3. Mitigation developed by permittees (PRM) takes more time and money for both permittees and CDFW staff, with costs ultimately borne by consumers and taxpayers.
4. Similar to above, costs for conservation bank sponsors increase with delays, with costs ultimately borne by consumers and taxpayers.
5. Delays mean it is hard to get beneficial projects (e.g., renewable energy, repairs of crumbling infrastructure) approved if there is not a supply of existing credits from approved conservation banks.
6. Opportunities to maximize the benefits of restoration are lost.

Additional detail on these impacts and a case study of lost conservation opportunity can be found in Section 1.3.

Opportunities to Improve Ecological and Economic Impacts Associated with Delays in the Approval Process

Address the gap between credit supply and demand by adopting all of the recommendations above. Extensive delays are creating a disincentive to create CDFW-approved credits and will exacerbate the dwindling supply. If fewer bank credits are available, there will be more PRM which means there is a temporal loss of the benefits of restoration and conservation. While some interviews anecdotally mentioned a large time gap between permit issuance and implementation of mitigation, the full scale of outstanding mitigation obligations in California is unknown at this time. As one interviewee mentioned: *Outstanding mitigation obligations "...could be one of the biggest conservation failures in the state in this decade."* Adopting any of the above recommendations could close the gap in credit supply.

Insight for Adaptive Management and/or Potential Policy Adjustments

Our analysis of a sample of CDFW timeline data found that, in its present form, **CDFW data do not provide the ability to analyze whether the agency is meeting its legislatively-required total 270-day deadline. This is problematic.** The biggest challenge to overcome would be to refine data entry during the bank agreement review period so that CDFW review time can be disaggregated from time spent on the process by CDFW, the bank sponsor, the interagency review team, and potentially external agencies. The data may also inconsistently track when a bank sponsor puts the approval process 'on hold.' Three of the 12 records in the sample indicated time extensions for external agency review, but it is possible that other records omitted this data.

The research identified issues with CDFW timestamp data that should be addressed. 'Timestamp' data were often missing and bank sponsors' internal data did not fully match with CDFW data. In

particular, multiple revisions within the lengthy time interval between determination of a complete bank agreement to an acceptable decision may not be captured in CDFW data (as we found when comparing bank sponsors' internal timeline data to CDFW data). Data that *do* appear to align well are initial documentation submission, timestamps for receipt of fees, and final 'acceptable' determination of the banking agreement. **Data improvement** could begin with a dialogue with CDFW to identify opportunities to adjust timeline data entry so that the program could be analyzed, while acknowledging that data entry tasks should not add undue burden to an agency that is already under-staffed (noted in [CDFW's report to the legislature](#)). CDFW could also consider creating an automated flag within their data entry system that could prevent the data gaps we identified in the test analysis.

Next Steps

This report is intended to be a jumping off point for adaptive management of the approval process. As Governor Newsom expressed in his Executive Order on Cutting Green Tape, the point is to "increase the pace and scale of environmental restoration and land management efforts by streamlining the State's process to approve and facilitate these projects." The following are ideas for taking action on the findings of the research.

Interviews with CDFW staff. Researchers attempted to include insights from informational interviews with Regional CDFW conservation banking leads. However, only one interview was scheduled at the time of writing. Insights from CDFW staff could be the subject of a companion report.

Expansion of analysis of timeline data. The researchers conducted an analysis on a *sample* of PRA data for 12 approved banks, but a full quantitative analysis of the PRA data was beyond the scope of the report due to resource constraints. Expanding the analysis could provide a greater understanding of the timeline of approvals, including the deadlines for different time intervals that CDFW is responsible for (e.g., the 30-day, 60-day, or 90-day turnaround times on the review of different documentation). Additionally, only the timeline of the initial bank approvals were analyzed. An expanded analysis could review the timeline of amendments.

Dialogue between CDFW staff and stakeholders about opportunities for change. Interviewees noted a number of ideas for reducing bottlenecks in the bank approval process. It would be fruitful to have a dialogue between CDFW staff and stakeholders to identify near- and long-term changes that could be adopted.

Appendix A. CDFW Bank Prospectus and Bank Agreement Package Review Timeline

Created from the following sources: [SB 1448](#) (2012), [Review Process Flowchart for Bank Prospectuses and Bank Agreement Packages](#) (2013), and an example of the fees form associated with a bank application for [Lazy K Mitigation Bank](#) (2022).

Days	Stage
30	Optional draft prospectus
30 [+ additional 30 days for each new version review]	Prospectus completeness determination
90	Prospectus review
30 [+ additional 30 days for each new version review]	Bank agreement package completeness determination
90	Bank agreement package review
[60]	Supplemental information requested
[90]	Unsolicited change to bank agreement package review
[60]	Review time extension

Appendix B. Additional Detail on the Approach and Themes Covered in Informational Interviews

Note: The approach for these informational interviews is based on similar research in progress at the national scale regarding federal wetland and stream mitigation banks conducted by the author, in collaboration with the Ecological Restoration Business Association. The report has not yet been published.



In determining the themes covered in the interviews, researchers reviewed previous research on “[Improving Compensatory Mitigation Project Review](#)” conducted by the Environmental Law Institute in 2020. Every theme discussed in the report was noted. Themes that recurred the most were captured and categorized into two main subject areas:

1. CDFW resources, IRT, processes
2. Bank sponsor and project

Additional information was sought on timeline data, and insights on potential economic and ecological impacts.

Rather than ask individual, specific questions in the interviews, researchers generally asked the interviewees to “tell the story” of their experience with the conservation banking approval process. After the interviewee was done, researchers reviewed the themes in the slides to ask about any themes that had not been mentioned (see Figure below). The interviews were concluded by asking the participants to identify the Top 3 things their CDFW Region is doing well to speed approval timelines, and the Top 3 things that could change to help the approval timeline.

These Top 3 answers were reviewed, themes were identified, categories were coded by two researchers, and the differences between the two researchers’ categories were reviewed and aligned. This method was undertaken to ensure that themes were categorized in a consistent manner. Top 3 themes were then summarized to create pie charts highlighting the top factors that affected the speed of approval timelines. Commentary from the interviews was summarized to provide detail on the top factors. The full transcripts of interviews were reviewed and themes that had not been noted in the Top 3 were summarized. Finally, recommendations indicated by the qualitative analysis were synthesized.

 <h3>Interview</h3> <p>Discussion of Factors Affecting Timelines, and Ecological / Economic Impacts of Delays</p> <p><i>Reminder: start recording</i></p> <ul style="list-style-type: none">• Themes we will cover<ul style="list-style-type: none">• Approval timeline data• CDFW resources, IRT, processes• Sponsor and project• Ecological / economic impacts <p><i>Improving Compensatory Mitigation Project Review (Kihlsinger et al., 2020)</i></p> <p><small>Environmental Policy Institute Center (EPIC)</small></p>	 <h3>Approval timeline data</h3> <ol style="list-style-type: none">1. Do you keep internal timeline data?<ul style="list-style-type: none">◦ By stage in process? Include whose desk it is on?2. Best professional guess average, minimum, maximum approval timeline?<ul style="list-style-type: none">◦ Cutting Green Tape - any streamlining?3. Do you have any relevant data that you would be willing to share? <p><small>Environmental Policy Institute Center (EPIC)</small></p>
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CDFW resources, IRT, processes



4. CDFW workload in region
 - Dedicated staff? Enough?
5. Project management, process schedule, deadlines, tracking
6. IRT process, decision-making, timeline
6. Standardized/consistent vs. case-by-case
 - Credit determination
 - Service area determination
 - Responsibilities required in long term management plan
 - Level of financial assurances, long-term management funding

Environmental Policy Innovation Center (EPIC)

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Sponsor and project



7. Complexity of project
 - High, medium, low; # of permits
8. Quality of site, quality of prospectus/draft instrument, experience of sponsor

Environmental Policy Innovation Center (EPIC)

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Ecological / economic impacts



9. Are you aware of ecological or economic impacts (beneficial or detrimental) of faster or slower bank approvals?
 - Gap between permit issuance and mitigation on the ground
 - Impacts to project cost
 - Timing of infrastructure improvements
 - Other?

Environmental Policy Innovation Center (EPIC)

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Top 3



- Out of all the factors discussed
 - What are the top 3 things your CDFW region is doing the best?
 - What are the top 3 things that could change that could really help the timeline (facilitate processing)?

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Appendix C. List of All Approved Conservation Banks Identified in California

Note: 'CDFW Region' is the region listed as having oversight of the bank on CDFW's [webpage](#) "Conservation and Mitigation Banks Established in California by CDFW." Banks may have service areas extending beyond the CDFW region noted.

CDFW Region	Bank Name	Status
R4	Agua Fria Conservation Bank	Sold-Out
R4	Alkali Sink Conservation Bank	Approved
R3	Alton Lane Conservation Bank	Approved
R3	Alton North Conservation Bank	Approved
R2	Antonio Mountain Ranch Mitigation Bank	Approved
R6	Barry Jones - Skunk Hollow Vernal Pool Mitigation Bank	Approved
R3	Beach Lake Mitigation Bank	Approved
R5	Brook Forest Mitigation Bank	Approved
R2	Bryte Ranch Conservation Bank	Approved
R2	Bullock Bend Mitigation Bank	Approved
R3	Burdell Ranch Mitigation Bank	Approved
R3	Burke Ranch Conservation Bank	Approved
R3	Carinalli-Todd Road Mitigation Bank	Approved
R5	Carlsbad Highlands	Closed
R5	Chiquita Canyon	Approved
R2	Clay Station Mitigation Bank	Approved
R4	Coles Levee	Approved
R2	Colusa Basin Mitigation Bank	Approved
R5	Cornerstones Lands Conservation Bank	Approved
R2	Cosumnes Floodplain Mitigation Bank	Approved
R1	Cottonwood Creek Mitigation Bank	Sold-Out
R5	Crestridge Conservation Bank	Approved
R5	Daley Ranch	Approved
R3	Desmond Mitigation Bank	Approved
R2	Dolan Ranch Conservation Bank	Approved
R4	Dutchman Creek Conservation Bank	Approved
R3	Elsie Gridley Mitigation Bank	Approved
R4	Grasslands Mitigation Bank	Approved
R3	Haera Wildlife Conservation Bank	Sold-Out
R3	Hale Mitigation Bank	Approved

CDFW Region	Bank Name	Status
R3	Hazel Mitigation Bank	Approved
R5	Heights of Pala Mesa Conservation Bank	Approved
R1	Honey Lake Wetland Mitigation Bank	Credits not for sale to the public
R3	Horn Avenue Mitigation Bank	Approved
R4	Kern Water Bank (Conservation Bank)	Approved
R3	Kimball Island Mitigation Bank	Sold-Out
R5	La Purisima Conservation Bank	Approved
R3	Liberty Island Conservation Bank	Approved
R5	Manchester Avenue Conservation Bank	Approved
R3	Margaret West Conservation Bank	Approved
R3	Martin Conservation Bank	Approved
R2	Meridian Ranch Mitigation Bank	Approved
R6	Mojave River Watershed Mitigation Bank	Approved
R3	Mountain House Conservation Bank	Approved
R3	Muzzy Ranch Conservation Bank	Approved
R5	North County Habitat Bank	Approved
R3	North Delta Fish Conservation Bank	Approved
R3	North Suisun Mitigation Bank	Approved
R3	Ohlone Preserve Conservation Bank	Approved
R3	Ohlone West Conservation Bank	Approved
R2	Orchard Creek Conservation Bank	Sold-Out
R3	Oursan Ridge Conservation Bank	Approved
R4	Palo Prieto Conservation Bank	Approved
R5	Petersen Ranch Mitigation Bank	Approved
R3	Pleasanton Ridge Conservation Bank	Approved
R3	Pope Ranch Conservation Bank	Sold-Out
R5	Ramona Grasslands Conservation Bank	Approved
R5	Rancho Jamul Wetlands Mitigation Bank	Approved
R6	Riverpark Mitigation Bank	Approved
R2	Sacramento River Ranch Wetlands Mitigation Bank	Approved
R5	San Luis Rey Mitigation Bank	Approved
R5	San Miguel Conservation Bank	Approved

CDFW Region	Bank Name	Status
R5	San Vicente Conservation Bank	Sold-Out
R5	Santa Paula Creek Preservation Bank	Sold-Out
R3	Slippery Rock Conservation Bank	Sold-Out
R2	SMUD Nature Preserve Mitigation Bank	Approved
R6	Soquel Canyon Mitigation Bank	Approved
R3	South West Santa Rosa Vernal Pool Preservation Bank (aka: Engel Preserve)	Closed
R4	Sparling Ranch Conservation Bank	Approved
R1	Stillwater Plains Mitigation Bank - Phase I	Approved
R1	Stillwater Plains Mitigation Bank - Phase II & III	Approved
R2	Sunrise Douglas Mitigation Bank (aka Anatolia Preserve)	Approved
R2	Sutter Basin Conservation Bank	Sold-Out
R3	Swift/Turner Conservation Bank - Swift Parcel	Approved
R2	Van Vleck Ranch Mitigation Bank	Approved
R5	Whelan Ranch	Closed
R3	Wikiup Wetlands Mitigation Bank	Sold-Out
R2	Wildlands (aka Sheridan and Silvergate) Mitigation Bank	Sold-Out
R3	Wright Preservation Bank	Sold-Out
R4	Antelope Valley Conservation Bank	Approved
R4	Black Mountain Conservation Bank [Not a duplicate, different species in different CDFW regions]	Approved
R6	Black Mountain Conservation Bank [Not a duplicate, different species in different CDFW regions]	Approved
R3	Brushy Creek Conservation Bank	Closed
R3	Byron Conservation Bank	Sold-Out
R6	Cajon Creek Habitat Conservation Management Area	Approved
R5	Cleveland Corridor Conservation Bank	Approved
R3	Jenny Farms Conservation Bank	Sold-Out
R3	Laguna (Carinalli) Mitigation Bank	Sold-Out
R6	Mojave Desert Tortoise Conservation Bank	Approved
R5	Pilgrim Creek Mitigation Bank	Sold-Out
R3	Springtown Natural Community Reserve	Approved
R4	West Mojave Conservation Bank	Approved

About EPIC

The Restoration Economy Center, housed in the national nonprofit Environmental Policy Innovation Center (EPIC), aims to increase the scale and speed of high-quality, equitable restoration outcomes through policy change.

The mission of EPIC is to build policies that deliver spectacular improvement in the speed and scale of conservation. EPIC focuses on a narrow set of strategies:

- Improving policies that allow private sector funding or stewardship to expand or supplant public or charitable conservation work
- Transforming government policies to focus on what matters—outcomes
- Eliminating the organizational barriers that prevent public agencies from adapting to 21st century solutions

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