

Kern Water Bank Authority

Habitat Conservation Plan/

Natural Community Conservation Plan

2012 Compliance Report and 2013 Management Plan



Bobcat (*Lynx rufus*)

May, 2013



Coyote (*Canis Latrans*)



Contents

Executive Summary	1
1.0 Introduction.....	3
2.0 Summary of 2012 Activities	7
2.1 Water Banking Operations and Maintenance Activities.....	7
2.2 Construction Activities	7
2.3 Security	8
2.3 Third Party Activities.....	8
3.0 Take, Mitigation Measures, and Avoidance and Minimization.....	12
4.0 Adaptive Management, Monitoring Programs and Studies.....	14
4.1 Adaptive Management and Vegetation Monitoring	14
4.1.1 Livestock Grazing.....	14
4.1.2 Mowing.....	15
4.1.3 Burning	16
4.1.4 Herbicide Use.....	17
4.1.5 Other Control Methods	17
4.1.6 Observation Monitoring Site Program.....	18
4.2 Ornithological Studies	19
4.3 Sensitive Species Monitoring	21
4.4 Miscellaneous Studies.....	22
5.0 Conservation Bank Report.....	24
6.0 Management Plan.....	26
6.1 Water Bank Operations.....	26
6.2 Vegetation Management	26
7.0 Viability Fund Status and Financial Report.....	28

8.0 Certification	30
9.0 Contact Information and Distribution List.....	31

Figures

Figure 1. KWB Location.....	4
Figure 2. Areas grazed by cattle in 2012.	13
Figure 3. Areas mowed in 2012.....	14
Figure 4. Areas burned in 2012.....	15
Figure 5. Areas sprayed in 2012	16
Figure 6. Conservation bank easements.....	24
Figure 7. Rainfall in the 2012 – 2013 season.....	26

Tables

Table 1. Habitat Disturbance Summary.....	8
Table 2. Conservation Bank Transaction Summary	24
Table 3. Report Distribution List.....	30

Appendices

Appendix A – Exhibit H to Implementation Agreement - Minimization of Impacts Requirements
Appendix B – 2012 Vegetation Monitoring Program Observation Monitoring Sites and Livestock Grazing Summary for the Kern Water Bank
Appendix C – Kern Water Bank Bird Survey Report: October – mid-April 2012
Appendix D – Kern Water Bank Interim Bird Survey Report: August – March 2013
Appendix E – 2012 Annual Wildlife Monitoring Report for the Kern Water Bank
Appendix F – California Legless Lizard Survey Report
Appendix G – Audubon Christmas Bird Count
Appendix H – Conservation Easement Legal Description and Preliminary Title Report
Appendix I – 2012 Conservation Bank Transactions
Appendix J – Draft Conservation Easement
Appendix K – Financial Statements

Executive Summary

The Kern Water Bank (KWB) occupies approximately 20,000 acres in the southern San Joaquin Valley. It is operated under a Habitat Conservation Plan/Natural Community Conservation Plan (HCP) which prescribes reporting and planning requirements, adaptive management methodologies, and avoidance and mitigation measures.

The KWB is well located to provide significant benefits to wildlife in the southern San Joaquin Valley. The water banking activities of the Kern Water Bank have re-established a thriving intermittent wetland habitat along the Pacific Flyway that is ideal for water birds, and the areas outside of the ponds provide excellent upland habitat for raptors, other migratory birds, terrestrial wildlife, and rare and endangered plants. An ornithological study completed during the fall and winter of 2011 indicated 66 different species of water birds were present with populations reaching 35,000 individuals. The study concluded that: “Overall, in terms of bird abundance, species diversity, acreage, location and habitat diversity, [the KWB] is one of the most important freshwater wetlands in California, especially when compared to other privately managed wetlands.”

Upland habitat has also been re-established on lands once farmed using the adaptive management methods prescribed in the HCP. These lands support many special-status species, including Tipton kangaroo rats, burrowing owls, tricolored blackbirds, and San Joaquin woolly threads. The careful implementation of adaptive management techniques has significantly improved upland habitat value – a follow-up ornithological study indicated that even when ponds are dry, the KWB is an important area of upland habitat in terms of bird abundance, species diversity, and habitat diversity. Overall, the KWB has become a very important wildlife resource of regional significance.

This report documents water banking activities in 2012, provides a management plan for 2013, summarizes Conservation Bank transactions, and describes other HCP compliance measures.



Red-tailed Hawk (*Buteo jamaicensis*)



Turkey Vulture (*Cathartes aura*)

1.0 Introduction

The Kern Water Bank (KWB) occupies approximately 20,000 acres in the southern San Joaquin Valley of California (Figure 1). The Water Bank is operated by the Kern Water Bank Authority (KWBA) under a Habitat Conservation Plan/Natural Community Conservation Plan (HCP) executed on October 2, 1997. The HCP provides for the overall management of Water Bank lands with the stated purpose of “accomplish[ing] both water conservation and environmental objectives. The primary water conservation objective is the storage of water in the aquifer during times of surplus for recovery during times of shortage. The primary environmental objective is to set aside large areas of the KWB for threatened, endangered, and sensitive species and to implement a program to protect and enhance the habitat.” The keystone of the HCP is balanced achievement of both goals, and issuance of “incidental take permits” by USFWS and “management authorizations” by CDFW applied to specific activities and use of the KWB.

Since the implementation of the HCP, KWBA has complied with its’ preservation, construction and operational, monitoring, adaptive management, and reporting requirements. The Implementation Agreement (IA) requires the submittal of an Annual Report of the previous year’s activities and a Management Plan describing the coming year’s activities. Specifically, the Annual Report is to provide the following information:¹

- 1) Summary of all activities that have taken place on the Kern Water Bank in the previous year, including construction, operation and maintenance of water recharge and water extraction facilities;
- 2) Summary of all Take that has occurred within the previous year, including Take of Covered Species and Covered Habitat;
- 3) Summary of all mitigation measures implemented in the previous year;
- 4) Results of completed studies;
- 5) Status of ongoing activities;
- 6) Results from the implementation of monitoring programs;
- 7) Results from the implementation of avoidance and minimization measures;

¹ Implementation Agreement, Section 3.3.4.

- 8) Report regarding the status of the Viability Fund;
- 9) Copy of KWBA's annual financial report; and
- 10) Certification by KWBA officer that the information in the report is "true, accurate and complete."

The Management Plan is to describe in detail the operational activities contemplated for the KWB during the next year, including construction, maintenance and repair of the infrastructure, and a description of the adaptive management activities to be carried out.²

In addition to the reporting requirement in the IA, the Conservation Bank Agreement (CBA) requires the submittal of an annual report detailing Conservation Bank transactions.

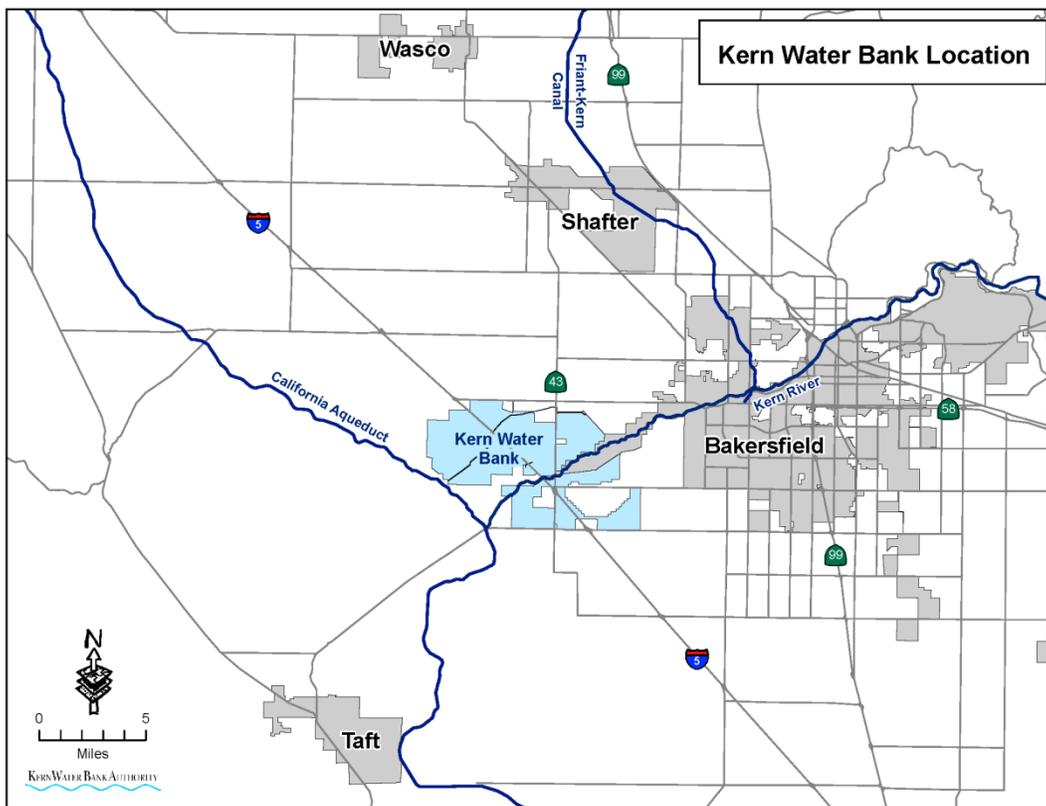


Figure 1. KWB location.

² Implementation Agreement, Section 3.3.5.

This report is intended to meet the reporting requirements of the IA and CBA. It consists of eight sections:

- Section 1 is this introduction, which reviews the objectives of the HCP and describes the basis for the report;
- Section 2 includes a summary of all activities completed in 2012 and the status of ongoing activities;
- Section 3 provides a summary of all take, a summary of mitigation measures implemented during the year, and the results of avoidance and minimization measures;
- Section 4 discusses adaptive management and the results of monitoring programs and completed studies;
- Section 5 is the Conservation Bank Report;
- Section 6 is the Management Plan;
- Section 7 discusses the Viability Fund and the annual financial report; and
- Section 8 is the certification regarding the accuracy of the report.



Common Raven (*Corvus corax*)



Greater Roadrunner (*Geococcyx californianus*)



Ring-necked Pheasant (*Phasianus colchicus*)

2.0 Summary of 2012 Activities

Activities in 2012 were primarily focused on recovery operations, maintenance and the replacement of three wells. Security measures included daily patrols. These activities are discussed below.

2.1 Water Banking Operations and Maintenance Activities

Recovery operations were conducted March through June and December 2012. During that time, approximately 107,000 acre-feet of groundwater was recovered. Maintenance activities focused on supporting recovery operations. Repairing and maintaining wells and clearing obstructions from conveyance facilities occurred throughout the year. These activities were conducted on existing facilities and none resulted in new habitat disturbance.

2.2 Construction Activities

Construction activities completed by KWBA in 2012 included:

- Drilling three replacement wells;
- Installing weir boxes;
- Installing fencing along the KWB Canal;
- Graveling roads; and
- Repairing well pumps.

Drilling the three replacement wells resulted in habitat disturbance. The rest of the activities were conducted on existing facilities on previously disturbed lands. The amount of additional disturbance is summarized on Table 1.

In addition to activities conducted by the KWBA, West Kern Water District finalized the installation of a pipeline across the western portion of the KWB to connect their new northwest well field with their existing well field. Much of the pipeline alignment is under existing roads and previously disturbed lands in the Farming Sector. Portions of the alignment are within Compatible Habitat. The pipeline provides significant benefits to KWB participants as it helps mitigate pumping impacts in the southern part of the KWB. As such, habitat disturbance is being mitigated with KWBA mitigation credits, also included in Table 1.

Table 1. Habitat Disturbance Summary.

<i>Recharge Basins</i>		
	HCP Estimated Disturbance	Actual Disturbance as of 12/31/12
Recharge Basins ¹	5,900	4,853
<i>Permanently Disturbed Areas</i>		
	HCP Estimated Disturbance	Actual Disturbance as of 12/31/12
Recovery Facilities	66	38
Conveyance Facilities	397	195
Kern River Reverse Flow	18	0
Total	481	233
<i>Temporary Disturbed Areas</i>		
	HCP Estimated Disturbance	Current Disturbance as of 12/31/12
Canal Construction	73	0
Pipelines	218	35
Total	291	35

¹ Does not include emergency basins in the farming area.

The temporary disturbance which resulted from the installation of the West Kern pipeline is rapidly being replaced with habitat, and soon the pipeline alignment will be indistinguishable from adjoining lands.

2.3 Security

Security patrols are conducted daily on KWB lands. The purpose of the patrols is to protect the property from trespassers, poachers, and thieves. Copper thefts were a significant problem in 2012. Seven wells and one pump station site were vandalized with repair costs averaging about \$4,200 per site. In response to this escalating problem KWBA extended patrol times and installed security cameras at key locations. Other more minor security issues included illegal dumping and trespassing.

2.3 Third Party Activities

Significant third party activities that occurred on the property included the removal of oilfield sumps in the River Area in Section 12 by the California Department of Conservation, Division of

Oil, Gas, and Geothermal Resources (DOGGR). KWBA supported the project by contracting with South Valley Biology Consulting LLC (SVB) to consult with DOGGR on endangered species issues. Other third party activities included:

- East Sales Gas Line Replacement Project by Occidental of Elk Hills in the southwest corner of Section 34, T30S, R25E;
- Remediation of the 211 Pipeline by Inergy Services;
- Miscellaneous well maintenance activities by Central Resources; and
- Pole replacements by PG&E.



Hummingbird Nestlings



Common Buckeye (*Junonia coenia*)



Golden Paper Wasp (*Polistes aurifer*)

3.0 Take, Mitigation Measures, and Avoidance and Minimization

No take of covered species occurred in 2012. As discussed above, the well replacement project and finalizing the installation of the West Kern Pipeline resulted in take of covered habitat. The amount of disturbance that occurred is listed in Table 1. Much of this disturbance is temporary, and the land surface is expected to revert back to habitat in the near future.

Mitigation measures for the minimization of impacts are prescribed in the IA³. They include: the use of a biological monitor, specific construction practices, practices for ongoing activities, notification requirements regarding listed animals, and special requirements for actions which might threaten fully protected species. All of the requirements are provided in Appendix A for reference.

The specific measures implemented in 2012 (and more fully described in Appendix A) for the activities described in Section 2.0 included:

- Use of a biological monitor prior to construction and maintenance activities that would disturb habitat;
- Oversight of construction and maintenance activities by KWBA personnel;
- Delineation of disturbance areas prior and during construction;
- Construction site review to ensure that no animals including kit foxes are trapped in pipes, culverts, or other like structures;
- Employee orientation in which endangered species concerns were explained;
- Equipment storage in non-habitat areas;
- Limiting traffic to existing roads and speeds of no more than 25 mph;
- Proper disposal of food-related trash and scraps;
- Prohibiting dogs (except for hunting) from the property; and
- Use of herbicides only in accordance with the Vegetation Management Plan.

³ Implementation Agreement, Exhibit H, Minimization of Impacts Requirements.



Red-shouldered Hawk (*Buteo lineatus*)



California Quail (*Callipepla californica*)

4.0 Adaptive Management, Monitoring Programs and Studies

The HCP's Vegetation Management Plan (VMP) describes vegetation management and restoration practices for the long-term adaptive habitat management and enhancement of Kern Water Bank lands. The priorities of the adaptive management program are protection of sensitive habitat areas and control of exotic pest plants; the primary tools of the program are livestock grazing, mowing, and burning.

Section IV.B.1. of the HCP requires rare plant surveys and monitoring of San Joaquin kit fox and Tipton kangaroo rat populations. The plant surveys are to be conducted at least every other year; the population monitoring is to be conducted annually. KWBA has also undertaken additional monitoring and surveys, including an ongoing ornithological study and the development of an observation monitoring grid. These topics are discussed in more detail below.

4.1 Adaptive Management and Vegetation Monitoring

The primary tools available under the VMP, livestock grazing, mowing, and prescribed burning, are used to varying degrees in response to ever-changing conditions on KWB lands.

Herbicide use for exotic pest plant control is also provided for in the VMP. SVB oversees much of the adaptive management measures undertaken throughout the year on the KWB and also documents conditions at the Observation Monitoring Sites (see report in Appendix B).

4.1.1 Livestock Grazing

Although precipitation in the winter of 2011-2012 was below normal, late rains provided favorable conditions for tumbleweed growth. In addition, drying recharge ponds provided ample moisture for significant plant growth in pond bottoms. As such, cattle grazing continued throughout the year with nearly 17,500 acres being grazed at some time (Figure 2). The primary goal of the grazing program is to minimize tumbleweeds and manage excessive growth.

Tumbleweeds are an exotic pest which crowd out native species and create significant maintenance problems after wind storms. Cattle will graze on young palatable plants and in some cases trample older plants helping to minimize this problem.

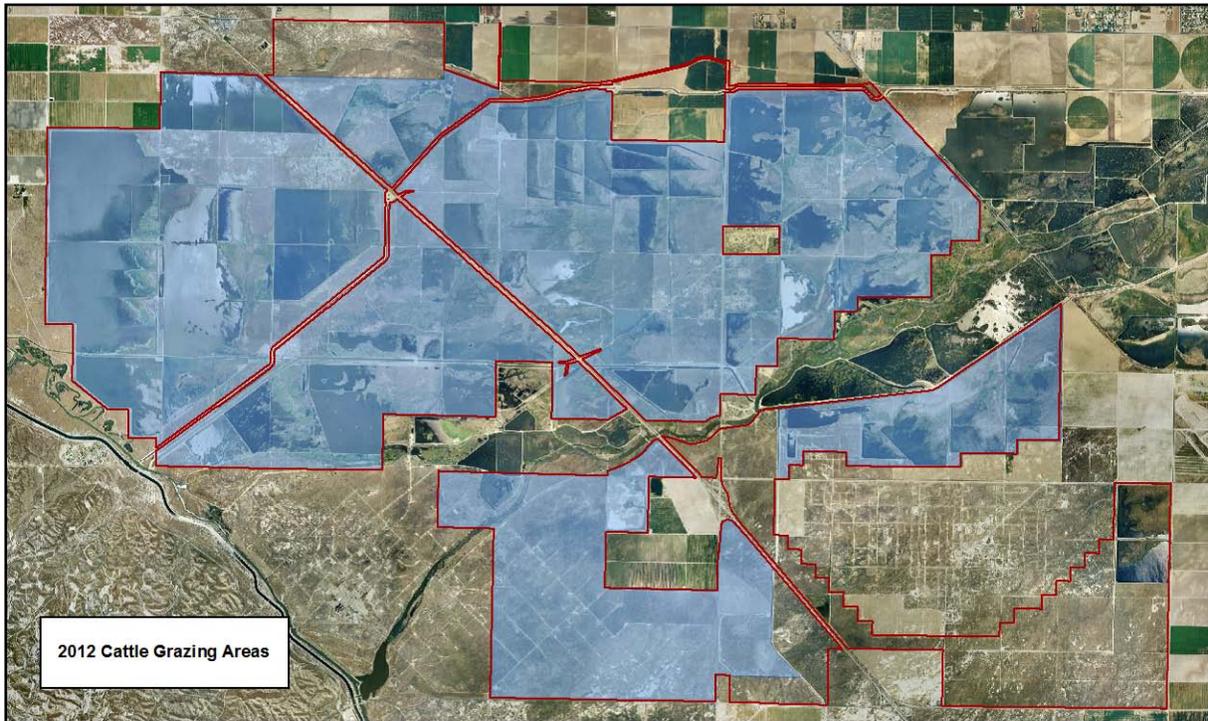


Figure 2. Areas grazed by cattle in 2012.

Excessive growth of other plants can exacerbate mosquito problems and diminish habitat value for some species. Mosquitos prefer to breed in vegetation choked portions of ponds rather than in open water. Heavy vegetation can also make it difficult to reach areas for abatement purposes. Grazing helps to minimize vegetation in ponds both before recharge events and along pond margins during recharge events, thereby diminishing areas favorable to mosquito breeding and providing access for abatement.

Heavy vegetation can also diminish habitat value for many species. Long-term studies of carefully managed grazing programs have indicated reducing herbaceous cover to about 500 lbs per acre Residual Dry Matter (RDM) is beneficial to many native vertebrate species. This RDM value has been an informal goal of the grazing program on the KWB.

4.1.2 Mowing

Mowing was conducted primarily along existing roads and canals to manage plant encroachment (Figure 3). Canal mowing was only used sparingly so that plant cover remained in place during



Figure 3. Areas mowed in 2012.

nesting seasons and so that cover was available for animals using the canals as a water source. Limited mowing was also conducted in the Strand area in Sections 9 and 12 and the West Area in Section 24. The Section 9 and 12 mowing was to remove large drifts of tumbleweeds; the mowing in Section 24 was to reduce thick stands of dead cattails. The drifts of dead tumbleweeds prevent the germination of desirable native plants and can create significant maintenance issues when they blow into canals. The dead cattails can provide breeding for mosquitoes when ponds are filled. Approximately 2,000 acres were mowed in 2012.

4.1.3 Burning

Burning (under a permit from the San Joaquin Valley Unified Air Pollution Control District) was conducted to eliminate drifts of dead tumbleweeds in the areas shown in Figure 4. As described above, the dead tumbleweeds crowd out desirable native plants and create significant maintenance issues. They can also create fire hazards when they pile up along fences near public highways. Approximately 1,340 acres were burned in 2012.

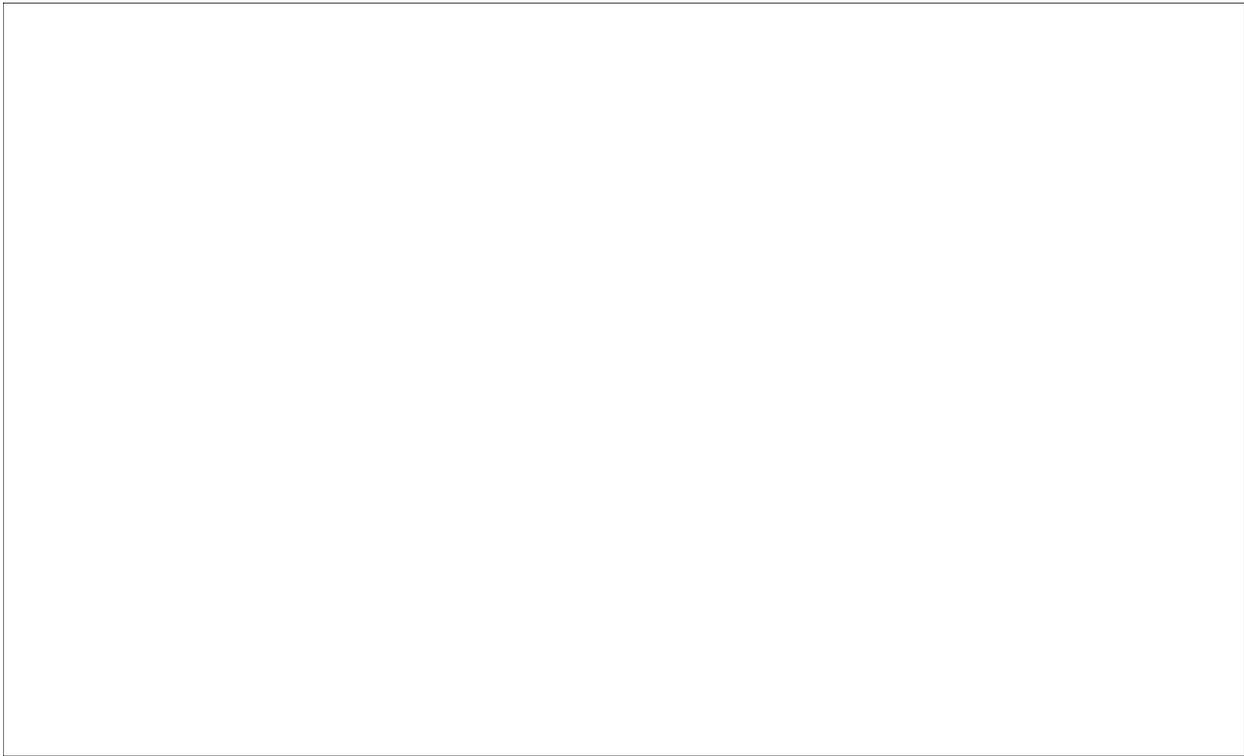


Figure 4. Areas burned in 2012.

4.1.4 Herbicide Use

Herbicides (Diuron and Round-Up) were used to control weeds at well sites, along roads, and at water control structures (Figure 5).

4.1.5 Other Control Methods

Yellow starthistle was discovered on a few acres in the northwest corner of Section 12, T30S/R24E. This plant is a rapid colonizer which rapidly depletes soil moisture for desirable native species.⁴ Shortly after the plants were discovered, they were removed by hand and burned. This area will be surveyed in the future for continued infestations and treated appropriately.

⁴ UC ANR Publication 7402.

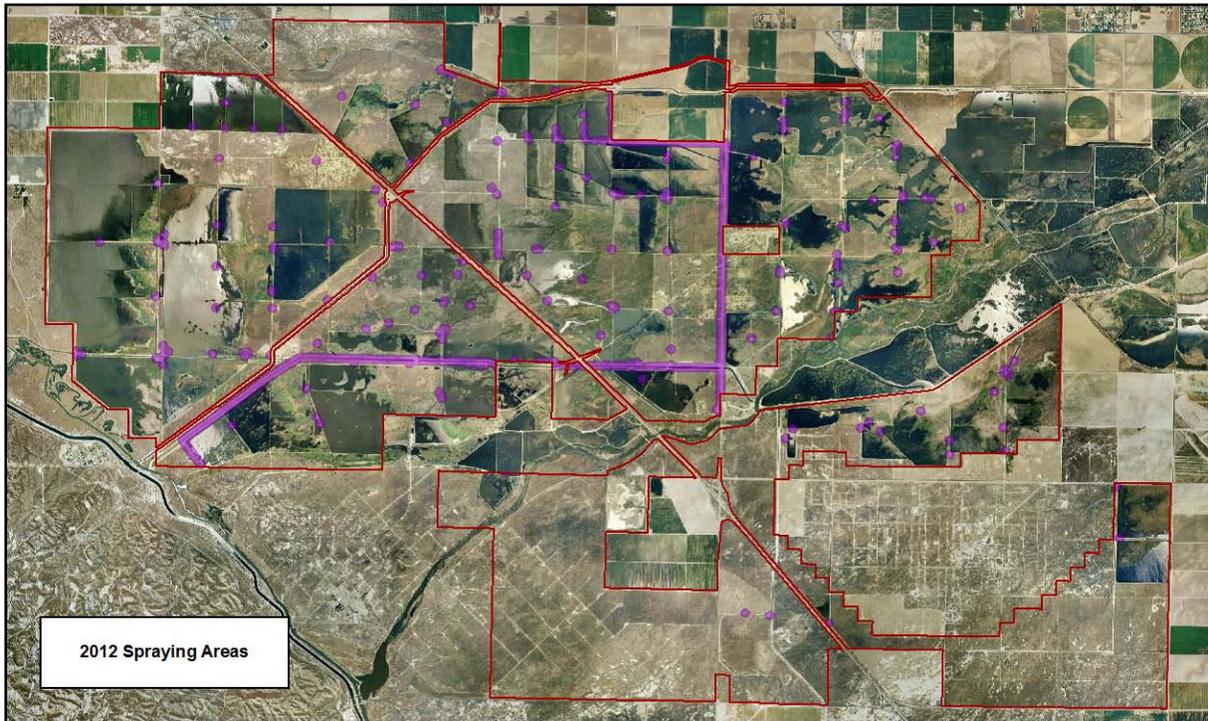


Figure 5. Areas sprayed in 2012.

4.1.6 Observation Monitoring Site Program

In 1999, KWBA implemented an observation monitoring program. Eight sites, referred to as Observation Monitoring Sites (OMS) and representing different aspects of KWB habitat (e.g., canal, ditch, pond, uplands, conservation bank), were selected for surveys and the development of photographic records. Quarterly, staff and/or consultants have observed each site and collected data on weather conditions, general vegetation conditions, and any other pertinent information. Also, photographs were taken, looking north, east, south, and west, to be compared with prior and future images to identify changes. KWBA will continue the quarterly OMS program, building a photographic record and informational database, which will help provide insight for adaptive management of different sectors of the KWB. The 2012 OMS report is provided in Appendix B.

4.2 Ornithological Studies

The Kern Water Bank lands “supports a wealth of native wildlife, especially an abundance of water birds and raptors attracted to the recharge ponds and/or the upland habitats.”⁵ With respect to the recharge ponds, they provide tremendous benefits to water birds. Prior to the development of Kern County’s water infrastructure, much of the area was intermittently flooded by the Kern River and other minor streams. This flooding supported extensive wetlands, marshes, and Kern and Buena Vista Lakes, all along the Pacific Flyway. Numerous canals and Isabella Dam were constructed during the 20th century to capture and regulate waters for beneficial uses. However, this redirection also resulted in a reduction in wetland and marsh habitats by as much as 90%.⁶ The development of the Kern Water Bank (and other banking projects in Kern County) has re-established thousands of acres of wetlands in the region and provide much-needed habitat for migrating water birds. The KWBA recognized the importance of this re-introduction of wetlands in the region, and has funded ornithological studies to document this benefit.

Sterling Wildlife Biology was contracted to complete bird surveys from October 2011 through mid-April 2012 (see report in Appendix C). The water bird surveys were conducted by observing recharge ponds, upland bird surveys were conducted by walking transects at specific locations, and raptor surveys were conducted by recording sightings along roads. The results can be summarized as follows:

- For the October through February period, overall water bird numbers ranged from approximately 20,000 to 35,000 individuals. Numbers declined after this as recharge operations ceased in early February 2012;
- 66 native water bird species were identified;
- Average species richness (number of species per pond) was 11 for the October 2011 through mid-February 2012 period;
- At their maximums, the grebe population nearly reached 900 birds, the gull population exceeded 2,100 birds, dabbling ducks nearly reached 15,000 birds, diving ducks exceeded 5,500 birds, herons and egrets exceeded 1,400 birds, and shorebirds reached

⁵ Sterling Wildlife Biology, Kern Water Bank, Interim Bird Survey Report: August – March 2013, April, 2013

⁶ Hundley, Norris, Jr., *The Great Thirst, Californians and Water, A History*, University of California Press, Berkley, CA.

nearly 10,000 birds;

- For individual species, at their maximums, the American coot population exceeded 12,000 birds, the white-faced ibis population exceeded 3,300 birds, the double-crested cormorant population exceeded 1,000 birds, and the American white pelican population reached nearly 3,000 birds.
- Raptors identified during the surveys include American kestrels, Cooper's hawks, ferruginous hawks, a golden eagle, northern harriers, osprey, peregrine falcons, prairie falcons, red-tailed hawks, red-shouldered hawks, sharp-shinned hawks, and white-tailed kites. Several Swainson's hawks were also identified on a late April 2012 survey.
- Rare birds included Barrow's goldeneye (the third documented sighting in Kern County), Greater Scaup (the only sightings in Kern County for 2012), Cassin's kingbird, and purple martin.

Sterling concludes that: "Overall, in terms of bird abundance, species diversity, acreage, location and habitat diversity, [the KWB] is one of the most important freshwater wetlands in California, especially when compared to other privately managed wetlands." The full report is located in Appendix C.

Further ornithological studies were initiated in August 2012 to document bird use of the project area absent recharge activities during the winter, spring migration and the start of the breeding seasons. Upland bird surveys were conducted on 10 fixed transects, whereas raptor surveys were conducted by driving most water bank roads. An interim report is provided in Appendix D. A detailed report will be published in July, 2013. The results of the survey through March 2013 can be summarized as follows:

- A comprehensive survey for raptors and loggerhead shrikes (*Lanius ludovicianus*) on the entire project area indicated the presence of high numbers of raptors including red-tailed hawks (*Buteo jamaicensis*) and loggerhead shrikes;
- The surveys documented fourteen species of raptors using upland habitats, including: American kestrels, Cooper's hawks, a ferruginous hawk, merlins, northern harriers, osprey, a peregrine falcon, prairie falcons, a red-shouldered hawk, red-tailed hawks,

- sharp-shinned hawks, Swainson's hawks, turkey vultures, and white-tailed kites;
- Overall numbers of raptors varied through survey period, with the highest number identified in early November 2012 at 103. By March, 2013, the total number had declined to 42.
 - Loggerhead shrike populations were relatively stable throughout the survey period ranging from 45 to 64 individuals; and
 - Rare birds identified during the surveys included a black-throated sparrow (a desert species very rare in the Central Valley), a fall migrant clay-colored sparrow (a midwestern species that is rare anywhere in California and especially in the Central Valley from which there are fewer than ten documented records), eight Brewer's sparrows which were wintering on the water bank. There are very few documented records of this Great Basin and desert species during winter months in the Central Valley.

Sterling states that: "The Kern Water Bank has exceptional habitats for birds and many rare birds will likely be found and documented in the future dependent upon survey efforts... .. The bird use of property managed by the Kern Water Bank Authority is clearly very high in accordance to the large acreages of upland habitats. Overall, in terms of bird abundance, species diversity, acreage, location and habitat diversity, it is an important area of upland habitat, especially when compared to surrounding agricultural lands."

4.3 Sensitive Species Monitoring

As discussed above, the HCP requires rare plant surveys and the monitoring of San Joaquin kit fox and Tipton kangaroo rat populations. South Valley Biology Consulting LLC (SVB) was contracted to conduct these activities in 2012 (see report in Appendix E). Some key points from their report are presented below.

SVB utilized three methods to complete sensitive species monitoring:

- Nighttime spotlighting surveys to determine San Joaquin kit fox populations;
- Small mammal trapping to determine Tipton kangaroo rat populations; and
- Site surveys for special-status plant species.

Although kit foxes are observed occasionally on the KWB, none were identified during the spotlighting surveys. Other mammals identified during the surveys included: 22 coyotes, 3 bobcats, 2 raccoons, 1 striped skunk, 135 desert cottontails, 268 black-tailed jackrabbits, and 21 kangaroo rats. Raptors included 41 barn owls, 4 great-horned owls, and 1 red-tailed hawk. SVB suggests the abundance of coyotes may be suppressing the kit fox populations.

Small mammal trapping was conducted on two grids. One grid is located north of the Kern River in Sensitive Habitat (the “Strand” grid) and the other is located south of the Kern River in the Conservation Bank Area (the “Southeast” grid). Two Tipton kangaroo rats were captured at the northern grid and 10 were captured at the southern grid. Other animals captured during the trapping included Heermann’s kangaroo rats, San Joaquin grasshopper mice, San Joaquin pocket mice and deer mice. Although the number of individual Tipton kangaroo rats are typically low at the northern grid, captures over many years suggest a small but stable population is present. The southern grid is new, so population trends cannot be deduced. However, the habitat is ideal for Tipton kangaroo rats, so positive captures are expected in future trapping events. With respect to Tipton kangaroo rats, SVB concludes that: “the Kern Water Bank Conservation Lands provide several areas of occupied Tipton kangaroo rat habitat. These areas are key in helping to protect and maintain this species both locally and cumulatively on a much larger scale. As identified in USFWS (1998), one key element of the recovery strategy for the Tipton kangaroo rat is to protect large blocks of habitat for the species. The KWB should be considered an important component of this recovery strategy.”

Special-status plants identified on the KWB have included San Joaquin woolly threads (federally endangered), Hoover’s woolly star, recurved larkspur, slough thistle, and Horn’s milk vetch. No San Joaquin woolly threads, Hoover’s woolly star, recurved larkspur, or slough thistle were observed in 2012. Conversely, populations of Horn’s milk vetch were high.

4.4 Miscellaneous Studies

The local chapter of the Audubon Society conducted their annual Christmas Bird Count in December 2012. They counted 118 species and 7,663 individuals. The results of their survey are presented on Appendix F.

Dr. Ted Pappenfuss of the University of California, Berkeley conducted surveys for the California legless lizard (*Anniella pulchra*) on the water bank. Cover boards were placed in December 2012 and checked in March 2013, and three lizards were found at three different sites. Dr. Pappenfuss stated: “I am impressed with the excellent habitat for this California Department of Fish & Wildlife Species of Special Concern.” His report is included in Appendix G.



California legless lizard (*Anniella pulchra*)

5.0 Conservation Bank Report

The Kern Water Bank Authority Conservation Bank was established concurrently with the HCP by the Conservation Bank Agreement (CBA). The CBA provides for 3,267 Conservation Credits (Credits) representing one-acre each. These Credits are provided by the KWBA as mitigation for impacts to Covered Species in the Permit Area as authorized by USFWS and CDFW. The Agreement requires that KWBA file an Annual Report to the CDFW Agencies each year documenting:

- The number of Credits available, sold, used, eliminated, and suspended, both cumulatively and in the preceding year;
- The name and address of each party purchasing Credits and the number of Credits that were sold, optioned, or transferred in the preceding year;
- A map showing the portion of the KWB Conservation Bank for which KWBA has delivered a Conservation Easement to the Department, and the portion of the KWB Conservation Bank unencumbered by a Conservation Easement; and
- Copies of the annual reports submitted by the Included Parties.

Annual conservation credit transactions as required by the agreement are summarized in Table 3. In 2012, the KWBA provided 11 conservation credits for two different projects; to date 1,232 of the 3,267 credits have been sold. These transactions provided \$4,125 (\$375 per credit) to the Endowment Fund held by CDFW.⁷

Figure 6 shows the portions of the Conservation Bank encumbered by Conservation Easements and the proposed Conservation Easement for 2012 transactions. Preliminary title reports for the proposed parcels are included in Appendix H. Pertinent correspondence related to Conservation Bank transactions, including the names and addresses of parties purchasing credits, is provided in Appendix I. A draft conservation easement is provided in Appendix J.

⁷ Conservation Bank Agreement, Section 6.

Table 2. Conservation Bank Transaction Summary.

Certificate Number	Recipient	Project	# of Credits
2012-01	Maralex Resources	NW McKittrick O&G Exploration	4
2012-02	West Kern WD	South Solar Project	7
		Total	11

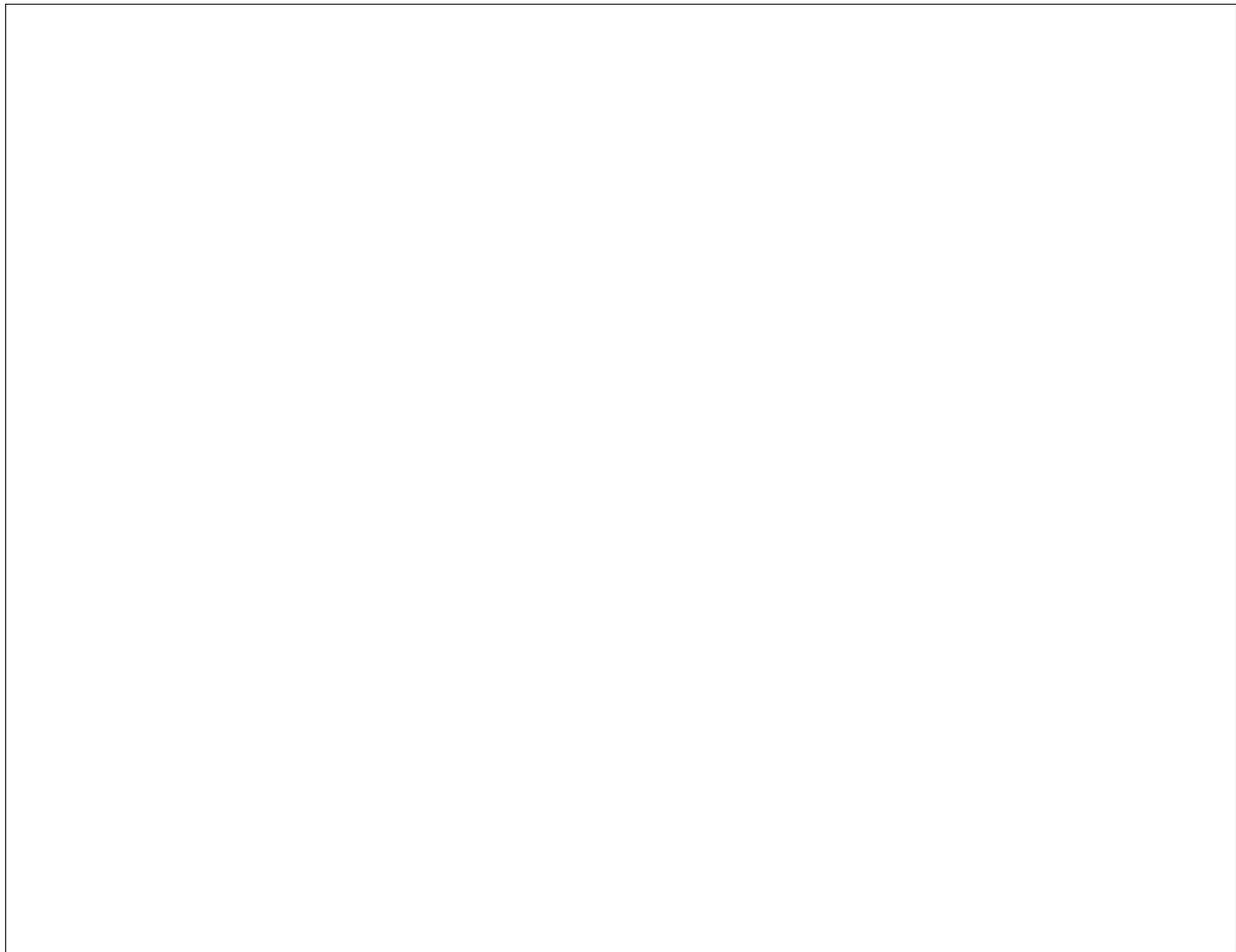


Figure 6. Conservation bank easements. The proposed easement for 2012 is in Section 28 and 32, T30S/R26E.

6.0 Management Plan

The Management Plan is to describe the operational activities contemplated for the Kern Water Bank during the next year, including construction, maintenance and repair of the infrastructure, and a description of the adaptive management activities to be carried out.⁸

6.1 Water Bank Operations

Unfortunately, 2013 has been very dry to date. As a result, recovery operations began in December 2012 and are expected to continue through early July, and may restart in the Fall. Recovery operations entail routine well maintenance, canal maintenance, and well repairs as needed. All of these activities are conducted on existing facilities, and no new habitat disturbance is contemplated.

In addition to the activities associated with recovery operations, the KWBA is contemplating several maintenance projects in the near future. They may include:

- Installation of fencing in the River and James areas
- Pipeline installation on recently replaced wells;
- Pipeline replacement;
- Traveling trash screen installation;
- Recharge basin maintenance; and
- Weir box installation.

In all cases, the appropriate Minimization of Impacts Requirements described in detail in Appendix A will be carried out.

In addition to water banking activities, it is anticipated that Plains Pipeline will be installing a pipeline across the water bank in Sections 4,9,16, and 21, T30S/R25E.

6.2 Vegetation Management

The winter of 2012/2013 was very dry and punctuated by several frosts (Figure . Precipitation in

⁸ Implementation Agreement, Section 3.3.5.

spring 2013 was late, and not particularly abundant. Experience has shown that these conditions are, unfortunately, very favorable to tumbleweeds. In response, KWBA expects to graze most of the KWB lands again in 2013. Mowing, burning (when permissible), and herbicide applications will also be used where appropriate.



Figure 7. Rainfall in the 2012-2013 season.

7.0 Viability Fund Status and Financial Report

The IA⁹ establishes the Kern Water Bank Species Viability fund in the amount of \$50,000. The County of Kern Auditor-Controller's Office reported that, as of December 28, 2012, the balance in the Viability Fund was \$52,529.42. This sum represents the principal balance of \$50,000 plus \$2,529.42 in accrued interest.

A copy of the "Kern Water Bank Authority Financial Statements - December 31, 2011 and 2012" is included in Appendix K of this report. The independent accounting firms of Barbich Hooper, King, Dill & Hoffman and Brown Armstrong Accountancy Corporation prepared the financial statements and auditor's report, respectively. Total assets on December 31, 2012 were \$68,256,041, current liabilities were \$10,592,082, long-term liabilities (debt) were \$21,271,293, and net asset value was \$39,010,232. The change in net assets from 2011 was -\$43,424.



Bobcat (*Lynx rufus*) on the hunt

⁹ Implementation Agreement, Section 3.3.2



Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*)



Western Rattlesnake (*Crotalus viridis*)

8.0 Certification

Under penalty of law, I certify that, to the best of my knowledge, after appropriate inquiries of all relevant persons involved in the preparation of this report, the information submitted is true, accurate and complete.

Kern Water Bank Authority

By: _____

William D. Phillimore,
Chairman, Board of Directors

Date: June 10, 2013



Cinnamon Teal (*Anas cyanoptera*)

9.0 Contact Information and Distribution List

The contact person for the KWBA is:

Jonathan Parker
 Kern Water Bank Authority
 1620 Mill Rock Way, Suite 500
 Bakersfield, CA 93311
 661-398-4900

Table 3. Report Distribution List

Binder	Download	Name	Address
1	1	Thomas Leeman San Joaquin Branch Chief	USFWS 2800 Cottage Way #W2605 Sacramento CA 95825 Thomas_Leeman@fws.gov
0	1	Hillary Swarts USFWS	hilary_swarts@fws.gov
0	1	Jeffrey Single Regional Manager - CDFW	jsingle@dfg.ca.gov
1	1	Reagan O'Leary	CDFW 1234 East Shaw Avenue Fresno, CA 93710 roleary@dfg.ca.gov
0	1	Annee Ferranti	aferranti@wildlife.ca.gov
0	1	Linda Connolly CDFW	lconnolly@dfg.ca.gov
0	1	Ernest Conant	Young Wooldridge
0	1	Robert Thornton	Nossaman, Guthner, Knox, Elliott rthornton@nossaman.com
0	1	Steve Jackson	Dudley Ridge Water District
0	1	David Beard	KCWA Improvement District 4
0	1	Wilmar Boschman	Semitropic Water Storage District
0	1	Dennis Atkinson	Tejon-Castac Water District
0	1	William Phillimore	Westside Mutual Water Co.
0	1	Scott Hamilton	Westside Mutual Water Co.
0	1	Robert Kunde	Wheeler-Ridge Maricopa Water Storage District
0	1	William Taube	Wheeler-Ridge Maricopa Water Storage District
1	1	Jim Jones	South Valley Biology