The 2014 Lesser Prairie-Chicken Range-wide Conservation Plan Annual Progress Report

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RECOMMENDED CITATION

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Photo Credit Grant Beauprez

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EXECUTIVE SUMMARY

In 2014, a new era in wildlife conservation was ushered in with the implementation of the Lesser Prairie-Chicken (LPC) Range-wide Conservation Plan (Van Pelt 2013; RWP). The RWP describes a locally controlled and innovative approach for maintaining state authority to conserve the LPC, as allowed under the Endangered Species Act (ESA).

The purpose of the RWP is to develop a conservation strategy for the species that identifies, coordinates, and commits to the implementation of an effort that ensures the improvement and long-term persistence into the foreseeable future (50 years) for the LPC throughout its current or expanded range. More specifically, this RWP:

1. Identifies range-wide and sub-population goals for LPC, the range-wide benchmark being a 10 year average of 67,000 birds.
2. Identifies desired habitat amounts and conditions to achieve the population goal within the first 10-year timeframe.
3. Uses a decision support tool (CHAT) identifying focal areas and connectivity zones where LPC conservation actions will be emphasized to produce the habitat conditions required to expand and sustain the species.
4. Enhances programs and cooperative efforts to encourage and expand voluntary landowner incentives and practices to produce the desired habitat conditions.
5. Promotes agreements designed to avoid and minimize impacts to LPC from various development activities and where avoidance is not possible, mitigate impacts.
6. Establishes a mitigation framework to be used by any entity and administered by WAFWA that will establish development agreements and when unavoidable impacts occur, to compensate for these impacts through off-site mitigation actions.
7. Identifies research needs and implements monitoring.
8. Develops an adaptive management framework that will incorporate monitoring and new information into future adjustments to maximize conservation benefits to LPC.
9. Addresses input and suggestions from agencies, organizations, landowners, industries, other stakeholders, and the general public on the conservation plan for LPC.

During the reporting period, March 1, 2014-February 28, 2015, significant progress was achieved across all nine elements of the LPC conservation strategy. More specifically:

1. The annual aerial survey used to monitor progress toward the population goals was conducted between March and May 2014. In 2014, the estimated population size of 22,414 was a 20% increase in the population size relative to 2013. The estimated increase of 3,667 LPC was not statistically significant at the 80% confidence level (p-value > 0.2), however the estimated increase of 3,199 LPC in the Mixed Grass Prairie Region (MGPR) of NE Texas, NW Oklahoma, and S Central Kansas was statistically significant at the 80% confidence level (p-value < 0.2). Despite the range-wide increase, there was a decrease of 1,540 LPC in the Sand Sagebrush Prairie Region (SSPR) of SE Colorado,

SW Kansas, and Oklahoma Panhandle was statistically significant at the 90% confidence level (p-value < 0.1).

2. We finalized six landowner contracts during this reporting period encompassing 37,767 acres. Conservation practices incorporated into the agreements included grazing plans with a 33% total utilization rate, mechanical tree removal, interseeding of planted grass stands, and chemical treatment of shinnery oak. We have paid landowners $117,357 in sign-up incentives and anticipate paying them another $357,042 during year 1 for implementation of conservation practices.
3. A decision support tool, the Southern Great Plains Crucial Habitat Assessment Tool (CHAT) was used to identify focal areas and connectivity zones where LPC conservation actions will be emphasized to produce the habitat conditions required to expand and sustain the species. An enhancement to the CHAT, a project estimator tool, was incorporated into the system to encourage pre-planning for development to reduce impacts to LPC. As a result of these enhancements and integration into the mitigation program, the CHAT on average has been receiving 87,570 hits per week since February 1, 2015.
4. We enhanced programs and cooperative efforts to encourage and expand voluntary landowner incentives and practices to produce the desired habitat conditions. In 2014, CHAT elements for LPC were incorporated into the Natural Resource Conservation Services (NRCS) ranking criteria for projects being considered under the Lesser Prairie Chicken Initiative (LPCI). Using the CHAT targeting tool, 77 LPCI applications were evaluated and 23 projects were awarded in FY2014. These awards included 181,542 acres of grazing and 28,340 acres of brush management. Through the LPCI program, landowners were paid approximately $2,935,894 for implementing conservation activities benefiting LPCs during 2014.
5. We authorized 733 project agreements designed to avoid and minimize impacts to LPC from various development activities, and where avoidance was not possible, mitigated impacts. The effects of the RWP mitigation framework on industry siting in terms of avoidance and minimization are evidenced by:
    a. A 23% increase in oil and gas project co-location and clustering (65 % overlap) compared to the pre-RWP period, and a corresponding decrease in the amount of habitat impacted by those developments, which demonstrates that participants are actively selecting areas with prior development for new project siting.
    b. A 54% overlap rate for new developments with pre-existing impacts across all industries.
    c. An average HEG score for new developments across all ecoregions of 0.23, which demonstrates that participants are actively selecting areas with low habitat quality.
6. WAFWA established and administered a mitigation framework to be used by any entity. We established enrollment and development agreements with 174 companies and collected $45,877,823in enrollment and impact fees for unavoidable impacts for off-site mitigation actions. The different industries participating in the RWP included oil and gas, pipeline, electric, wind energy, and telecommunications.

7. We coordinated with LPC States to identify research needs and implemented elements of the RWP monitoring. Research activities included examining disproportionate declines in LPC populations, habitat use, survivability, nest success, recruitment and evaluating the benefits of prescribed grazing on LPC demography.
8. We developed an adaptive management framework incorporating monitoring and new information to make adjustments to maximize conservation benefits to LPC. The Lesser Prairie Chicken Initiative Council (LPCIC) adjusted the timing of surveys, personnel options, burial of power lines, and impact buffers
9. Through the Lesser Prairie Chicken Advisory Committee (LPCAC), representatives from industry, non-governmental agencies, as well as state and federal agencies addressed input and suggestions from agencies, organizations, landowners, industries, other stakeholders and the general public on the conservation plan for the LPC.

Overall, the RWP allowed for economic development to continue in a seamless manner by providing an efficient mechanism to voluntarily conserve the LPC and/or comply with the ESA. Without the RWP, there could have been significant regulatory delays in obtaining take permits, disruption to economic activity in an area vital to state and national interests, and little incentive to conserve LPC habitat on private lands. The RWP encourages participants to enact proactive and voluntary conservation activities promoting LPC conservation. Implementation was tracked through a committee structure using adaptive management. Goals and objectives associated with population levels, habitat conservation objectives, and funding streams were conducted by the adaptive management process.

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Western Association of Fish and Wildlife Agencies

INTRODUCTION

This document is the 2014 progress report for the comprehensive RWP for the lesser prairie-chicken (*Tympanuchus pallidicinctus*; hereafter LPC) title *The Lesser Prairie-Chicken (LPC) Range-wide Conservation Plan* (Van Pelt 2013). The goal of the RWP is to conserve the LPC for future generations while facilitating continued and uninterrupted economic activity throughout the entire five-state LPC range (See Figure 1). The RWP identifies a two-pronged strategy for LPC conservation: (1) the coordinated implementation of incentive-based landowner programs, and (2) the implementation of a mitigation framework which reduces threats and provides resources for off-site conservation.

If conservation of the LPC is to show long-term success, a strong and mutually respective partnership will be necessary between the state, federal, non-governmental agencies, and private landowners. The foundation of that partnership is embedded under Section 6 of the Endangered Species Act. This section clearly directs the U.S. Fish and Wildlife Service (USFWS) to cooperate to the maximum extent practicable with state fish and wildlife agencies, and provides the authority for the USFWS to carry that partnership forward. By coming to agreement on the RWP, the LPC now has a solid road map for conservation.

BACKGROUND

Because of declining population numbers of LPC, reduction in range relative to their historical occurrence, and presumed increasing scope and intensity of identified impacts, the USFWS was petitioned to list the LPC by the Biodiversity Legal Foundation in 1995 (USFWS 1997). After review, the USFWS issued its findings in 1998 that the species warranted listing, but was precluded because of actions needed for other higher priority species (USFWS 2012). The USFWS assigned the LPC a listing priority number of 8 (1 indicating the highest need for action and 12 lowest). This was revised to a priority number 2 in 2008 because of the belief by the USFWS that the threat of wind development and associated development of transmission lines within the occupied range had increased significantly since the previous analysis (USFWS 2012). On December 11, 2012, the USFWS expressed concerns that a number of existing and expanding threats are currently outside of the regulatory authority of the states to control, and proposed listing the LPC as threatened with a final listing decision scheduled for no later than September 30, 2013 (USFWS 2012). Publication of the proposed rule opened a 90-day comment period that closed on March 11, 2013.

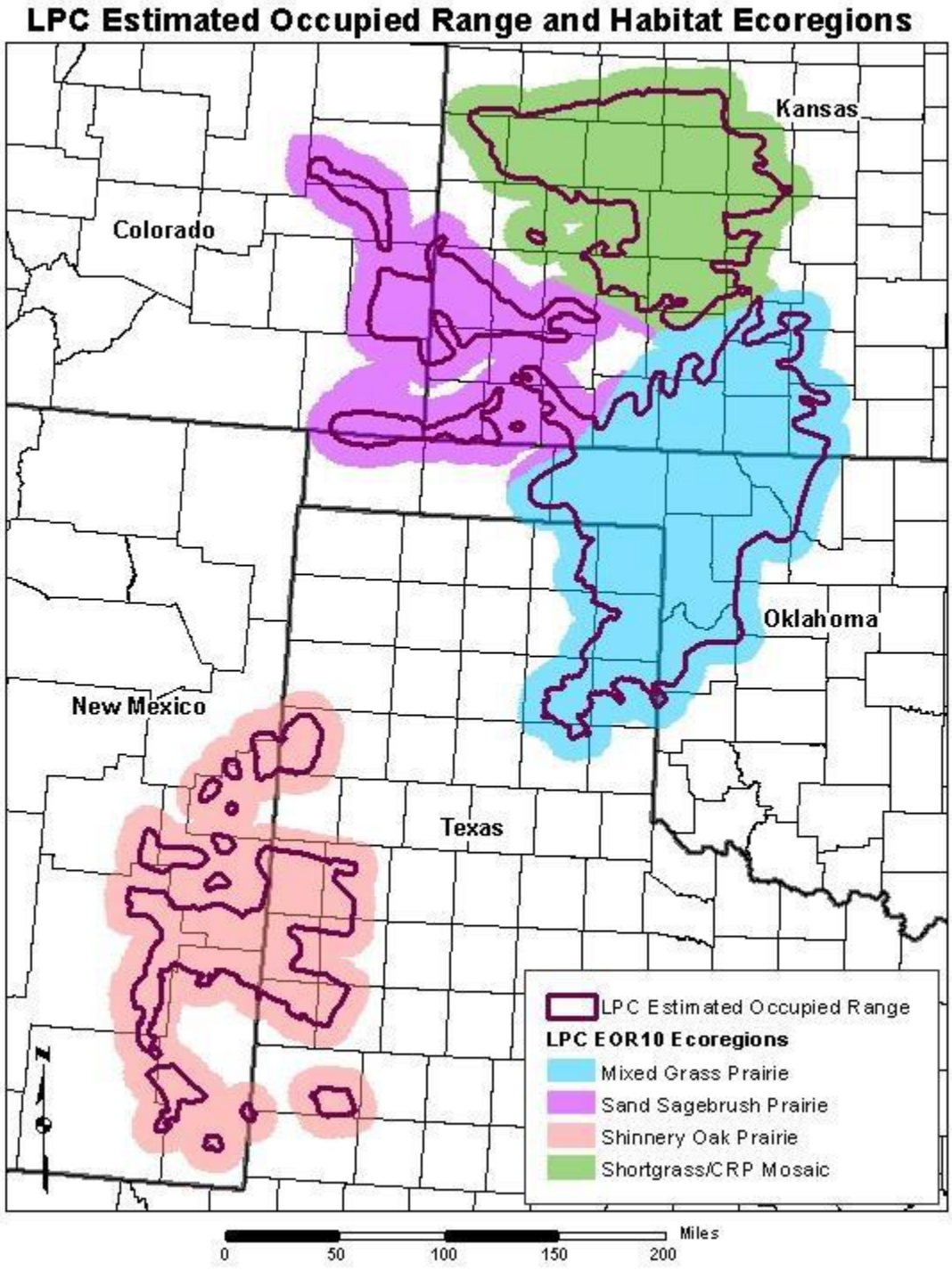

Figure 1 The currently estimated occupied range (EOR) and the four ecoregions used by the lesser prairie-chicken.

Public comments received by the USFWS during the comment period expressed concerns regarding the sufficiency and accuracy of data related to the listing proposal for the species and the positive impacts of conservation programs on LPC populations. These include state and federal programs enrolling millions of acres in LPC programs such as the Natural Resource Conservation Service's LPC Initiative (LPCI). Public comments identified the appearance of some LPC populations as being stable, and need for concerted efforts to address the declines in other ecoregions.

On May 6, 2013, the USFWS announced the publication of a proposed special rule under the authority of section 4(d) of the Act. A comment period on the proposed listing rule was opened to provide an opportunity for the public to simultaneously provide comments on the proposed listing rule with a proposed special rule, and a draft range-wide conservation plan for the LPC prepared by the five state wildlife agencies in collaboration with the Western Association of Fish and Wildlife Agencies. This comment period was open from May 6 to June 20, 2013.

On July 9, 2013, the USFWS announced a 6-month extension of the final listing determination based on their finding that there was substantial disagreement regarding the sufficiency or accuracy of the available data relevant to their determination regarding the proposed listing rule. The Service reopened the comment period to solicit additional information. This comment period closed on August 8, 2013.

On December 11, 2013 the USFWS reopened the comment period, to solicit comments on a revised proposed special 4(d) rule and the December 11, 2012 proposed listing rule as a result of endorsing the Western Association of Fish and Wildlife Agencies' LPC Range-wide Conservation Plan. This comment period closed on January 10, 2014. However, the endorsed version of the Western Association of Fish and Wildlife Agencies' LPC Range-wide Conservation Plan (Van Pelt et al. 2013) was not available on the USFWS websites, as stated in the December 11, 2013 revised proposed special 4(d) rule. Subsequently, the USFWS reopened the comment period on January 29, 2014, to allow the public the opportunity to have access to this range-wide plan and submit comments on the revised proposed special rule and the December 11, 2012 proposed listing rule. This comment period closed on February 12, 2014.

On March 27, 2014, the USFWS announced the listing determination of threatened species status for the LPC under the Endangered Species Act of 1973, as amended (Act) (USFWS 2014). This final rule implemented the federal protections provided by the Act for the LPC. Critical habitat is prudent but not determinable at the time of listing. In addition, the USFWS published a final special rule under section 4(d) of the Act for the LPC. Under section 4(d) of the Act, the Secretary of the Interior may publish a special rule that modifies the standard protections for threatened species with special measures tailored to the conservation of the species that are determined to be necessary and advisable. This 4(d) special rule does not remove or alter in any way the consultation requirements under section 7 of the Act. Under the 4(d) special rule, the USFWS provides that all of the prohibitions under 50 CFR 17.31 and 17.32 will apply to the LPC, except those noted in the rule itself. The final 4(d) special rule provides that take incidental

to activities conducted by a participant enrolled in, and operating in compliance with, the LPC Interstate Working Group's RWP will not be prohibited (Van Pelt et al. 2013). The USFWS included this provision in the final 4(d) special rule in recognition of the significant conservation planning efforts of the five state wildlife agencies within the range of the LPC (e.g. Van Pelt et al. 2013).

This final 4(d) special rule also stated that take of the LPC will not be prohibited provided the take is incidental to the conditioned conservation practices that are carried out in accordance with a conservation plan developed by the Natural Resources Conservation Service (NRCS) in connection with NRCS's LPCI and related NRCS activities focused on LPC conservation consistent with the provisions of the November 22, 2013 conference opinion that was developed in coordination with the USFWS. Conditioned conservation practices are NRCS standard conservation practices to which the USFWS and NRCS have added specific requirements in the form of conservation measures so that when the measure is followed, impacts to the LPC will be avoided or minimized.

Finally, the final 4(d) special rule determined that take of LPC will not be prohibited provided the take is incidental to activities that are conducted during the continuation of routine agricultural practices on cultivated lands that are in row crop, seed-drilled untilled crop, hay, or forage production. These lands must meet the definition of cropland as defined in 7 CFR 718.2, and in addition, must have been cultivated (meaning tilled, planted, or harvested) within the 5 years preceding the proposed routine agricultural practice that may otherwise result in take. Thus, this provision does not include take coverage for any new conversion of grasslands into agriculture.

The RWP was developed in response to concerns about LPC habitat threats which may be impacting LPC populations, and the proposed listing under the ESA. Along with the existing conservation efforts already being implemented, the RWP represents another mechanism to implement conservation to benefit LPC. The RWP represents an opportunity to enroll participants who agree to avoid, minimize and mitigate actions which may be detrimental to LPC. Landowners may enroll properties to be managed for the benefit of LPC. Properties may generate credits for mitigation. When complete avoidance is not possible, industry participants may enroll and pay fees to be used to mitigate impacts. When taken as a whole, the RWP along with other existing and planned conservation efforts can effectively ameliorate threats to LPC and lead to the delisting of the species.

BIOLOGICAL GOALS AND OBJECTIVES

USFWS defines biological goals as the broad, guiding principles that clarify the purpose and direction of the conservation components for conservation tools (65 FR 35241). The biological goals and objectives are designed to address the potential impacts of the proposed activities while taking into account the overall conservation needs of LPC and its habitat. In general, the biological goals will be accomplished by: (1) conserving LPC and their habitat in the service areas, and (2)

mitigating the impacts of take contemplated by the RWP by conserving and managing certain known LPC habitat areas throughout the service areas. In addition to these general objectives, the RWP will include a conservation strategy that will strive for the implementation of activities providing the blueprint toward speedy recovery and delisting.

CONSERVATION STRATEGY

This RWP describes a conservation strategy, which when implemented, will provide the population and habitat needed to expand and sustain LPC. The strategy identifies a desired population goal deemed adequate to provide for a well distributed LPC population dispersed throughout each of four ecoregions within a 10-year period. To meet the population goal, the RWP identifies habitat goals that provide for good representation of adequately sized habitat patches to provide for resiliency in populations, and with enough patches to provide for redundancy to support populations that persist in the long term. The RWP also identifies needed connectivity among habitat patches that will allow for genetic and demographic support among populations and will allow for potential movement of the species given uncertainties from climate change. The RWP provides for coordination and enhancement of programs to improve habitat on private lands through landowner incentive programs, and promotes the avoidance and minimization of impacts to important habitat patches. Where avoidance and minimization is not possible, the RWP identifies processes to mitigate impacts from developments. Finally, the RWP requires monitoring and adaptive management actions.

A key component of the conservation strategy is applying the concept of focal (core) areas. This concept as applied to LPC is based on identifying the areas of greatest importance to the species, and focusing habitat enhancement, maintenance, conservation, and protection in these areas. In addition, a subset of lands within focal areas will be identified as "strongholds." These are areas meeting the definition described by the USFWS (2012b) and are a much smaller component of focal areas but have the ability to provide permanent LPC conservation areas. This accomplishes:

1. It concentrates limited resources for species conservation in the most important areas, allowing for the restoration, enhancement, and maintenance of large blocks of habitat needed by LPC.
2. It identifies areas where development should be avoided, which also helps identify areas where development is of less concern for LPC. This provides developers with the guidance they typically seek for their development planning purposes and helps avoid conflicts over impacts to the species.

The conservation strategy employs various tools to achieve its management objectives with an emphasis on focal areas and connectivity zones. With the exception of New Mexico, over 95% of the current LPC range is on private lands. To be successful, the conservation strategy must emphasize delivery of habitat improvement in focal areas and connectivity zones by maximizing incentives to encourage landowners to engage in LPC habitat improvements. This has to be either economically neutral or economically advantageous to the landowner. The strategy

identified existing programs available to help provide these improvements and then worked with implementation teams and others to identify how to coordinate and maximize the delivery of these programs, especially in focal areas. Another important component of the strategy is identifying approaches and tools to avoid, minimize, and compensate through off-site mitigation the potential threats to LPC. This is accomplished through a mitigation framework that offers assurances for continued operations for developments in the future following identified guidelines and standards. This mitigation framework includes a metric system to quantify impact units and mitigation units.

WAFWA Mitigation and Metrics System

The WAFWA Mitigation Framework incentivizes avoidance and minimization of impacts to LPC habitat from development. The metrics system within this framework provides a pathway to mitigate for impacts to habitat through a biologically-based system that incorporates space, time and habitat quality to define both habitat impact units and habitat offset units. A habitat impact is defined as: potential LPC habitat that has been rendered unusable by LPCs based on direct or indirect habitat loss related to development. A habitat offset is defined as: an area of potential LPC habitat that is conserved and managed or restored to compensate for impacted habitat. Impacts are considered permanent, unless remediation back to baseline occurs. The mitigation system also utilizes a 2:1 mitigation ratio to ensure that offsets are greater than impacts, resulting in a net conservation benefit for the LPC.

The WAFWA Mitigation Framework functions as a platform to balance impact and habitat offset units in that a portion of the offset units are allocated at the sign-up based on current acreage and habitat quality. Additional offset units are generated annually and the quantity is reflective of potentially usable acreage and habitat quality. The landowner is incentivized to manage for quality habitat because their annual payment is based on the acreage and Habitat Evaluation Guide (HEG) score of the enrolled property. If the participant does not follow the recommended management plan for the property, the offset units will be reduced, as will the annual payment to the participant. This performance-based system ensures participants are not paid in advance for ungenerated offset units.

Offset units will be generated by enrolling a property into an agreement with WAFWA or one of its technical service providers. Participants may enroll in short-term (5-10 year) agreements or in long-term agreements requiring an easement. The value of 25% of the habitat offset units will be targeted towards permanent conservation to support long-term or dynamic conservation and population strongholds. The remaining 75% of the conservation efforts will be targeted towards short-term or static contracts (5-10 years), which represent permanent conservation that may shift around on the landscape within the targeting goals of the RWP and the CHAT. Finally the WAFWA mitigation system incentivizes the remediation of impacts that are not permanent on the landscape by providing the opportunity to generate offset units that can count toward new developments elsewhere. The 25/75 ratio of long and short-term offset units will be evaluated through the adaptive management process and may need to be adjusted in the future.

ADAPTIVE MANAGEMENT

Adaptive management is defined as a formal, structured approach to dealing with uncertainty in natural resource management, using the experience of management and the results of research as an ongoing feedback loop for continuous improvement. Adaptive approaches to management recognize that the answers to all management questions are not known and that the information necessary to formulate answers is often unavailable. Adaptive management also includes, by definition, a commitment to change management practices when deemed appropriate within the guidelines of the RWP.

Adaptive management is a dynamic process that helps reduce uncertainty in natural resource management by incorporating into flexible conservation plans new information as it becomes available. Adaptive management strategies allow for mutually agreed-upon changes to the conservation measures to occur in response to changing conditions or new information, including those identified during monitoring. The primary reason for using adaptive management in the RWP is to allow for changes in the conservation measures that may be necessary to reach the stated long-term goals. Under adaptive management, the mitigation and conservation activities implemented under the RWP will be monitored to identify whether or not they are producing the required results. Additionally, adaptive management activities affecting the implementation of the RWP will be influenced by emerging science that fills existing knowledge gaps. Those two types of information will be used to guide adjustments in implementation of the RWP.

Starting in 2014, some of the factors that will be evaluated regularly by the various committees include LPC population sizes, progress toward habitat goals, conservation practice costs, avoidance of high priority conservation areas, management prescriptions, etc. Among the items being evaluated, breeding population sizes will be annually assessed by drawing comparisons between the 3-year average and 50% of the population goal for each ecoregion. The 3-year average is being utilized to smooth out the erratic annual fluctuations that commonly occur within populations of gallinaceous game birds that are due solely to weather variations. Comparisons for the first 5 years will be drawn to 50% of the population goals, because achieving those levels would require an increasing population in each ecoregion. After the fifth evaluation, the science subcommittee will re-evaluate that portion of the trigger to determine if comparisons need to be drawn to a greater percentage of the population goals. All RWP cooperators will take action to identify and address the factor(s) limiting population growth if the current trigger is eclipsed in any ecoregion.

Every five years, a more rigorous review will occur to assess each WAFWA prescribed conservation practice, the appropriateness of the reporting area locations, and progress towards achieving the stated population and habitat goals of the RWP. The conservation practices prescribed during the previous five years will be evaluated by the WAFWA committees based on their ability to achieve the desired vegetation parameters. New standards will be considered for 1) practices that have not maintained habitat quality in at least three of five years where it existed at baseline and 2) practices that have not resulted in at least a measurable level of improvement in habitat quality where such improvements were the desired outcome of a management plan.

The composition of each reporting unit will also be evaluated to assess progress towards achieving the stated habitat goals of 70% and 40% quality habitat for focal areas and connectivity zones, respectively. Those goals will be evaluated using the 5-year revision of the impact analysis and occupancy models (McDonald et al.2013). Modifications to priority area (reporting units) boundaries will be considered if the amount of impacted acreage will prevent the goals of the RWP from being achieved or landowner participation has been poor.

RWP Industry Participation

The RWP is designed to include conservation measures that eliminate and/or reduce threats by land uses including mineral, oil/gas, and, wind-energy developments, agricultural practices, and civil infrastructure (including transmission and distribution lines, radio/cell towers, water lines, and roads) on state and private property. As of the end of the first reporting period, March 1, 2014 to February 28, 2015, 174 companies have enrolled in the RWP.

The impacts to the LPC and its habitat from covered activities and the net benefits to recovery attributable to the conservation measures required under the RWP are explained in more detail in it. The following covered activities are organized by industry but may be conducted by any enrolled Participant.

Oil and Gas Activities

Seismic and Land Surveying: Seismic activities are generally performed in the exploration mode of oil and gas development or in areas of development for refining knowledge of the geology and improving well siting. Seismic activities are conducted for periods of short duration in any given area. Activities may include clearing vegetation to allow equipment access for seismic work and consist of a small crew laying/stringing cables on foot or possibly using off-highway vehicles (OHVs). A crew removes cables when the project is complete. Land surveying is a temporary activity and may require some truck and/or foot traffic.

Construction: Construction of facility sites and associated infrastructure, which includes but is not limited to access roads, well pads or locations, reserve pits and other facilities for the disposal of waste, tanks and storage facilities, treaters, separators, dehydrators, electric and other utility lines and pipelines (e.g., gathering lines, flowlines, and distribution lines), may include the use of heavy equipment and trucking activities in clearing vegetation, contouring, compacting, stabilizing soils, and installing erosion control (including silt fencing, earthen berms, etc. per Clean Water Act permitting requirements). Well site construction may also include erecting temporary fencing and netting around a location, or portions thereof, for livestock and wildlife protection. A water well, disposal well and/or injection well may be drilled near the location and possible trenching-related activities associated with installation of flowlines, pipelines, and utilities may occur. Associated infrastructure for compressor facilities and gathering/processing facilities may also be constructed on site or at adjacent sites. Where practical, equipment may electrified (which greatly reduces noise and emissions from gas-driven equipment), which involves the installation of in-field electrical distribution systems (poles, transformers and

overhead wires). Activities may be conducted to plug and abandon a well, which may involve workover rig mobilization, removal of facility equipment and associated infrastructure, access roads, abandonment in place of subsurface lines, and surface remediation/restoration pursuant to lease and regulatory requirements.

Drilling, Completion, and Workovers (Re-Completion): Related drilling, completion, and workover activities include rig mobilization and can include heavy equipment and frequent traffic. Wellbore completion activities, such as hydraulic fracturing, will not directly impact the LPC because they are contained and take place on the well site location. Well site fencing may be utilized after completion operations for security and to limit access.

Operations and Maintenance: Routine operations can include stimulations and wellbore repair, daily inspections and maintenance, gathering line and flowline repairs, unloading of storage tanks, truck traffic for removal of product or waste, emergency response activities, remediation of spills, workovers, and weed control.

Plugging and Remediation: These activities may include well plugging, draining lines and tanks, removal of surface infrastructure including pump jacks and Christmas trees, tank batteries and associated lines, compressor stations, pipelines, buildings, and power lines, as well as the removal of roads and pads, regarding surface contours and re-seeding.

Agricultural Activities

Brush management: Brush management will be a covered activity if done in accordance with the NRCS practice standards.

Building and maintaining fences and livestock structures: Construction and maintenance of new and existing fences and/or livestock structures will be covered activities if they are done in accordance with the NRCS practice standards.

Grazing: Grazing will be a covered activity if it is done in accordance with the NRCS practice standards.

Water/windmill: Construction of water storage facilities, agricultural water pipelines, windmills, and water troughs will be covered activities if they are done in accordance with NRCS practice standards.

Disturbance practices: Disturbance of grassland is a covered activity if done in accordance with USDA practice standards for native rangelands and planted grass stands. Some activities that will be covered include prescribed fire, disking, mowing, haying, etc.

Crop production: Normal agricultural activities occurring on tilled acreage are not considered to be a source of take (e.g. plowing, planting, harvesting, etc.).

Wind Power, Cell and Radio Towers, and Power Line Activities

Construction: This includes all aspects of construction of turbines towers or power lines, as well as access to the sites, transmission line connections to substations, existing power grids, or structures, associated infrastructure, assembling and erecting poles and towers, and stringing and connecting wires. Also considered part of construction are clearing vegetation, contouring, compacting, stabilizing soils and erosion control (including silt fencing, earthen berms, etc. per Clean Water Act permitting requirements). Heavy equipment and trucking associated with construction activities may cause LPC mortality due to collision and behavioral modifications. Physical disturbance affected by the construction of turbines, turbine noise, and physical movement of turbines during operation have the potential to disturb nesting.

Operations and Maintenance: Routine operations can include daily inspections and maintenance, electrical line repairs, emergency response and repair and cleaning of structures, work overs (recompletions), and weed and tree control.

Decommissioning and Remediation: These activities may include removal of turbines, towers, power lines, buildings, roads and pads, re-grading of surface contours, and reseeding.

Road Activities

Construction: This includes all aspects of construction from siting routes, establishing staging areas for machinery, building associated infrastructure, access roads and rights-of way and may include clearing vegetation, contouring, compacting, stabilizing soils and erosion control (including silt fencing, earthen berms, etc. per Clean Water Act permitting requirements). Heavy equipment and trucking associated with construction activities may cause LPC mortality due to collision and behavioral modifications.

Operations and Maintenance: Routine operations can include daily inspections and maintenance, road repairs, emergency response and repair and cleaning of roadways or applying gravel, work overs (recompletions), and weed and tree control.

Decommissioning and Remediation: These activities may include removal of roads, bridges, and culverts, re-grading surface contours and reseeding.

General Activities

OHV activity: OHV activity in LPC habitat includes OHV use for recreation (including hunting) and for ranching and oil and gas development.

General construction: General construction and development activities by a variety of sectors, public and private, may occur in LPC Habitat. For example, a water utility line planned by multiple counties in the region may involve construction in or near LPC habitat. Other construction or access dozing by alternative energy producers or for recreational purposes is also contemplated.

Other land management: Other land management activities may include prescribed burns and game, predator management, and remediation of impacted habitat back to baseline conditions.

Number of participants enrolled in the RWP by the WAFWA Conservation Agreement

The number of companies enrolled in this program is in constant flux as new companies may enroll at any time and enrollments can be purchased and transferred. The first enrollment in the WAFWA Conservation Agreement (WCA) was on January 17, 2014 and the last enrollment during this reporting period was on February 11, 2015. Additional enrollments have come in since the end of the reporting period that will be reported next year. As of the end of the first reporting period, we have 81 companies enrolled in the WCA. Of those companies, 43 are enrolled in both the WCA and CCAA. Table1 lists WCA participants as follows:

Table 1. Participants in the WAFWA Conservation Agreement through the RWP			
Access Midstream Partners, LP	Alfalfa Electric Cooperative	American Electric Power Service Corporation	Anadarko E&P Onshore LLC
Anadarko Petroleum Corp	Apache Corporation	Bailey County Electric Cooperative, Association	Bluestem Wind Energy/RES-Americas Inc.
BP America Production Company	Centurion Pipeline, LC	Central Valley Electric Cooperative	Chaparral Energy, LLC
Cimarex Energy Co.	Cimarron Electric Cooperative	COG Operating LLC	Conoco-Phillips
Coral Coast Petroleum, LC	DCP Midstream LP	Devon Energy	Eagle Oil and Gas
Eagle Rock Energy Services, LP	Eagle Rock Field Services, LP	Edison Operating Company, LLC	Enable Midstream Partners, LP
Energy Transfer Partners	EnerVest Operating LLC	Forestar Petroleum Corporation	Gore Oil Company, Inc.
Grand Mesa Pipeline, LLC	Greenbelt Electric Cooperative, Inc	Hess Oil Company	ITC Great Plains LLC
Jayhawk Pipeline, LLC	John O. Farmer, LLC	Jones Energy, LLC	Kaiser-Francis Oil Company
Kinder Morgan	Kirkpatrick Oil Company, Inc.	Kiwash Electric Cooperative	Landmark Resources, Inc.
Linn Operating, Inc.	Lyntegar Electric Cooperative, Inc.	Magellan Midstream Partners	MarkWest Oklahoma Gas Company, LLC
Mewbourne Oil Company	MidCoast Operating, LP	Nadel and Gussman Operating, LLC	Ninnescah Electric Cooperative
Northfork Electric Cooperative	Northwest Electric Cooperative	OGE Energy Corp.	ONE Gas, Inc.
ONEOK Partners, LP	Oxy USA, Inc.	P.O.&G Operating LLC	Peregrine Petroleum Partners, Ltd.

Pioneer Resources, Inc.	Plains All American Pipeline	Prairie Wind Transmission, LLC	Ramsey Property Management, LLC
Raydon Exploration	Red Oak Energy, Inc.	Regency Energy Partners LP	Roosevelt Electric Cooperative
Samson Resources Company	Samuel Gary JR & Associates, Inc.	SemGroup Corporation	Stratakan Exploration LLC
Sunflower Electric	T.H. McElvain Oil & Gas LLP	Toto Energy, LLC	Tower Assets Newco IX, LLC
Tri-County Electric Cooperative	Unit Petroleum Company	VAL Energy, Inc.	Versado Gas Processors., LLC
Western Farmers Electric Cooperative	Western Gas Partners	XCEL Energy, Inc.	

The enrollment in this program is incredibly diverse and inclusive. By industry, there are 36 oil and gas companies, 23 pipeline companies, 19 electric companies, one wind energy company, one electric/wind company, and one telecommunications company. These companies represent multinational corporations to small family-owned oil and gas companies and regional electric generation and transmission companies to member-owned rural electric cooperatives. Enrollment by companies ranges from as little as 10 acres to hundreds of thousands of acres.

Enrollment in the WCA is continuing. A single participant enrolled more than 300,000 acres of oil and gas lease just before the end of this reporting period, and we've had several smaller oil and gas enrollments both before and after the end of this reporting period. With the current drop in oil prices, many other companies are acquiring new leases that may be enrolled in this program. Just after the end of this reporting period, WAFWA received a new wind development enrollment which will start construction in July, and we are working on the enrollment of two more planned wind energy developments (by three currently unenrolled companies). A new electric company enrolled in March and we are expecting about six more to enroll this spring. The first telecommunications enrollment was finalized earlier this year and several companies are now in discussions with us about enrollment of existing and planned telecommunications towers.

As required in the WCA, a copy of all Certificates of Participation for this agreement will be available for the USFWS to view on a secured database.

Summary of all the impact acres enrolled in the RWP broken out by ecoregion

The 79 companies participating in the WCA through the RWP have enrolled a total of 2,927,020 acres across the EOR+10. Of those enrollments, the majority is in the Mixed Grass Ecoregion with 1,862,658 acres (63.64%), followed by the Shinnery Oak, Sand Sagebrush, and Shortgrass Ecoregions with 627,267 acres (21.43%), 394,626 acres (13.48%) and 42,467 acres (1.45%) respectively. These enrollments represent oil and gas leases, 2 existing wind developments and one in development, pipelines, gas plants electric lines and telecommunications towers. Oil and

gas leases, wind developments and telecom sites are enrolled as parcels. Linear impacts such as pipelines and electric lines are buffered by 50 feet (15.25 meters) to define the enrolled acreage. This generally approximates the largest right of way width for these linear projects. The majority of the enrollments are oil and gas leases followed by electric lines, pipelines, and wind energy respectively. Figure 2 shows acres enrolled through the WCA by industry type and ecoregion.

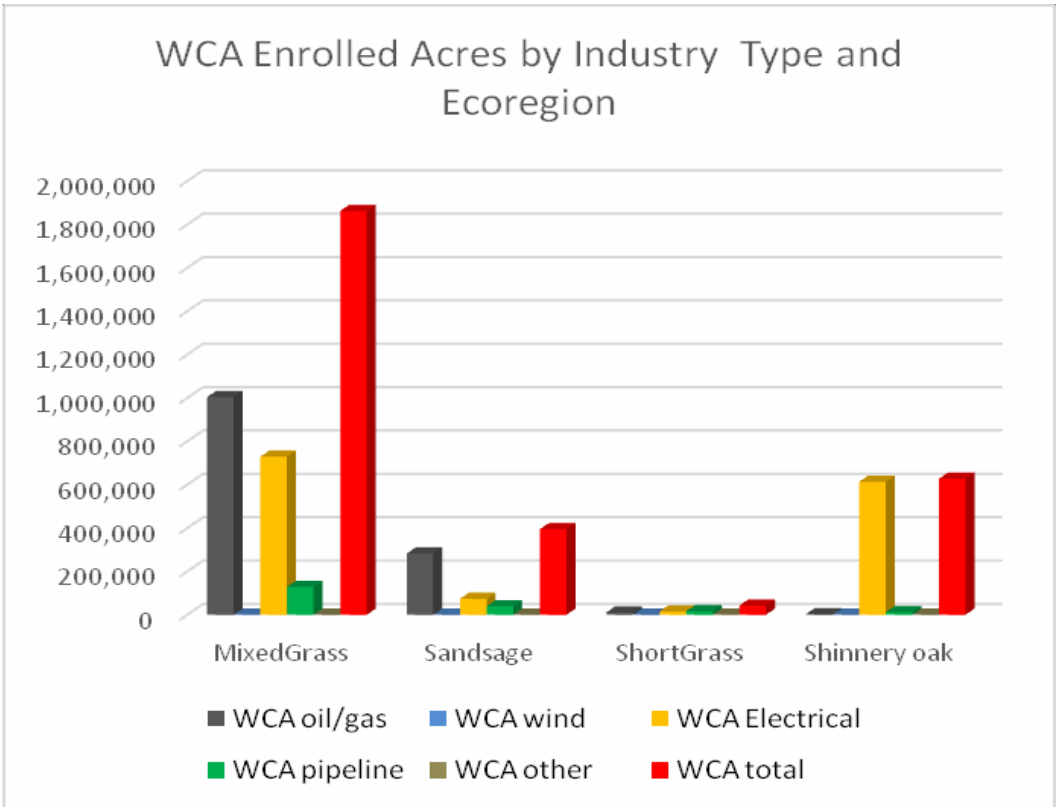

Figure 2. Acres enrolled through WCA contracts by industry type and ecoregion

Summary of non-compliance reporting in WCA

The listing of the LPC and the majority of the enrollments in the WCA occurred after the mid-point of the 2014 breeding season, and the majority of the compliance monitoring is related to breeding season stipulations defined under the Conservation Measures in the WCA. So, for the first year of implementation, WAFWA focused heavily on outreach and education to ensure compliance. Our staff spent countless hours on the phone, in face-to-face meetings across five states, and giving presentations at industry association meetings and in-service trainings to inform participating companies and answer questions about enrollment, project siting, conservation measures, habitat assessment, mitigation, and lek surveys. This personal, service- oriented effort helped avoid problems before they began, and there were no-instances of non-

compliance reported under the WCA in the first year. WAFWA staff will begin random compliance monitoring visits in 2015.

Summary of the acreages of remediated impacts, existing impacts

Several remediation projects are in process for both the WCA and CCAA agreements, but none were completed during this reporting period. The remediation of impacts often requires planting native vegetation based on NRCS standards and specifications, which occurs in the spring. The projects in process that we are aware of include seven oil and gas wells and an electric transmission line in the Mixed Grass Ecoregion, two oil and gas wells in the Sand Sagebrush Ecoregion, and one in the Shortgrass Ecoregion. Many remediation projects will be reported to WAFWA only after the work has been completed, so we expect more to be reported in the spring and summer after the first planting season ends.

Number of participants enrolled in the RWP by the Candidate Conservation Agreement with Assurances (CCAA)

The Candidate Conservation with Assurances (CCAA) was completed on February 28, 2014. First enrollment was on March 4, 2014 and enrollment closed on May 12, 2014.Unlike the WCA, enrollment in the CCAA is limited to oil and gas and pipelines and was open for enrollment only prior to the implementation of the listing decision on May 12, 2014. The deadline resulted in a substantial pulse of enrollment from the petroleum industry. The current total for participating companies in the CCAA is 136, of which 117 are oil and gas exploration and 19 pipeline companies. While no new acreage may be enrolled in the CCAA after listing, the list of companies may change from day to day as enrolled leases may be purchased, transferred, and even split, such that one company may acquire lease rights for drilling at a given depth, while other companies may hold or acquire the lease rights for other depths. Table 2 lists companies enrolled in the CCAA:

Table 2. Participants in the Candidate Conservation Agreement With Assurances

Access Midstream Partners, LP	Anadarko Minerals, Inc.	Anadarko Petroleum Corporation	Apache Corporation
Ares Energy Ltd.	Beren Corporation	Berexco LLC	BP America Production Company
Castelli Exploration, Inc.	Central Operating, Inc.	Centurion Pipeline, LP	Chisholm Partners, II LLC
Cholla Production, LLC	Cimarex Energy Co.	CMX, Inc.	Coats Energy, Inc.
COG Operating LLC	Conoco-Phillips	Continental	Corlena Oil Company
Crawley Petroleum Corporation	Culbreath Oil & Gas Co., Inc	DaMar Resources, Inc.	DayStar Petroleum, Inc.

DCP Midstream LP	Devon Energy	Diehl Oil, Inc.	Dorchester Minerals Operating LP
Duncan Oil Properties, Inc.	Eagle Rock Energy Services, L.P.	Eagle Rock Field Services, L.P.	Eagle Rock Mid-Continent Operating, LLC
Eagle Rock Operating Company, LLC	Edison Operating Company, LLC	Edmiston Oil Co, Inc.	Elevation Resources LLC
Empire Energy E&P LLC	Enable Midstream Partners, LP	Encino Operating, LLC	Energex LLC
Energy Alliance Company, Inc.	Energy Transfer Partners	EnerVest Operating LLC	EOG Resources, Inc.
Eternity Exploration LLC	Fasken Oil & Ranch	Forestar Petroleum Corporation	Griffin Management LLC
IA Operating, Inc.	Jayhawk Pipeline LLC	JMA Energy Company, LLC	Jolen Operating Company
Jones Energy, LLC	Joshi Techonologies International, Inc.	Kenneth W. Cory, Ltd.	Kinder Morgan Inc.
Kirkpatrick Oil Company, Inc.	Laddex LTD.	Landmark Resources, Inc.	LB Exploration, Inc.
Le Norman Operating LLC	Legacy Reserves Operating LP	Lighthouse Oil & Gas LP	Linn Operating, Inc.
M&M Exploration, Inc.	Magellan Midstream Partners LP	Marathon Oil Company	MarkWest Oklahoma Gas Company, LLC
Maverick Brothers Resources, LLC	McGinness Oil Co. of Kansas, Inc.	Meridian Energy Inc.	Merit Energy Company, LLC
Mewbourne Oil Company	MIDCO Exploration, Inc.	MidCoast Operating, LP	MidCon Energy Operating LLC
Midnight Hour, LLC	Mikol Oil, LLC	Murfin Drilling Co., Inc.	Nadel and Gussman Operating, LLC
O'Benco IV, LP	Ol' Miss, LLC	ONE Gas, Inc.	ONEOK Partners, LP
Oolite Energy Corporation	Osage Investors I, LLC	Osage Oil, LLC	Oxy USA, Inc.
Occidental Permian	Paladin Energy Corp.	Panhandle Topeka, LLC	Pickrell Drilling Company, Inc.
Pintail Petroleum, Ltd.	Pioneer Natural Resources USA, Inc.	Pioneer Oil Company, Inc.	Plains All American Pipeline, LP

QEP Energy Company	Questa Energy Corporation	Range Resources	Red Oak Energy, Inc.
Redland Resources, LLC	Regency Energy Partners LP	Rio Petroleum, Inc.	Samson Resources Company
Samuel Gary JR & Associates, Inc.	SandRidge Energy	SemGroup Corporation	Shakespeare Oil Company, Inc.
Stanolind Operating LLC	Strand Energy LC	Strat Land Exploration Co	Superior Pipeline Company
T.H. McElvain Oil & Gas LLLP	Tabula Rasa Partners LLC	Tandem Energy Corporation	Tengasco, Inc
Texakoma Exploration & Production, LLC	Texland Petroleum, L.P.	Thomason Petroleum Inc.	Three Rivers Acquistion II, LLC
Toto Energy, LLC	Trey Resources Inc.	Triad Energy, Inc.	Unit Petroleum Company
Versado Gas Processors, LLC	Viking Resources, Inc.	Vincent Oil Company	W.R. Williams, Inc.
Ward Petroleum Corporation	Western Gas Partners, LP	Western Operating Company	White Exploration, Inc
Whiting Petroleum Corporation	Williford Energy Company	Younger Energy Company	Zinszer Oil Company, Inc

Like the WCA, enrollment in the CCAA is diverse and inclusive, ranging from multi-national oil and gas companies to multi-state midstream pipeline companies to small independent, family owned oil and gas companies. Companies have enrolled as little as 10 acres in this program and up to nearly 1.5 million acres.

As required in the agreement, a copy of all Certificates of Inclusion for this agreement will be available for the USFWS to view on a secure website.

Summary of all the impact acres enrolled in the CCAA broken out by ecoregion

As of this reporting date, the 136 companies listed above have enrolled a total of 8,376,285 acres in the CCAA across the entire EOR10. Over 75% of those acres are oil and gas leases and the remainder are pipelines. The majority of the enrollments are in the Mixed Grass Ecoregion with 4,172,814 acres (49.82%), followed by Sand Sagebrush, Shinnery Oak, and Shortgrass Ecoregions with 3,092,471 acres (36.92%), 735,963 acres (8.79%) and 375,036 acres (4.48%)

respectively. Figure 3 shows the distribution of CCAA and WCA enrollment acres by ecoregion. Figure 3.depicts acres enrolled through CCAA and WCA contracts by ecoregion.

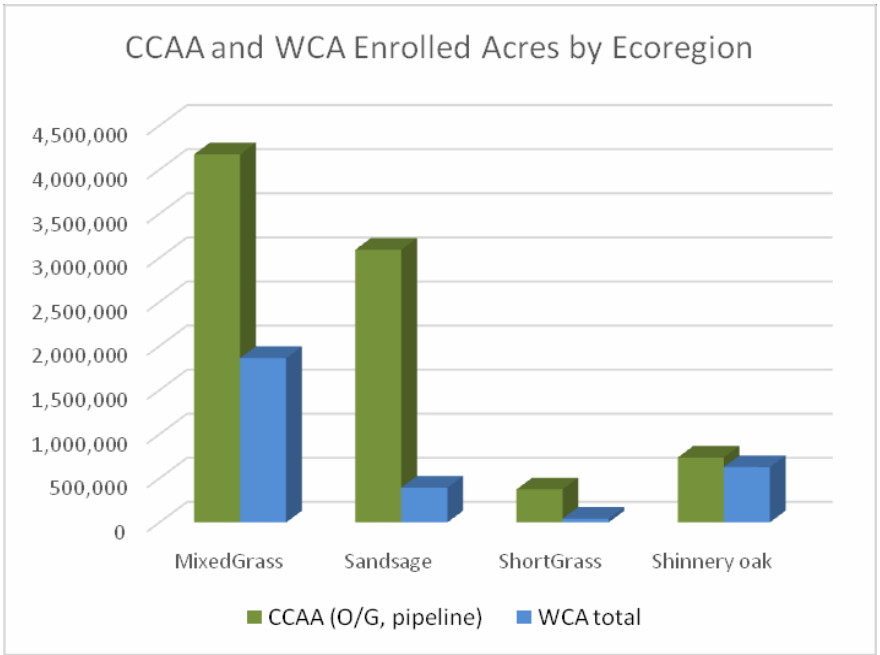

Figure 3. Acres enrolled through CCAA and WCA contracts by ecoregion.

Summary of the acreages of remediated impacts, existing impacts

Several remediation projects are in process for both the WCA and CCAA agreements, but none were completed during this reporting period. The remediation of impacts often requires planting native vegetation based on NRCS standards and specifications, which occurs in the spring. The projects in process that we are aware of include seven oil and gas wells and an electric transmission line in the Mixed Grass Ecoregion, two oil and gas wells in the Sand Sagebrush Ecoregion, and one in the Shortgrass Ecoregion. Many remediation projects will be reported to WAFWA only after the work has been completed, so we expect more to be reported in the spring and summer after the first planting season ends.

Number of Impact Units and Offset Units for each ecoregion

The CCAA and associated permit under Section 10(a)(1)(A) of the ESA and the WCA and associated Special Rule under Section 4(d) of the ESA each provided a mechanism to allow permitted activities to occur within a specified framework. The framework of the RWP set up a mitigation cost structure that calculated mitigation costs based on the area of new impact, the quality of the impacted habitat, and a categorical multiplier related the CHAT category. This cost structure greatly incentivized development that minimized impacts on LPC habitat by:

- Minimizing new impact areas by co-locating or clustering of projects near other existing infrastructure on the landscape
- Placing projects on lands of poor habitat quality (degraded grasslands and cropland are cheaper than good quality grasslands), and
- Encouraging development in CHAT 4 modeled non-habitat areas (multiplier of 1.6) as opposed to in a CHAT 1 focal area that had a multiplier of 2.5.

Within the plan, each new development project is assigned a buffer distance/area that represents the habitat impact area for that project. If projects are co-located or clustered, then their buffers overlap areas that are already impacted, and the amount of new habitat impacted by those developments is less than projects that are not. We refer to the total impact buffer area without considering the overlap as the potential impact and to the total impact minus the overlap as the actual impact. We calculated those numbers for each industry type and ecoregion by CHAT category the potential impacts are listed in Table 3 and the actual impacts are listed in Table 4.

Table 3. Potential Impacted Acres by Type and Ecoregion**

Ecoregion	CHAT category	oil/gas	wind	Transmission	Distribution	other *	total
MixedGrass	CHAT 1	4392.8		4,796.8			9,189.6
	CHAT 2	1738.8					1,738.8
	CHAT 3	11663.8		12,339.7	5.1	376.3	24,384.9
	CHAT 4	2139.6			0.8		2,140.4
	total	**19935.0**	**0.0**	**17,136.5**	**5.9**	**376.3**	**37,453.7**
Sandsage	CHAT 1	628.1					628.1
	CHAT 2						0.0
	CHAT 3	155.2					155.2
	CHAT 4	558.7		2,024.4			2,583.1
	total	**1342.0**	**0.0**	**2,024.4**	**0.0**	**0.0**	**3,366.4**
ShortGrass	CHAT 1	831.5					831.5
	CHAT 2						0.0
	CHAT 3	753.2					753.2
	CHAT 4	1033.0		3,451.3			4,484.3
	total	**2617.6**	**0.0**	**3,451.3**	**0.0**	**0.0**	**6,068.9**
Shinnery Oak	CHAT 1						0.0
	CHAT 2						0.0
	CHAT 3	651.1				345.4	996.5
	CHAT 4	639.7					639.7
	total	**1290.8**	**0.0**	**0.0**	**0.0**	**345.4**	**1,636.2**
Grand total	Grand total	**25185.4**	**0.0**	**22,612.2**	**5.9**	**721.7**	**48,525.2**

* Other = radio/cell towers and compressor stations

** Acres as defined by full site impact buffers WITHOUT existing impact areas removed

Table 4. Actual Newly Impacted Acres by Type and Ecoregion**

Ecoregion	CHAT category	Oil/Gas	Windfarms	Transmission	Distribution	other*	Total
MixedGrass	CHAT 1	2,824.2		2,041.8			4,866.0
	CHAT 2	1,182.2		424.2			1,606.4
	CHAT 3	7,904.4		3,247.8	5.0	338.2	11,495.4
	CHAT 4	1,120.0		746.3			1,866.3
	total	**13,030.8**	**0.0**	**6,460.1**	**5.0**	**338.2**	**19,834.1**
Sandsage	CHAT 1	525.6					525.6
	CHAT 2						0.0
	CHAT 3	93.1					93.1
	CHAT 4	248.5		1,506.5			1,755.0
	total	**867.1**	**0.0**	**1,506.5**	**0.0**	**0.0**	**2,373.6**
ShortGrass	CHAT 1	658.6					658.6
	CHAT 2						0.0
	CHAT 3	659.6					659.6
	CHAT 4	666.9		1,545.1			2,212.0
	total	**1,985.1**	**0.0**	**1,545.1**	**0.0**	**0.0**	**3,530.2**
Shinnery Oak	CHAT 1						0.0
	CHAT 2						0.0
	CHAT 3	475.6				32.4	508.0
	CHAT 4	42.5					42.5
	total	**518.1**	**0.0**	**0.0**	**0.0**	**32.4**	**550.5**
Grand total		**16,401.1**	**0.0**	**9,511.7**	**5.0**	**370.6**	**26,288.4**

* Other = radio/cell towers and compressor stations

** Acres as defined by impact buffers with existing impact areas removed

The information in Tables 3 and 4 represent strong evidence that the mitigation framework in the RWP is incentivizing avoidance of LPC habitat. Prior to the implementation of the RWP, we examined similar data for oil and gas wells that were drilled during 2012 across the entire EOR+10and we calculated the ratio of actual to potential impacts as an estimate of the overlap of impact buffers. The result, found in the RWP on page 137, was a 42% overlap of impact buffers for new wells with pre-existing impact buffers. Using the same approach with for oil and gas impacts mitigated for in the first year of RWP implementation, we find an overlap of 65%. Therefore oil and gas projects mitigated under the RWP are, on averaging, affecting 23% less potential LPC habitat than those developed prior to RWP implementation. Across all industry types, that overlap is 54%, which is 12% more overlap than the pre-implementation figures for oil and gas.

Beyond avoidance on the individual project level, the actual impact acreages represented in Table 3 also suggest there is substantially less development occurring than expected based on the impact analysis in the RWP. That analysis estimated an average of 73,338-107,291 acres of impact for oil and gas development only. Oil and gas impacts for the first year of RWP implementation were only 22% of that low end estimate of impact acres. Over all industries, the impact analysis projected there could be 164,515 acres of impact in any given year. The acreage mitigated for under the RWP in its first year of implementation amounted to less than 16% of the amount forecasted in the RWP impact analysis. These numbers may reflect avoidance of development in the region or significant declines in oil and gas prices and short-term responses to the listing decision. Frankly, one year is not enough time to determine the reasons for this lower rate of development. However, if rates do increase, the RWP mitigation system is designed to incentivize companies to avoid high quality habitat. The results in Table 3 suggest that is likely to work, because, in terms of acreage, more than 70% of new impacts occurred in CHAT 3 and 4.

By industry, impact acreage followed a pattern similar to enrollment with oil and gas and electric accounting for the majority of the impact acres (Figure 4). Wind energy has the potential to account for significant amounts of impact acres. There are two enrolled wind projects planning to start construction in 2015, but the majority of these two projects will be sited in CHAT 3 and 4. Figure 4 also demonstrates the degree to which each industry was able to minimize their impacts through co-location and clustering of developments, by the difference between potential and actual impact acres.

From an ecoregional perspective, more than 75% of the impact acres in the first year were in the Mixed Grass Ecoregion, which was expected. The Shortgrass, Sand Sagebrush, and Shinnery oak Ecoregions accounted for 13.4%, 9.0%, and 2.1% of actual impact acres respectively (See Figure 5). While there is a significant amount of oil and gas development and production occurring in the Shinnery Oak Ecoregion which contains the Permian Basin, it is important to note that the majority of that property is not enrolled under the RWP. The New Mexico CCA/CCAA program is administered by CEHMM Conservation and Environmental Services, and currently has 3,142,378 acres of oil and gas lease enrolled. The program allows participants a pathway to mitigate for new development based on a Section 10(a)(1) (A) permit under ESA. Enrollment, mitigation, and offset information for this program may be referenced in the 2014 annual report (http://cehmm.org/docs/2014AnnualReport.pdf). As with any CCAA program, enrollment concluded with the implementation of the listing decision, and any subsequent enrollment of private land oil and gas leases or non-oil and gas related development must be enrolled through the RWP or other options that may be in development

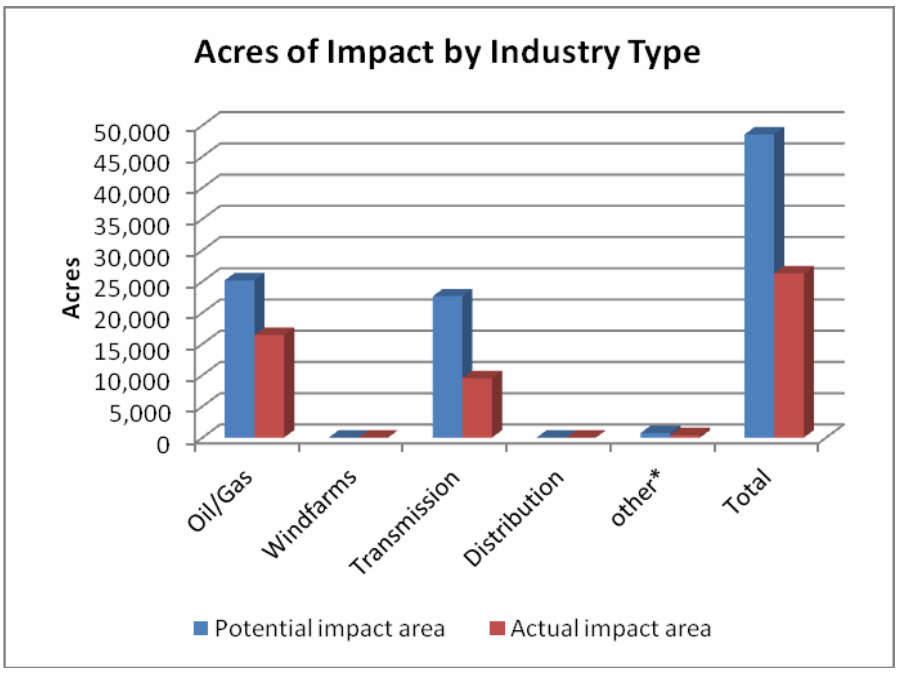

Figure 4. Acres of Impact by Industry type.

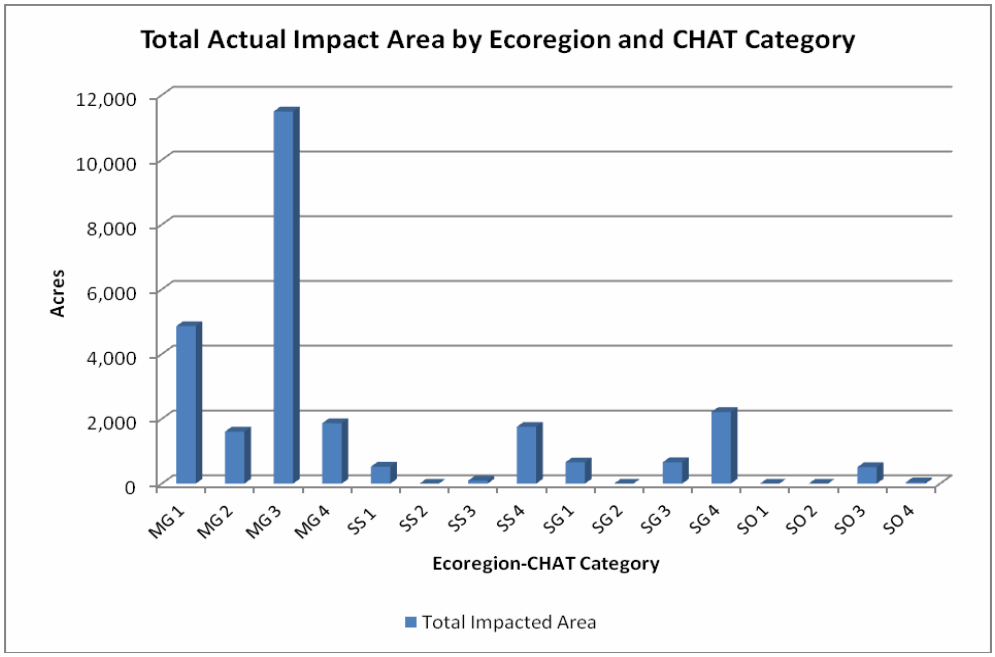

Figure 5. Total actual impact area by ecoregion and CHAT category.

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While impact acreage is important, it is only part of the mitigation framework under the RWP. This framework utilizes habitat units, which include both acreage and a proportional habitat quality such that one acre of the highest quality habitat equals one unit. If the habitat quality on that acre falls to 0.5, then the acre accounts for a half a habitat unit. For impacts the habitat quality is assessed prior to impacts, and a company can significantly reduce mitigation costs by avoiding high quality habitat for development in favor of lower quality habitat. Those impacts must be offset with iterative short-term conservation contracts or permanent easements at an average 2:1 mitigation ratio and those offsets use the same system of habitat units based on acreage and habitat quality. Those impact and offset units are tracked in ecoregion specific ledgers that are displayed in full in Appendix A-F.

Assessing habitat quality in the field requires significant staff and resources. Given the timing of the listing in the middle of the breeding season, the last minute nature of the bulk of the enrollments, and the rapid turn-around required for many of the industries, WAFWA created an impact estimator tool as an option for companies to address those issues. This tool uses spatial data such as land cover, soils, and cropland data to estimate habitat quality and mitigation costs from a desk top analysis. However because of the large-scale nature of the data sources used, they are poor predictors for project level habitat quality. Furthermore, USFWS requires that WAFWA mitigate for all impacts prior to the start of construction. The only answer, given the available data was to build an estimator tool that overestimates habitat quality to ensure that sufficient mitigation funds are in place in the event the model under predicts habitat quality. Any overpayment is credited back to the participant company once the fieldwork is completed. The tracking ledgers in Appendix A-F display the estimates and adjustments once the field habitat assessment is completed.

We examined the performance of this tool based on 137 projects where both estimated impacts and final impact calculations were available. While it underestimated impact units and mitigation costs in only 5.1% of cases, it also over-estimates the impact units and mitigation costs by an average of 340% or 26 extra units per estimate. While this system works to speed up the mitigation process, it also means extra short-term cost for participant companies and requires WAFWA to have the additional offset units available to cover those estimated impacts. Due to the complexity it creates, WAFWA is working to phase out the use of this estimator tool over the next year for mitigation and speed up the process for getting field data to calculate actual impacts. WAFWA is working diligently to accelerate the timing of the mapping and field habitat assessment process to meet a 10-day goal for assessment of small-scale projects such as wells, compressor stations, and distribution lines. Larger projects will require more time. Over the coming year, we intend and reach and maintain that goal, which will allow companies to build that process into their normal development timelines. We will also begin to impose deadlines on the return of habitat evaluations for companies performing their own habitat evaluations. By December 31, 2015, WAFWA will discontinue the use of the impact estimator tool to expedite development. It will still be available for project planning decisions.

Tables 5-8 summarize the impact and the associated offset balance for each CHAT category for each of the four ecoregions. The full data are detailed in Appendix A-F. Impacts are tied to the CHAT category they occurred in, and can only be offset by units in an equal or higher CHAT category. This allows for impacts in CHAT 3 to be offset by conservation sites in CHAT 1, 2 or 3. Accordingly, any negative account balances within any CHAT category can be "absorbed" by available positive balances in higher level categories.

Table 5. Sand sagebrush Offset/Impact summary

CHAT	offset units	impacts	balance
1	4175.7	-416.8	3758.9
2	0.0	0.0	0.0
3	0.0	-151.6	-151.6
4	0.4	-16.4	-16.0
Total	4176.1	-584.8	3591.3

Table 6. Shortgrass Offset/Impact summary

CHAT	offset units	impacts	balance
1	1191.3	-471.9	719.4
2	0.0	-51.1	-51.1
3	1.4	-259.4	-258.0
4	12.4	-211.0	-198.6
Total	1205.1	-994.4	211.7

Table 7. Shinnery oak Offset/Impact Summary

CHAT	offset units	impacts	balance
1	4667.4	0.0	4667.4
2	0.0	0.0	0.0
3	82.4	-475.8	-393.4
4	3.1	-25.8	-22.7
Total	4752.9	-501.6	4251.3

Table 8. Mixed grass Offset/Impact Summary

CHAT	offset units	impacts	balance
1	16,176.1	-2974.7	13,201.4
2	313.8	-899.3	-585.5
3	1072.8	-5171.2	-4098.4
4	1594.4	-660.6	933.8
Total	19,157.2	-9705.9	9451.3

The important thing is that the balance of available offset units not only remains positive to allow for additional development, but that there is a significant buffer to absorb bursts of development or large projects like transmission lines or wind farms. The positive balances in each ecoregion are currently sufficient for immediate development needs, but they are also going to increase rapidly due to two factors. First, the current offset units are reflecting only 50% of their annual supply, with the balance made available after field work is performed during the 2015 breeding season. This release of the second half of the offset units will add a total of 14,570 additional units based on current contracts, and if a couple contracts that are in process are completed, the total offset units could be 55,204 across the region by the fall of 2015. Additionally, field reconciliations have not yet been completed on 85 projects that were mitigated based on the estimator tool. Based on the average error rate described above, these projects are probably requiring about 10,000 additional units at the current time that will eventually be removed from the ledger when they have been reconciled with actual field data.

Within the full line-item tracking ledger, eight columns provide information on each project that that has been authorized for construction. Table 9 is a sample table showing how the log tracks the date, impact/offset ID, charge type, the type of project, cost, impact units, offset units, the conservation offset site ID used to mitigate specific projects, the offset site balance, and the overall ecoregion offset balance.

Table 9. Sample ledger showing how impact/credits are tracked and balanced

Entry Date	ID	CHAT	charge Type	impact type	impact cost	Impact units	Offset Credits	Offsetting Site ID	Offset Site Balance	Ecoregion Offset Balance
4/21/2014	2	2	impact estimate	well	$492.94	-0.50		5	50.00	-0.50
4/23/2014	3	4	impact estimate	well	$184.75	-2.50		5	-3.00	-3.00
4/25/2014	4	1	impact estimate	well	$0.00	-1.00		5	-4.00	-4.00
5/1/2014	5	1	Cons. Offset	offset			50.50		-4.00	46.50
5/22/2014	6	3	impact estimate	well	$2,082.00	-0.50		5	-4.50	46.00

At first observation, it is apparent the ecoregion offset balance goes negative prior to any offset units being available. This negative balance is a result of the one-year waiver period for oil/gas well development that gives WAFWA time to get land owners signed up and acquire a balance offset units. This waver period was only for oil/gas well development and ran from March 1, 2014 to March 30, 2015. When examining the ledger, a site is entered on the date which it begins requiring mitigation or generates offset units. This reporting period WAFWA signed up landowners in conservation offset contracts within each ecoregion to provide the necessary offsets for non oil/gas projects and to have a positive balance on March 31, 2015.

While the service area summary ledgers include some overestimation of impacts because of the use of the estimator tool, they still provide significant information to assess the rate and scale of development across ecoregions. As with enrollment and impact acres, the majority of the impact units are occurring in the Mixed Grass Ecoregion with only small amounts occurring in the other

service areas. As noted above, most of the development impacts in the Shinnery Oak Ecoregion are covered by and mitigated under the New Mexico CCA/CCAA.

These service area summary ledgers also provide important information to assess the quality of habitat where the impacts are occurring. The annual impact units in these tables are calculated as:

Annual Impact Units = Affected Acres X Habitat Quality X CHAT Mitigation Multiplier

Based on above, we can calculate the average Habitat Quality (also referred to as the HEG score in the RWP) using the actual impact area for each service area and CHAT category from above. The HEG score is represented as a proportion, from 0 to 1, where 1 is the highest quality habitat and 0 is the poorest quality habitat. The results are contained in Table 10.

Table 10. Average habitat quality scores (HEG scores) for new impacts mitigated under the LPC Range-wide Conservation Plan during the first year of implementation (2014-2015).

CHAT	Mixed Grass	Sand Sagebrush	Shortgrass	Shinnery Oak
1	0.24	0.32	0.29	ND
2	0.27	ND[a]	ND	ND
3	0.23	0.90	0.22	0.52
4	0.22	0.01	0.06	0.38
Average	**0.24**	**0.31**	**0.14**	**0.22**

[a] ND = no data.

The average HEG scores in Table 10 provide information to demonstrate that the companies participating in the RWP are generally avoiding development in high quality habitat for LPCs. The average HEG score for all new impacts mitigated under the first year of the RWP across all four service areas is 0.23. This score corresponds to poor quality sites that are either heavily degraded, have inappropriate soil types and vegetation composition for LPC habitat, are invaded by trees, or are highly fragmented by agriculture. As we noted above, the impact acreage provides evidence that companies are selecting project sites with extensive prior impacts, but prior impacts and impact buffers are not considered as part of the HEG score. So companies are also selecting low quality habitat for development, separate from their efforts to cluster and co-locate development. The CHAT website provides tools to assist participant companies in assessing potential habitat quality and mitigation costs for proposed developments. These web-based tools are receiving nearly 90,000 hits per week, on average. This access to information is obviously assisting these companies in project siting decisions. The RWP mitigation framework was designed to incentivize avoidance of high quality LPC habitat, and this information provides significant evidence to demonstrate that it is accomplishing its intended goals in the first year of implementation.

Note that in some instances no impact units were added in CHAT 1 and 2 within three service areas (Table 10). This does not necessarily mean that no development occurred in those areas. Because the annual impact units are the product of the affected acreage, CHAT impact multiplier and habitat quality, new development can occur in places where the habitat quality is a zero and produce no impact units. An example of this would be large areas of cropland, where no rangeland or planted grass exists. Projects could have been collocated completely within existing impact buffers which would have also produced zero impact units.

EMERGENCY REPORTING PROVIDED TO USFWS SECURE WEBSITE

We had two reported instances of emergency operations during the 2014 breeding season. A summary of those operations is listed below:

- On May 1, 2014 at 8:30 AM/CDT, a compressor in the Mixed Grass Region in Beaver County, OK went down on a Turbo issue (shut down). Personnel had to enter the station to restart the compressor in order to protect the integrity of the pipeline in the field. This was to ensure human safety and to avoid environmental impacts from a blow-out. The restart was completed that morning.

- A compressor in the same station as above went down due to High Discharge Pressure (shut down) on May 9, 2014 at 7:50 AM/CDT. Personnel had to enter the station to restart the compressor in order to protect the integrity of the pipeline in the field. This was to ensure human safety and to avoid environmental impacts from a blow-out. The restart was completed that morning.

Additional information about this report has been provided to USFWS on a secure website that allows the agency to view the documents without the ability to download them.

There were six additional reports by companies of activities that did not violate breeding season restrictions and did not require reporting. These activities were either conducted in areas where breeding season restrictions do not apply (CHAT 4) or were conducted on existing roads or facilities (no off-road travel) between the hours of 9:00 AM and 3:00 PM.

There is also the potential for additional emergency operations to be reported associated with an unresolved compliance notice which is described below in the non-compliance reporting section. The company failed to report any emergency operations, but while reviewing a self-reported non-compliance it appears the company may have had well in progress of drilling at enrollment that were not completed by the beginning of the breeding season. Drilling is a 24-hour operation that requires the presence of personnel until the well is completed in order to prevent explosions or spills that may result in human or environmental health and safety issues. These activities are not allowed under the CCAA within 1.25 miles of active leks or within 1.25 miles of CHAT 1-3 areas that are not surveyed for leks. However, if a company had ongoing drilling before enrollment, those activities are allowed until the well is completed under emergency operations.

WAFWA is working with this company to evaluate whether these operations occurred, and if so we will report them to USFWS via the secure website and include them in subsequent reports.

NON-EMERGENCY WORK WITHIN 1.25 MILES OF ACTIVE LEK DURING BREEDING SEASON

We had no reported instances within 1.25 miles of a known lek. Two companies submitted reports of activities, although both were unaware of leks within 1.25 of these activities and reported them because of that unknown survey status.

- One company reported three pipeline repairs that required digging. All four instances were in the Mixed Grass Ecoregion in CHAT 4 in Barber County, Kansas. Two of the three locations were in cropland. CHAT 4 has a very low probability of lek occurrence and surveys are not required in these areas by the RWP. The company was not required to report these instances.
- A second company reported activities on three wells in the Shortgrass Ecoregion in Kansas that occurred prior to their enrollment in the agreement. The company also reported a seismic survey that was in process during their enrollment (effective May 9, 2014). The survey occurred in Sheridan Gove and Thomas, Counties in KS and occurred from April 1- August 25, 2014. The company reported that they avoided work during the 3:00 am-9:00 am period. They also noted that the area was 75-80% cropland. WAFWA has requested additional information from the company on the location of those surveys, but notes that recent analysis by the Science Working Group identified areas with less than 34% grassland are low probability lek habitat and are excluded from lek survey requirements and breeding season conservation measures.

WAFWA has made these reports available to the USFWS to review on the secure website.

SUMMARY OF LPC MORTALITY OR INJURY

No mortalities or injuries of LPCs were reported during this reporting period.

SUMMARY OF CCAA NON-COMPLIANCE MONITORING

The listing of the LPC and the majority of the enrollments in the CCAA occurred about the mid-point of the 2014 breeding season, and the majority of the compliance monitoring is related to breeding season stipulations defined under the Conservation Measures in the agreement. So, for the first year of implementation, WAFWA focused heavily on outreach and education to ensure compliance. Our staff spent countless hours on the phone, in face-to-face meetings across five states, and giving presentations at industry association meetings and in-service trainings to inform participating companies and answer questions about enrollment, project siting, conservation measures, habitat assessment, mitigation, and LPC lek surveys. This personal, service-oriented effort helped avoid problems before they began.

There were two non-compliance reports in the first year of CCAA implementation and two issues identified related to lek surveys.

- One report involved the construction of a well before mitigation. The company contacted WAFWA to ask about payment of an outstanding invoice. During the conversation, they informed WAFWA that the well had been drilled, was a dry hole and the company was planning to remediate the location. WAFWA informed the company that construction cannot proceed until mitigation has been finalized. The company was unaware of that requirement, but they paid the mitigation fees for the location when informed of the requirement. We also informed the company that after March 30, 2014. Conservation credit must be secured before the mitigation can be completed, and that WAFWA will begin random compliance visits in 2015. A compliance notice has been issued to the company and WAFWA considers this issue resolved. WAFWA has shared this compliance notice with US Fish and Wildlife on its secure document sharing site.

- The second report involves two issues a) drilling new wells on pads constructed before listing without mitigation and b) failure to follow breeding season stipulations and conservation measures in areas that were not completely surveyed. These issues were self-reported by the company when they realized they were not in compliance, and they immediately submitted all unmitigated locations for payment. WAFWA has issued a notice of non-compliance to this company and that notice has been shared with USFWS on the WAFWA secure document website along with the initial report by the company. The company has taken steps to educate their staff about the breeding season requirements and assures WAFWA that these violations are not continuing. WAFWA is still working with this company to determine the full extent of those breeding season violations. WAFWA considers that issue unresolved as of this reporting date, but expects to resolve it in the near future.

- WAFWA also rejected lek surveys performed by two companies for failure to follow the required protocols. WAFWA has informed the participant company and the consulting firm that performed the surveys of that failure. While not technically a non-compliance issue, WAFWA has shared documentation of this failure with USFWS through its secure document web site.

WAFWA staff will begin random compliance monitoring visits in 2015. These visits will document existing infrastructure at a project location to ensure that mitigation was completed for all new construction. They will also ensure all conservation measures defined in the agreement are being followed. Allowing compliance monitoring visits is defined as an obligation of the participants under Section XI(A) of the CCAA agreement and the conditions of access are outlined in that section.

RWP Conservation Program

The RWP establishes a mechanism to enroll private or state lands to produce conservation benefits to LPC by implementing management practices that will improve habitat quality and quantity. Offset units will be generated by enrolling a property into an agreement with WAFWA

or one of its technical service providers. A property must be at least 160 acres in one block to be eligible to produce offset unit. This eligibility requirement is to ensure that habitat is being managed at a sufficient size to provide a meaningful benefit to the species. Multiple landowners may cooperate to produce a management area meeting the size requirement. The property must be managed in compliance with a WAFWA-approved management plan to generate offset units. Each year a property is in an agreement, it will generate offset units based on the LPC habitat quality and the acreage of unimpacted by development. This system is performance-based which means higher quality habitat generates more offset units per acre. This will result in higher payments for landowners who manage their property well. The maximum rate that offset units may be generated is 1.25 units per acre per year where the HEG score is equal to one and the property falls within a focal area.

Conservation Funding Strategy

Currently, a ratio of 75/25 is used to split conservation agreements between dynamic permanently conserved sites and perpetually conserved sites. The dynamic permanent conservation sites are five and ten year term contracts that can shift around the landscape. When these term contracts expire WAFWA will find another term contract with equal or greater value to replace the expired one. The perpetually conserved sites are high quality habitats or sites with potential to be restored to those conditions. The perpetually conserved sites will adhere to the conservation banking guidelines set forth by the USFWS for the species. Funding for both portions of the WAFWA program will be available in perpetuity because all of the conservation funds are in endowment and operational expenses only utilize the interest from that account.

The 75/25 funding split was chosen as the initial ratio for two primary reasons. First, WAFWA will be able to affect a far greater number of acres with the majority of funding being targeted toward term contracts. Applying beneficial conservation practices on the maximum possible acreage provides the best opportunity to stabilize or increase the LPC population. This approach has proven to be successful at recovering the LPC as demonstrated by the range expansion and population growth observed in Kansas shortly after the implementation of the conservation reserve program (Rodgers and Hoffman 2005). Secondly, a dynamic approach provides WAFWA with some flexibility to adapt to future changes to environmental conditions that may influence the ability of a specific site to support LPCs. The 75/25 ratio will be evaluated periodically through the adaptive management process described in the LPC range-wide plan.

Participation in Dynamic Permanent Conservation Contracts

Landowners can apply for a 5 or 10 year term contract with WAFWA at any time throughout the year. Landowners must apply for a 10 year contract if restoration is required on the property. This is required to ensure to maximize the cost benefits of the restoration work which requires a large up-front payment. It often can take several years after completing restoration work for a site to be fully restored, especially in the more arid ecoregions.

Two types of conservation plans are available for landowners to choose. The first is a rangeland conservation plan which utilizes livestock grazing as the primary management practices. The other option is a planted grass management plan which utilizes disturbance other than domestic livestock grazing to create and maintain suitable vegetative conditions for LPC (e.g. disking and prescribed fire). WAFWA can prescribe 27 different conservation practices in these plans and they must be implemented to the standards described in the range-wide plan. The practices and their standards mimic those approved in the USFWS's biological opinion for the NRCS LPCI with 3 exceptions. The grazing applied through the RWP will be prescribed at 33% total utilization rather than 50%, all trees will be felled when brush management is prescribed, and there will be no chemical treatment of sand sagebrush.

The first landowner application for a term contract was received by WAFWA on November 14, 2013. From that date until the end of this reporting period a total of 48 applications were submitted. Through those applications, landowners offered 309,154.5 acres with the greatest amount coming from the mixed grass service area (Table 11). When contracts were needed to offset industry impacts, all applications on hand were ranked using an established set of criteria and offers were selected based on their value to LPC and availability of sufficient funding. Prior to the end of the reporting period a total of 11 contracts had been offered to landowners across the LPC range. Those offered contracts contained 68,874 acres with the majority located in the mixed grass service area (Table 11).

Table 11. Summary of applications and offered contracts for WAFWA offset unit generation certificates of participation. Data are summarized from program inception through February 28, 2015.

Service Area	Number of Applications	Total Acres	Number of Contracts Offered	Acreage Contained in Offered Contracts
Sand Sagebrush	3	21,165	2	19,352
Shortgrass	10	22,722	4	10,072
Mixed Grass	24	231,778	2	23,325
Shinnery Oak	11	33,489.5	3	16,125
Range-Wide	**48**	**309,154.5**	**11**	**68,874**

Of the 11 contracts offered prior to February 28, nine were for rangeland conservation plans and two were for planted grass management plans. Two contracts from the initial offering were declined due to an unknown reason and insufficient time for the landowner to adjust to the prescribed conservation practices (i.e. no time to reduce herd size). Six of the contracts were executed prior to the reporting cut-off date (4 rangeland & 2 planted grass). Those six contracts are all 10 years in duration and contain 37,767.0 acres of which 30,962.9 are unimpacted (Table 12). There are 1,268 acres of restoration prescribed for the next reporting period within these contracts. Those prescriptions call for 628 acres of brush management in the mixed grass service

area and 640 acres of range planting in the shinnery oak service area. The three remaining contracts were still conditional at the end of the reporting period with an execution date scheduled prior to the end of March. Those three contracts would all be 10 years in duration and contain 20,620.0 acres of which 17,005.3 are unimpacted (Table 12). There are 12,564 acres of brush management prescribed in those pending contracts.

Table 12. Status of contracts offered to landowners prior to February 28, 2015 and their associated total and unimpacted acreages.

Service Area	Contracts	Total Raw Acres	Total Unimpacted Acres	Unimpacted CHAT 1	Unimpacted CHAT 2	Unimpacted CHAT 3	Unimpacted CHAT 4
Sand Sagebrush							
declined	1	6,663.0	5,093.4	4,429.6	203.3	67.5	393.0
pending	0	0.0	0.0	0.0	0.0	0.0	0.0
executed	1	12,689.0	9,997.6	9,997.6	0.0	0.0	0.0
Shortgrass							
declined	1	3,824.0	3,305.8	2,123.3	0.0	1,182.5	0.0
pending	2	5,135.0	4,987.6	978.2	4,009.4	0.0	0.0
executed	1	1,113.0	1,043.0	1,043.0	0.0	0.0	0.0
Mixed Grass							
declined	0	0.0	0.0	0.0	0.0	0.0	0.0
pending	0	0.0	0.0	0.0	0.0	0.0	0.0
executed	2	23,325.0	19,364.2	13,261.3	0.0	140.3	5,962.6
Shinnery Oak							
declined	0	0.0	0.0	0.0	0.0	0.0	0.0
pending	1	15,485.0	12,017.7	10,739.5	0.0	1,278.2	0.0
executed	2	640.0	558.1	558.1	0.0	0.0	0.0
Range-Wide							
declined	2	10,487.0	8,399.2	6,552.9	203.3	1,250.0	393.0
pending	3	20,620.0	17,005.3	11,717.7	4,009.4	1,278.2	0.0
executed	6	37,767.0	30,962.9	24,860	0.0	140.3	5,962.6

Two additional rangeland contracts were offered to landowners in the mixed grass service area following the February 28 cut-off date for reporting. Those 2 contracts contain an additional 38,712.0 acres with 23,182.0 located in CHAT 1, 377.8 located in CHAT 2, 502.1 located in CHAT 3, and 8,817.4 located in CHAT 4. Those 2 contracts are also scheduled to be executed by the end of March. There are an additional 1,528.5 acres of brush management prescribed in these late contract offers.

Each of the executed contracts produces offset units that are used to offset industry projects in the same service area. One half of the expected units for year one are immediately when the

contracts are executed. Breeding season vegetation monitoring will be conducted between March 15 – July15 on all contracted sites and the actual number of annual units produced in year one will be calculated using those data. The difference between the initial release of offset units and the actual calculated number will be available immediately after the breeding season monitoring is completed. In subsequent contract years, all of the annually generated offset units will be released immediately after the breeding season monitoring has been completed.

The 6 contracts that were executed by February 28, 2015 produced 9,150.3 offset units on the date of their signing with an equal number expected immediately after the breeding season vegetation monitoring is completed (Table 13). These 6 contracts are expected to produce 231,836.0 offset units during their duration. The 5 pending contracts offered prior to the end of the reporting period and the 2 late offers are anticipated to produce an additional 36,903.7 offset units during 2015 (18,415.9 available at execution).

Table 13. Offset units generated from 6 contracts executed prior to February 28, 2015. Five additional contracts have been executed or are scheduled to be executed by March 31, 2015.

Service Area	Offset Units Released at Contract Execution[a]	Expected Total Offset Units Generated for 2015	Expected Total Offset Units for Contract Duration[b]
Sand Sagebrush	4,173.9	8,347.7	94,276.9
Shortgrass	146.5	293.0	5,312.7
Mixed Grass	4,541.9	9,083.7	125,757.2
Shinnery Oak	288.0	576.0	6,489.2
Range-Wide	**9,150.3**	**18,300.6**	**231,836.0**

[a] One half of the expected annual units generated for year one of a contract are released on the date of execution.
[b] All executed contracts summarized in this table are 10 years in length.

Progress toward meeting permanent conservation goals

The RWP establishes a goal of 25,000 acres of permanent conservation within each service area by year 10. At the time of this report, no permanent conservation sites had yet been established through the RWP. However, WAFWA recently purchased a piece of property demonstrating progress towards the permanent habitat goals. The administration and management of the property will adhere to the USFWS conservation banking standards. Generally this means the property will carry a perpetual easement and a management plan will be created to ensure the sites is providing sufficient LPC habitat. Endowments will be established to cover monitoring and management activities on the property in perpetuity. Within 90 days, this particular property will annually generate approximately 10% of the offset units that are expected to be produced in 2015.

WAFWA is considering other potential permanent conservation opportunities. They are evaluating proposals from 2 different conservation bankers who have three established bank sites across the range. WAFWA is also in negotiations for purchase of title and/or easements on 2 other high quality pieces of LPC habitat. Finally, several other landowners have expressed interest and/or asked to be considered for permanent conservation sites in the future.

Remediation of Impacts to Generate Offset Units

Offset units can also be generated by remediation of existing impacts as described in the RWP. Those remediation units are reserved for the company which generates them and can be banked for their use for future developments. In some instances, remediation offset units are required before development can occur. The RWP establishes impact goals of 30% for CHAT 1 reporting units and 60% for CHAT 2 reporting units. Some of those reporting units already exceed those goals which means that remediation must occur before participant development in those areas can be initiated (Appendix D&E, Van Pelt et.al 2013). To date, no remediation activities have occurred through the RWP but a few requests have been submitted. Those requests will be completed during the next reporting period.

Participation on non-offset generating certificates of participation

Landowners can also request for WAFWA to generate a non-offset generating conservation plan for their property. Those plans do not provide any payments to landowners but they do provide exemptions from the take prohibitions of the endangered species act for conservation practices being implemented as prescribed. During this reporting period the WAFWA had requests from 2 landowners for non-offset generating agreements covering 20,322 acres. One agreement was prepared and executed prior to the end of the reporting period. That one agreement provided take exemptions for prescribed grazing and prescribed fire on 8,598 acres in the mixed grass service area. The second non-offset plan has not yet been prepared but will be completed during the next reporting period if the landowner still so desires it be done. That agreement would provide the landowner with take exemptions on 11,724 acres in the shortgrass service area.

Summary of acres enrolled in federal and state programs specifically targeted and implemented to benefit lesser prairie-chickens

Lesser Prairie-Chicken Conservation Initiative: In 2010, NRCS launched the Lesser Prairie-Chicken Conservation Initiative (LPCI). The objective of this initiative is "to increase the abundance and distribution of the LPC and its habitat while promoting the overall health of grazing lands and the long-term sustainability of ranching operations. The USFWS completed a biological opinion of the LPCI on August 13, 2014. The opinion provided a description of 27 conservation practices that could be implemented through the program that the USFWS deemed to be benign or beneficial to LPCs.

Two of the 27 approved practices are considered core conservation practices. The primary core conservation practice is upland wildlife habitat management (645) and prescribed grazing (528) is considered a secondary core management practice when livestock are present. Implementation

of core practices is required in order to develop a landowner's conservation plan that will focus on improving habitat and reducing threats to LPC. This is important because implementing LPCI under 645 ensures that all other LPCI practices are implemented specifically to benefit LPCs.

Additional conservation practices are often necessary to facilitate the implementation of the core practices. One of those facilitating practices is brush management (314) which is used to restore or enhance the native plant community. This practice provides substantial benefit to LPCs because it restores habitat by removing undesirable woody vegetation and improving plant diversity. There are many other practices being applied through LPCI that provide benefit to LPCI, but the 3 previously described collectively provide the greatest benefits to the species. So, for the purpose of this report only the acreages associated with those 3 practices will be summarized.

A total of 181,543 acres of prescribed grazing (528) were applied through LPCI during the 2014 federal fiscal year and more than 320,000 acres have been applied since 2010 when the program was initiated (Table 14, Figure 6). Upland wildlife habitat management (645) was not prescribed on every LPCI acre prior to the completion of the biological opinion. However, some of the states were applying the practice and in the last federal fiscal year a total of 105,118 acres were prescribed and since 2010 the practice has been applied to more than 260,000 acres (Table 14, Figure 7). All LPCI contracts generated during the current federal fiscal year will utilize 645 on every managed acre. Finally, a total of 28,340 acres were treated with brush management during the last federal fiscal year and more than 100,000 acres have been treated since 2010 (Table 14, Figure 8). Many of these acres were previously completely unusable by LPC and all of the acres were at least in a degraded condition. Through the LPCI program, landowners were paid approximately $2,935,894 for implementing conservation to benefit the LPC during 2014.

Table14. Acres of habitat improvement implemented through the NRCS lesser prairie-chicken initiative for the two core conservation practices (528 & 645) and brush management (314). Acres are reported by ecoregion and CHAT category for the most recent federal fiscal year and total since the first year of program implementation (2010).

Service Area	Prescribed Grazing (528)		Upland Wildlife Habitat Management (645)		Brush Management (314)	
	FY 14	*Total*	*FY 14*	*Total*	*FY 14*	*Total*
Sand Sagebrush						
CHAT 1	772	2,166	1,673	26,314	0	0
CHAT 2	0	0	0	1,784	0	0
CHAT 3	418	1,253	263	17,271	263	263
CHAT 4	10,760	31,592	344	344	112	112
Total	*11,950*	*35,011*	*2,280*	*45,713*	*375*	*375*
Shortgrass						
CHAT 1	6,502	22,050	0	131	0	0
CHAT 2	79	236	0	0	0	0
CHAT 3	4,573	10,511	0	0	0	0
CHAT 4	259	561	0	0	0	0
Total	*11,413*	*33,358*	*0*	*131*	*0*	*0*
Mixed Grass						
CHAT 1	51,699	88,015	9,941	17,370	240	10,388
CHAT 2	6,549	16,139	2,711	7,786	0	2,005
CHAT 3	16,066	38,650	8,423	15,188	1,211	6,708
CHAT 4	10,550	15,318	9,528	16,386	4,115	6,588
Total	*84,864*	*158,122*	*30,613*	*56,730*	*5,566*	*25,689*
Shinnery Oak						
CHAT 1	21,485	24,332	31,340	65,685	4,259	11,967
CHAT 2	22,419	22,419	8,418	25,181	1,080	7,720
CHAT 3	6,238	27,424	16,723	34,902	15,681	53,113
CHAT 4	23,173	23,173	15,754	33,914	1,379	2,306
Total	*73,315*	*97,348*	*72,235*	*159,682*	*22,399*	*75,106*
Range-wide						
CHAT 1	80,458	136,563	42,954	109,500	4,499	22,355
CHAT 2	29,047	38,794	11,129	34,751	1,080	9,725
CHAT 3	27,295	77,838	25,409	67,361	17,155	60,084
CHAT 4	44,742	70,644	25,626	50,644	5,606	9,006
Grand Total	***181,542***	***323,839***	***105,118***	***262,256***	***28,340***	***101,170***

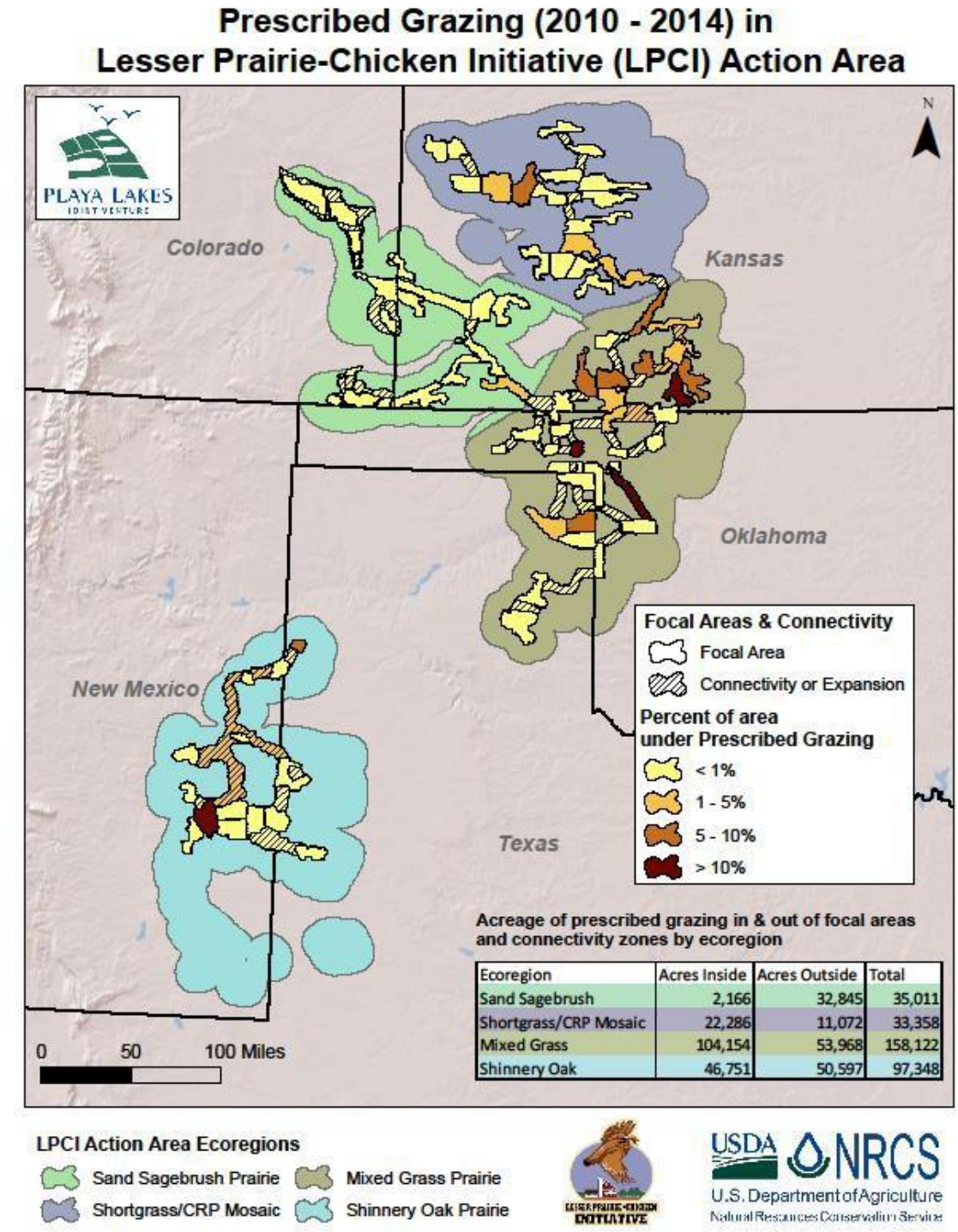

Figure 6. Acres of prescribe grazing (528) applied through the NRCS lesser prairie-chicken initiative since 2010 represented as a percentage of each reporting unit defined in the RWP.

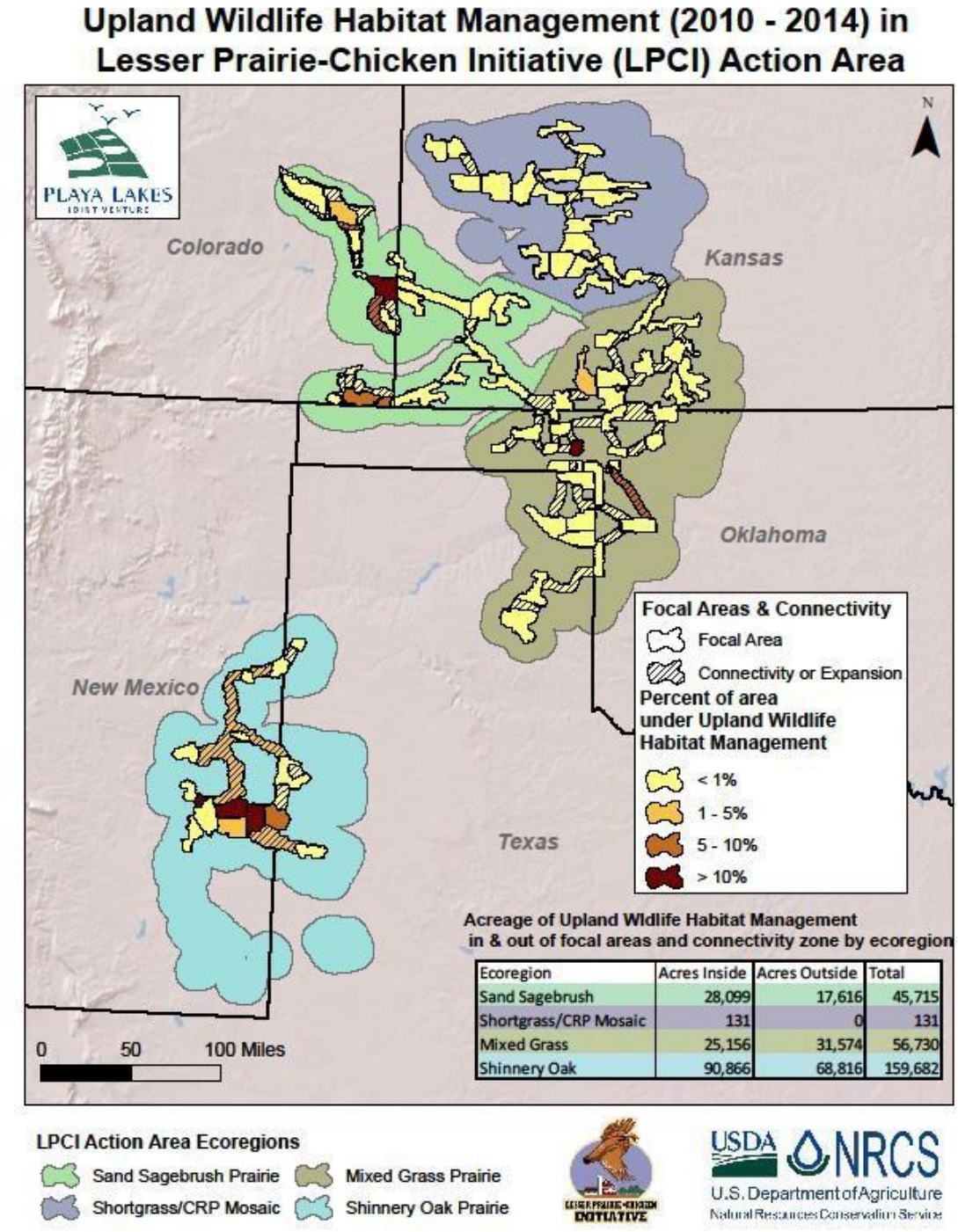

Figure 7. Acres of upland wildlife habitat management (645) applied through the NRCS LPCI initiative since 2010 represented as a percentage of each reporting unit defined in the RWP.

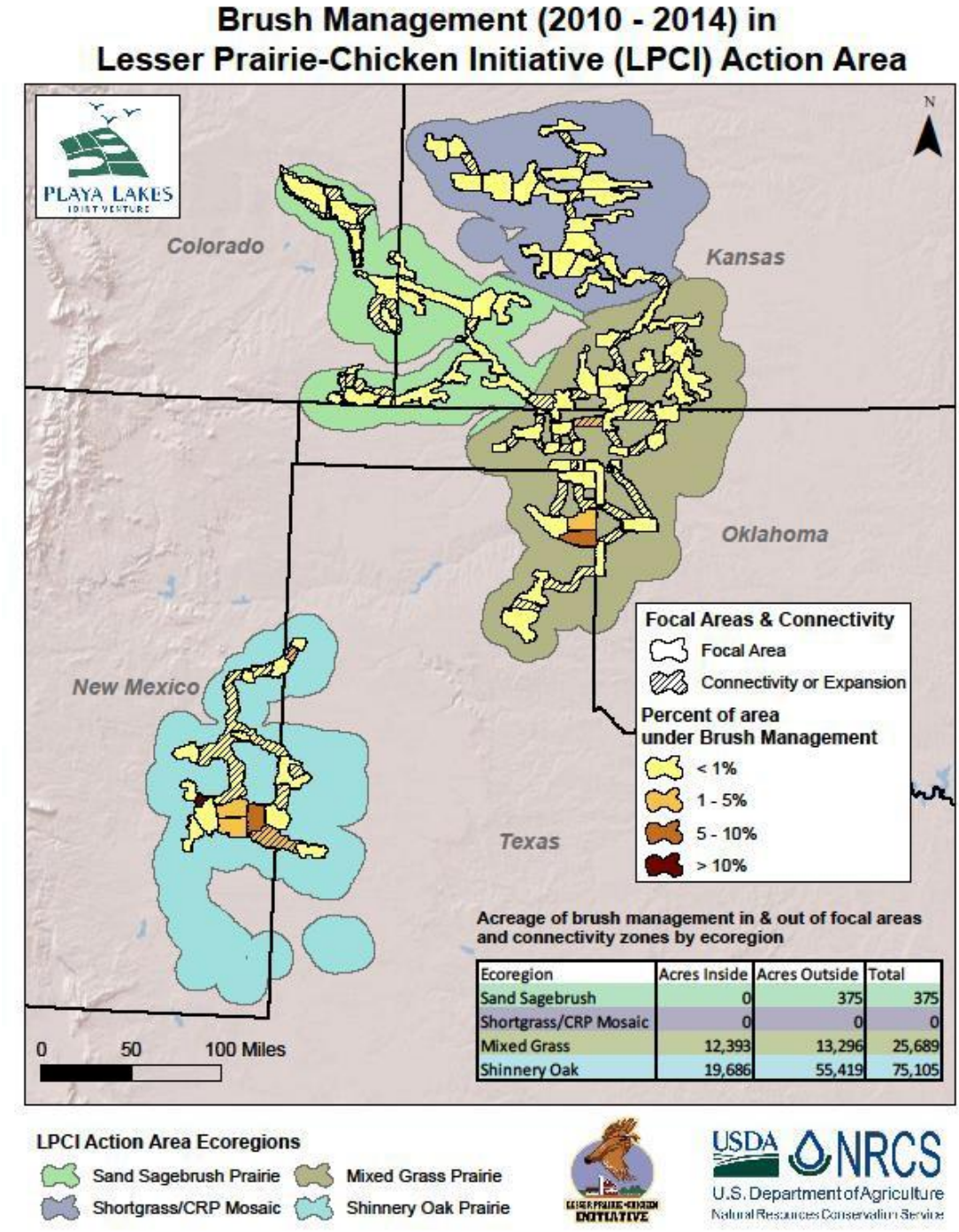

Figure 8. Acres of brush management (314) applied through the NRCS lesser prairie-chicken initiative since 2010 represented as a percentage of each reporting unit defined in the RWP.

Producers identified as having LPC habitat or potential LPC habitat who are not part of LPCI but participate in other NRCS programs will also be using conservation practices as described in the biological opinion. Producers in this situation are not required to implement these practices under a management plan developed in accordance with the core practice of upland wildlife habitat management (645) but the practices they implement generally still provide benefit to LPC. The acres from those other NRCS programs (e.g. EQIP) were not available at the time of this report but it should be noted that NRCS is applying beneficial conservation on a far greater number of acres than reported just for LPCI.

Conservation Reserve Program: CRP is a voluntary program for agricultural landowners administered by FSA that incentivizes landowners to take cropland out of production and plant it to native grasses and forbs. The conversion of these lands back to grassland promotes habitat connectivity, which helps address LPC threats like climate change and extreme weather events. The program also addresses grazing threats by providing millions of acres of grassland habitat that are managed by many different mechanisms. Participants in the program are required to maintain the prescribed vegetation conditions, which includes control of noxious weeds. They are also required to implement some type of periodic management to promote wildlife habitat. The various management practices that can be implemented include shallow disking, prescribed burning, herbicide usage, inter-seeding with legumes and forbs, and periodic managed grazing.

There is fluidity in CRP enrollment as individual contracts expire at the end of a 10 or 15 year term and new contracts get enrolled in other locations. In the past, periodic new sign-up periods have been successful at enrolling sufficient acreage to replace expirations and as such the total acres enrolled in the program has remained fairly constant since 1998 (U.S. Fish & Wildlife Service 2014). These acres provide important habitat for LPC and support a large proportion of the range-wide population; especially in the shortgrass service area (Fields 2004, Rodgers and Hoffman 2005, McDonald et al. 2014). Currently, there are nearly 2.9 million acres enrolled within the range of the LPC (Table 15).

There were 119,919 acres that expired across the range during the 2014 federal fiscal year most of which was in the mixed grass service area (Table 15). There was not a general sign-up authorized during the last year so most of those expired acres were not immediately replaced with contracts elsewhere. However, there were new enrollments in the continuous conservation practices but those data were not available at the time of this report. So, it is not clear at this point in time whether there was a net gain or loss in enrolled acres during the last fiscal year. It is important to note that a recent survey discovered that a high percentage of CRP expiring from 2008 through 2011 in each of the 5 states was still being maintained in grass cover in 2012 (range 73% - 97%; USDA 2012).

Table 15. Conservation Reserve Program (CRP) acres expired and newly enrolled during the most recent federal fiscal year by ecoregion and CHAT category. Currently active acres are those that were under contract at the start of the new federal fiscal year. This summary includes acres across all the various CRP practices.

Service Area	Expired FY14	Newly Enrolled FY14[a]	Currently Active
Sand Sagebrush			
CHAT 1	5,343	NA[b]	148,580
CHAT 2	493	NA	20,489
CHAT 3	6,440	NA	334,261
CHAT 4	13,982	NA	402,020
Total	*26,258*	NA	*905,350*
Shortgrass			
CHAT 1	8,168	NA	172,405
CHAT 2	562	NA	11,543
CHAT 3	4,699	NA	155,323
CHAT 4	11,002	NA	243,542
Total	*24,431*	NA	*582,813*
Mixed Grass			
CHAT 1	7,720	NA	123,353
CHAT 2	5,692	NA	63,767
CHAT 3	15,476	NA	285,943
CHAT 4	13,706	NA	132,048
Total	*42,594*	NA	*605,111*
Shinnery Oak			
CHAT 1	1,041	NA	52,883
CHAT 2	1,067	NA	85,860
CHAT 3	20,132	NA	510,160
CHAT 4	4,396	NA	156,569
Total	*26,636*	NA	805,472
Range-wide			
CHAT 1	22,272	NA	497,220
CHAT 2	7,814	NA	181,659
CHAT 3	46,747	NA	1,285,688
CHAT 4	43,086	NA	934,178
Grand Total	***119,919***	**NA**	***2,898,745***

[a] There was not a general sign-up during the 2014 federal fiscal year. There were acres enrolled in continuous practices during the 2014 federal fiscal year but those data were not available at the time of this report.

[b] NA = not available

Partners for Fish and Wildlife Program: The USFWS Partners for Fish and Wildlife (PFW) Program restores, improves and protects fish and wildlife habitat on private lands through partnerships between the USFWS, landowners and others. The objectives of this national program are to: 1) Restore, enhance and manage private lands for fish and wildlife habitat, 2) Significantly improve fish and wildlife habitat while promoting compatibility between agricultural and other land uses, 3) Restore declining species and habitats; 4) Promote a widespread and lasting land use ethic.

The PFW applies habitat practices on private lands to address threats to the LPC. This program utilizes practices and targets limiting factors similar to NRCS programs. Projects are designed to benefit LPC and other wildlife while also supporting working lands including farming and ranching operations. Typical conservation practices directed to LPC habitat conservation include invasive species removal (eastern red cedar, non-native grasses), fence marking or removal, native vegetation planting, prescribed fire, prescribed grazing, and brush control. Through the PFW, the USFWS provides technical assistance and financial incentives to landowners that improve the state of LPC and important habitat on their property. Cooperating landowners agree to use funds for approved wildlife related projects, and manage and maintain the project area for at least 10 years. The program provides technical and financial assistance through a 10-year cost-share agreement. Landowners agree to maintain the conservation practices for the duration of the agreement. During the last calendar year there were 11,736 acres enrolled in the PFW program (Figure 9). The number of active acres enrolled during previous years was not available at the time of this report.

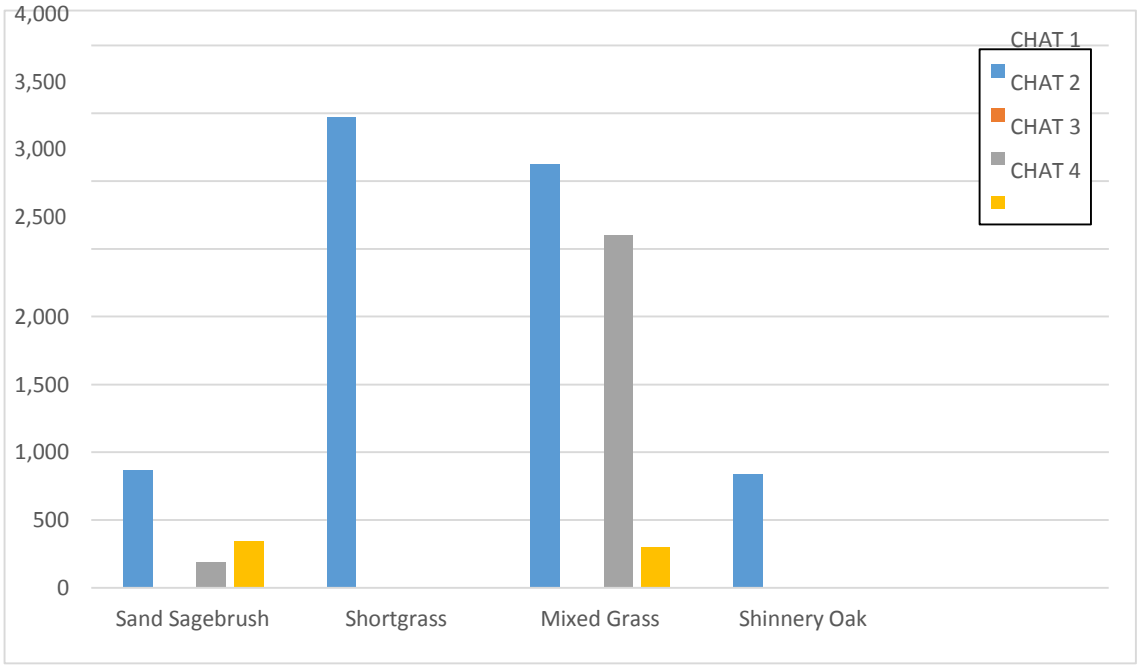

Figure 9. Acres enrolled in the U.S. Fish & Wildlife Service's Partners for Fish & Wildlife Program within each ecoregion by CHAT category during the 2014 calendar year.

Candidate Conservation Agreements: Candidate Conservation Agreements (CCA) are formal, voluntary agreements between the USFWS and one or more parties to address the conservation needs of a candidate species. Participants voluntarily commit to implement specific actions designed to remove or reduce threats to the covered species. They can be entered into by industry or landowners and strong participation can be sufficient to preclude the need to list a species. There are no payments, specific permits, or assurances associated with a CCA and they are entered into primarily by Federal Agencies or other entities operating on federally owned lands. Candidate Conservation Agreements with Assurances (CCAA) are formal agreement between the USFWS and non-federal entities. A CCAA differs from a CCA in that it includes a permit that provides assurances that the holder will never be required to implement additional conservation measures beyond those in the agreement. These assurances apply even if the species is eventually listed under the endangered species act.

Landowner CCAs and CCAAs require the development of site-specific management plans for addressing LPC threats in the following manner:

- Agricultural conversion: Landowner commits to refrain from plowing additional rangeland as long as they are in the program.
- Loss of CRP: Landowner commits to re-enrolling or maintaining expired CRP in grass as long as they are in the program.
- Woody invasive species: Landowner commits to addressing the spread of these species as funding sources become available.
- Shrub control: Agreements restrict sand shinnery control but allow for shinnery oak suppression using reduced rate chemical application.
- Altered fire regimes: Agreements use prescribed fire as a potential option for management and provide cost share options for its application.
- Collision: Agreements require fence marking in the vicinity of known leks.
- Design grazing management plans for incompatible grazing regimes to meet habitat specific goals for individual ranches. This may include stocking rates, rotation patterns, grazing intensity and duration, and contingency plans for varying prolonged weather patterns including drought.
- Climate Change: Increased habitat quality, quantity, and connectivity through the above actions to improve the ability of the LPC to move and respond to climate change.
- Extreme weather events: Increased habitat quality, quantity, and connectivity improve the ability of the LPC to move and respond to weather events like droughts and storms.
- Predation: Increased habitat quantity and improved habitat quality decrease predation on nests, juveniles and adults.
- Disease: Increased habitat quality results in improved physical condition of individual LPC.

The availability of CCAs and CCAAs provide an incentive for landowners to participate in conservation actions that benefit the species prior to a listing. Prior to the threatened listing of the LPC there was a CCA available to landowners operating on public land in New Mexico and

CCAAs available to all other landowners in New Mexico, Texas, and Oklahoma. Enrollment in those programs stopped on the effective listing date of the LPC which was May 12, 2014. Currently, implementation is occurring on 1,577,601 acres enrolled in the landowner CCA in New Mexico and 1,411,659 acres enrolled in CCAAs across all 3 states (Table16).

Table 16. Number of landowners and associated acreage enrolled in candidate conservation agreements (CCA) and candidate conservation agreements with assurances (CCAA) in New Mexico, Texas, and Oklahoma.

State - program	Number of Enrolled Landowners	Enrolled Acreage
New Mexico		
CCA	37	1,577,601
CCAA	72	349,394
Texas		
CCAA	93	671,590
Oklahoma		
CCAA	81	390,675
Total	**283**	**2,989,260**

Tracking Progress Toward Restoration Goals Stated in RWP

Starting with the next report, the collective managed acres contained within each of the previously described programs will be pooled and summarized at the reporting unit scale. Trends since RWP implementation (2014 – present) will be produced annually at that scale to assess spatial and temporal progress and creating and maintaining LPC habitat. Additionally, all the restored acreage will be pooled to assess collective progress toward the established goals outlined in the RWP. Remediated impact acres and restoration acres resulting from management actions will be pooled at the reporting unit scale. The annual and cumulative totals since implementation of the RWP will be compared to the restoration acreage goals presented in Appendix D & E of the RWP to assess progress (Van Pelt et al. 2013).

POPULATION SURVEY

Based on review of the available population information and analyses, the LPC science committee recommended a range-wide population goal of 67,000 birds as an annual spring average over a 10 year-time frame, or an increase of 9.4% from the current 10-year average. If necessary, population goals could be adjusted after the first 10 years of RWP implementation through the adaptive management process.

In 2014, a range-wide aerial population monitoring program was continued for LPC. This survey used helicopters flying standard routes within 15 km by 15 km blocks distributed within four LPC ecoregions (McDonald et al. 2012) consisting of the sand shinnery oak ecoregion in eastern New Mexico-southwest Texas, the sand sagebrush ecoregion located in southeastern Colorado-southwestern Kansas and the western Oklahoma Panhandle, the mixed grass ecoregion located in the northeast Texas panhandle-northwest Oklahoma-south central Kansas area, and the short grass/CRP mosaic ecoregion located in northwestern Kansas and northeastern Colorado. Two hundred forty-five (245) of the grid cells surveyed in 2012 were resurveyed in 2013 and 2014. Thirty-eight (38) additional cells were surveyed in 2013 and in 2014. The same 2 transects were flown in each survey of a given cell. The same field survey and analysis methods were used in 2012, 2013, and 2014.

The annual aerial survey for monitoring progress toward the population goals was conducted between March and May 2014. In 2014, the estimated population size of 22,414 was a 20% increase in the population size relative to 2013 (Table 17). The estimated increase of 3,668 LPC was not statistically significant at the 80% confidence level (p-value > 0.2), however the estimated increase of 3,199 LPC in the Mixed Grass Prairie Region (MGPR) of NE Texas, NW Oklahoma, and S Central Kansas was statistically significant at the 80% confidence level (p-value < 0.2). Despite the range-wide increase, there was a decrease of 1,540 LPC in the Sand Sagebrush Prairie Region (SSPR) of SE Colorado, SW Kansas, and Oklahoma Panhandle which was statistically significant at the 90% confidence level (p-value < 0.1).

Table 17. Estimated total abundance reported in McDonald et al.2014

Ecoregion	Est. #. of leks	Est. Population	% of surveyed leks	% of surveyed pop in ecoregion
Sand Shinnery oak	156	1,292	6.70%	5.76%
Sand Sagebrush	61	477	2.62%	2.13%
Mixed-Grass	650	7,372	27.94%	32.89%
Short-Grass	1460	13,273	62.74%	59.22%
Total	2,327	22,414	100%	100%

In the face of the continuing drought of 2013, estimated populations in the Short Grass-CRP Prairie Region (SGPR) of NW Kansas and Mixed Grass Prairie Region (MGPR) of NE Texas, NW Oklahoma, and S Central Kansas showed modest increases in population sizes in spring 2014.

For the development of the RWP, we reconstructed LPC populations using results from the 2012 range-wide aerial survey as a baseline and forecasted backward using trend data collected by the state wildlife agencies. The first year for which a 10-year moving average can be calculated is 2012 and the figure is 60,702 (Table18). The 10-year average has declined during each of the last 2 years. There was a decline in the 10-year average from 2013 to 2014 despite an annual increase over that period. The annual increase did not fully offset the large decline observed in the previous year which is why the 10-year average continued to decline.

Table 18. LPC Range-wide reconstructed population estimates (Garton 2012) and the 10-year moving average (Garton 2012).

Year	Reconstructed Pop.	10-year moving average
2003	79,090	--
2004	83,670	--
2005	79,896	--
2006	76,469	--
2007	47,549	--
2008	45,822	--
2009	51,264	--
2010	51,057	--
2011	55,036	--
2012	37,170	60,702
2013	18,747	54,668
2014	22,414	48,543
Avg.	60,702	--

FINANCIAL summary of implementing WAFWA LPC RWP

The *Lesser Prairie Chicken Conservation Delivery Business Plan* was established to carry out the financial means necessary to implement the LPC RWP. 10-year plan projections include enrollment and impact fee revenues and investment earnings retained and added into conservation and administration trust funds. During the reporting period, and as a direct impact of implementing the LPC business plan, WAFWA's business structure underwent a mammoth restructuring which included:

1. Establishing a business office in Boise, Idaho;
2. Changing the name of the Audit and Finance Committee to Budget and Finance Committee, expanding its membership from 3 to 6 directors, increasing meeting frequency and instituting closer coordination with the Executive Committee and LPC Council;
3. Completing the transition from a part-time Treasurer to a full-time Chief Financial Officer, with full accompaniment of administrative staff;
4. Implementation of annual, external audits;

5. WAFWA was designated as the permit holder and the establishment of the Western Conservation Foundation (WCF) to be the LPC RWP fiscal agent;
6. The hiring of a firm to provide investment management services to maximize return on investment and ensure financial target within the business plan are being met.

In response to an RFP for Investment Management Services, WAFWA's Executive Committee and Budget and Finance Committee selected four firms and held face-to-face interviews. Following extensive comparisons and discussions, RBC Wealth Management was unanimously selected and approved by the Executive Committee. Both committees defined an investment strategy that would achieve or exceed the conservative investment earnings, projecting a 'real' rate of return over the long term of 4% as outlined in the Business Plan. The investment asset allocation targets 50% Equities, 10% Alternatives/Real Assets, and 40% Fixed Income. The Executive Committee, will at a minimally review all investments and associated costs annually and communication with the CFO/Treasurer will occur throughout the year. In late December 2014, two investment trusts were established to distribute enrollment and impact fees. Upon receipt, fee revenues are split accordingly; 87.5% are allocated to a conservation trust for conservation offsets and 12.5% are deposited into an administration trust for operation related expenses.

Table 19 depicts the current Conservation Trust account activities. *Note: An entire fiscal year of financial data has yet to occur. Fiscal Year 14 only included two months and the current fiscal year has only nine months of activity.*

Table 19. Conservation Trust account activity by fiscal year

	FY15: 7/1/14-6/30/15	FY14: 7/1/13-6/30/14
	Activity July'14-February '15	Activity May & June '14
Enrollment & Assessment Fees	$ 31,767,322	$ 14,110,501
Investment Income	29,980	42
Total Fee Revenue	31,797,302	14,110,543
Landowner Short Term Contracts	545,923	0
Permanent Easements	0	0
Total Deductions	545,923	0
Net Position	$ 31,251,379	$ 14,110,543

Funding amounts for habitat conservation on private/state lands in the states

Although, as of the end of February, there are no permanent conservation easement contracts, WAFWA recently secured a contract for fee-title purchase which will close within 90 days. This property will generate approximately 10% of our total offset need to date. The permanent

easement is 1,554 acres and 1,205 unimpacted acres. The incentive payment is $5,624 and total first year payment $9,592. When permanent easements are negotiated, individual endowments will be established and monitored to ensure the rate of return of the endowment will make the annual perpetuity payments. The current projected endowment of the above permanent easement will be approximately $270,000.

September 2014 through February 2015 WAFWA secured six landowner contracts through the reporting period with additional contracts the following month to offset impacts during the waiver period. These contracts have ten year terms and reflect conservation efforts within the four designated LPC ecoregions. Average annual habitat replacement costs per acre are utilized in calculating the mitigation fees charged to industry and in the payments to secure offset habitats. (Table 20).

Table 20. Mitigation per unit cost by ecoregion through February 28, 2015

	Industry Impacts	Landowner/Offsets
Short Grass	28.77	20.72
Mixed Grass	47.47	38.03
Sand Sagebrush	19.13	20.22
Shinnery Oak	31.70	40.99

The decision regarding ecoregion fund allocation is based upon current conservation habitats that are experiencing impacts. Current ecoregion impacts (Table 21) reflects $546,000 in fee revenues that were used for conservation offsets in year 1. Based on the individual habitat conservation management plans established with each landowner, WAFWA expects to pay six landowners approximately $5.1 million over the next ten years. Pending (in progress or signed after February 28, 2015) term contracts by ecoregion impacts (Table 22) is an additional $1.3 million budgeted toward conservation offsets. In addition, both tables show the price per acre and price per unimpacted acre that was paid by ecoregion.

Table 21. Term contract payments by ecoregion

	Mixed Grass	Short Grass	Shinnery Oak	Sand Sagebrush
Incentive Payments	62,522	1,582	3,265	49,988
Rangeland Management Plan	211,517	4,484	20,211	120,830
Habitat Restoration Payments	71,388	-	133	-
TOTAL	$345,427	$6,066	$23,609	$170,818

Table 22. Pending contract payments and per acre price by ecoregion after February 28,2015				
	Mixed Grass	Short Grass	Shinnery Oak	Sand Sagebrush
Incentive Payments	$136,562	$20,929	$57,532	$0
Per acre price	3.53	4.08	3.72	0.00
Per unimpacted Acre	4.18	4.20	4.79	0.00
Rangeland Management Plan	$558,393	$37,284	$69,704	$0
Per acre price	14.42	7.26	4.50	0.00
Per unimpacted Acre	17.08	7.48	5.80	0.00
Habitat Restoration Payments	$0	$0	$433,077	$0
Per acre price	0.00	0.00	56.09	0.00
Restored Acre	0	0	7,721	0
TOTAL PAYMENTS	$694,955	$58,213	$560,313	$0.00
TOTAL ACRES	38,712	5,135	15,485	0
TOTAL UNIMPACTED ACRES	32,696	4,987	12,018	0

When applicable, habitat restoration payments are made at the end of each year. A habitat management plan is outlined for each property selected within one or more of the four designated ecoregions. The plans are reviewed annually and adjusted accordingly. Year one of the LPC RWP indicates 27% of the total $1.9 million in anticipated payments are going toward habitat restoration, both executed and pending contracts. Table 23 summarizes the total acres of unimpacted acres and total year one payments for both executed and pending landowner contracts.

Table 23. Total amounts for all executed and pending landowner contracts: year 1					
Total Acres	Total Unimpacted Acres	Total Incentive Payments	Total Rangeland Management Payments	Total Restoration Payments	Year 1 Total: all payments
97,099	80,664	$332,383	$1,021,457	$504,597	$1,858,438

RESPONSIBLE PARTIES FOR RWP ADMINISTRATION

The WAFWA was founded in 1922. It currently consists of 23 member states and provinces that have primary responsibility and authority for protecting and managing fish and wildlife in the

western United States and Canada. The 19 member states encompass over 2.5 million square miles. The chief executive officer of each fish and wildlife agency are on the Board of Directors of three non-profit business entities, the Western Association of Fish and Wildlife Agencies, its fund-raising arm, the Foundation for Western Fish and Wildlife (FWFW) and the Western Conservation Foundation (WCF).

WAFWA Board of Directors established the LPC Initiative Council (LPCIC) in October 2013 when the RWP was endorsed by the USFWS. The directors of the state fish and wildlife agencies within the LPC range are members of the WAFWA, FWFW, and WCF Boards of Directors and will comprise the LPCIC, along with a member of the Executive Committee, appointed by the President, and representing an agency with extensive experience with ESA issues as it pertains to private lands. This relationship will ensure decision-making roles regarding how and where funds are spent for the state agencies, as well as coordination with other WAFWA/WCF/FWFW conservation efforts. The LPCIC will annually report decisions for the RWP.

The LPCIC established a Lesser Prairie Chicken Advisory Committee (LPCAC) and associated working groups and maintained the Interstate Working Group (IWG). The LPCAC and IWG are strictly advisory in nature and provided recommendations to the LPCIC for final approval through the adaptive management process. The intent of these groups is to support the RWP, promote effective communication between the parties, resolve disputes, revise cost structures, and make adaptive management recommendations. The LPCAC are supported by two subcommittees: (1) Fee Structure Working Group and (2) Science Working Group.

COMMITTEE COMPOSITION

Interstate Working Group

- One representative from each of the 5 state fish and wildlife agencies
- The WAFWA Grassland Coordinator as an ex officio member

Advisory Committee

- The WAFWA LPC Program Manager will coordinate and facilitate the Advisory Committee as an ex officio member
- An additional 17 representatives will compose the committee
  - One representative from 3 of the 5 state fish and wildlife agencies, to serve on a rotating schedule
  - One representative from each of the 2 primary federal agencies closely involved with LPC conservation (USFWS and NRCS)
  - Three representatives from industry organizations (e.g. oil & gas, wind, transmission, etc.)
  - Three representatives from agricultural and landowner organizations (e.g. Cattlemen's Association, Corn Grower's Farm Bureau etc.)

- Three representatives from conservation organizations (e.g. The Nature Conservancy, North American Grouse Partnership, National Audubon Society, etc.)
- Three representatives from local government or municipalities

Fee Structure Working Group

- The WAFWA LPC Program Manager will coordinate and facilitate the Fee Structure Working Group as an ex officio member.
- An additional 13-15 representatives will compose the working group
  - One representative from 3 of the 5 state fish and wildlife agencies
  - One representative from each of the 5 LPC states from NRCS
  - One representative from each of the 5 LPC states from FSA
  - One representative from FWS Regions 2 and 6 from the Partners for Fish and Wildlife Program, if desired

Science Working Group

- The WAFWA LPC Program Manager will coordinate and facilitate the Science Working Group as an ex officio member.
- Up to a maximum of an additional 15 representatives will compose the working group
  - One representative from each of the 5 state fish and wildlife agencies and USFWS
  - Up to 9 additional members with expertise in LPC ecology, habitat modeling, population monitoring, impact evaluation, and other relevant topics may serve on the subcommittee

COMMITTEE RESPONSIBILITIES

Committees will have the following responsibilities and will make recommendations to the LPCIC for final decisions:

Interstate Working Group

The Interstate working group will:

- Update and revise the LPC RWP
- Update and revise the CHAT
- Review and update, as necessary, ecoregions, focal areas, and connectivity zones
- Make nominations to the Science Subcommittee
- Annually provide a report to the WAFWA LPCIC

Advisory Committee

The Advisory Committee will:

- Review annual reports from Ecoregional Implementation Teams and Technical Service Providers concerning enrollment, monitoring and conservation delivery related to the RWP
- Review overall progress toward meeting conservation goals through the mitigation framework and, as necessary, make recommendations for changes to the mitigation framework
- Review and recommend applications for Technical Service Providers to the LPCIC and review compliance and reporting by Technical Service Providers
- Review non-compliance issues by participants and terminate agreements if necessary
- Review research needs and, if needed, recommend a portion of annual Habitat Conservation Fees as noncash (e.g. in-kind) match for research
- Review reports and evaluate recommendations from the Fee Structure and Science Subcommittee and the Interstate Working Group
- Annually provide a report to the WAFWA LPCIC

Fee Structure Working Group
The Fee Structure Working Group will:

- Annually review and update mitigation costs and landowner enrollments in specific practices
- Annually review adaptive management triggers and evaluated actions related to the fee structure for the mitigation framework
- Annually provide a report to the Advisory Committee

Science Working Group
The Science Working Group will:

- Review annual reports related to population estimates and trends, including aerial and ground-based surveys
- Evaluate emerging science related to LPC, including habitat selection, responses to conservation practices, responses to impacts, etc.
- Annually review adaptive management triggers and evaluated actions related to LPC population trends and emerging science
- Review and update research needs for LPC
- Annually provide a report to the Advisory Committee

COMMITTEE MEETINGS

The committees will meet, at minimum, annually. Additional meetings of these committees may be scheduled as requested by members of the committees or the LCPIC. The general timeframe for the meetings will be from mid-fall through mid-winter. This allows time for the population survey and vegetation monitoring data to be summarized and available for discussion at the

meetings. The order of the meetings will be as follows: 1.) Science Working Group, 2.) Fee Structure Working Group, 3.) IWG, 4.) Advisory Committee, and 5.) LPCIC.

As with developing different components of the RWP, meetings schedules varied during this reporting period. The LPCAC met three times, the LPC Science Working Group met once and held one webinar, and the Fee Structure Working Group held one initial telephone conference. Minutes and summaries from these meetings were summarized on March 31, 2015 by the LPCAC.

The LPCIC met in person or held a coordination conference call throughout the reporting period. Action taken by the LPCIC included modifying position descriptions and titles based upon actual workload, finalized criteria to evaluate potential long-term agreements, and one adaptive management letter. This letter made the following adaptive management changes relating to buffers, lek surveys, and burial of distribution lines. Information was distributed to RWP participants on February 10, 2015.

WAFWA recognizes committee meeting information and results have been limiting. In January 2015, WAFWA began a RFP process to hire a website designer to over haul the WAFWA website, especially those pages associated with the LPC conservation effort.

PROPOSED STAFFING

There is flexibility built into the RWP as to the location of personnel associated with this effort. Field personnel will need to be located within the five-state range of the LPC (Kansas, Texas, Oklahoma, Colorado, and New Mexico), but administrative services can occur from remote locations. Field personnel can work either from their homes or from shared offices with state partners. Having dedicated WAFWA field staff housed within the state fish and wildlife agency offices would promote coordination with the states to ensure that projects support state planning efforts identified in their Comprehensive Wildlife Conservation Strategies, also called State Wildlife Action Plans (SWAPs). Essential equipment would include a lap top computer and cell phone. Initially, field staff will use rented state vehicles or their own vehicles and be reimbursed mileage. A GIS specialist will be needed to track impact and conservation units and provide information to industry representatives for planning purposes. This position can be housed similar to field personnel. Besides the existing Western Grassland Coordinator position, the following additional personnel may be considered by the LPCIC to help implement the RWP:

- In March 2015 a Lesser Prairie Chicken Program Manager (LPC Program Manager) was selected by the LPCIC to start April 2015. This person will direct operations, supervise staff, be responsible for annual reports to USFWS, and report to the WAFWA Grassland Coordinator. The LPC Program Manager will be responsible for ensuring thorough communication and coordination among affected state, federal, and local agencies for the RWP. This position will staff the various committees and subcommittees as described in

the RWP and will be responsible for annual monitoring and reporting related to the RWP. To the extent consistent with applicable state law, information in annual reports will include, but not be limited to, the following:

1. Number of participants enrolled under the WCA over the past year, including copies of the completed WCP, excluding any identifying information related to participants
2. A summary of habitat management and habitat conditions in the covered area and on all enrolled property over the past year with any identifying information related to participants removed
3. Effectiveness of habitat management activities implemented in previous years at meeting the intended conservation benefits
4. Population surveys and studies conducted over the past year with any identifying information related to participants removed
5. Any mortality or injury of the species that was observed over the previous year
6. A discussion of the funds used for habitat conservation within the states

- The hiring process has begun for four technical/ecoregional biologist positions who will be responsible for working with industry and private landowners to enroll and monitor leases, working with landowners to direct conservation funding, and coordinating with local state fish and wildlife, NRCS, and USFWS Partners for Fish and Wildlife Program staff. In addition, WAFWA partnered with Pheasants Forever and cost shared 25% of the 13 partner biologist that will be working in the LPC range delivering conservation.
- A Lesser Prairie Conservation Delivery Director and Industry Service Director were hired to supervise the four biologist positions and would be responsible for interacting with participants and potential partners in the RWP.

FWFW (later changed to WCF) administrative staff will report through the CFO/Treasurer and consist of:

- One accountant, who will prepare, analyze, and/or audit financial records and documents, accounting systems, financial statements, work papers, budgets, tax and payroll records, and other related documents. We hired a Supervisor, Business Operations in lieu of Accountant
- Two accounts payable technicians, who will analyze, research, forecast, and reconcile financial documents, ensure compliance with laws, rules, and policies, and prepare invoices for payment. Currently have one accounting technician and one Administrative Assistant
- Two contract/grant administrators, who will maintain records on incoming funds, expenditures for conservation, travel costs, and salary Currently have one contract/grant administrator
- One GIS coordinator, who will ensure that the field staff is producing data in a consistent fashion and will maintain a central database of all enrolled leases and conservation efforts, and coordinate with the Software-as-a-Service supplier. This is contracted to KU

In addition to the proposed staffing structure above, the RWP affords the LPCIC flexibility to contract out work to qualified 3rd party, technical service providers and other entities to perform certain elements of the work detailed in this plan.

RESEARCH PRIORITIES

The ODWC is working with The University of Oklahoma and Oklahoma State University on 2 separate research projects looking at LPC avoidance of anthropogenic disturbances. The OSU project is scheduled for completion in December of 2014 and the OU project the fall of 2016.

New Mexico State University has two different studies ongoing in eastern New Mexico in the Sand Shinnery ecoregion. The first study is looking at disproportionate declines in LPC populations south of Highway 380 relative to populations north of the highway on Bureau of Land Management owned properties. The objectives of this study are to determine if these declines are due to disproportionate reproductive and survival rates between the two areas and determine if these declines are linked to habitat condition, composition, and/or vegetation characteristics.

Their second study is looking at the response of LPC to new habitat management practices on Prairie Chicken Areas owned by the New Mexico Department of Game and Fish and use these results to inform management alternatives and future conservation practices in New Mexico. Both studies are in their 3rd year.

Texas Tech University is currently conducting a contract research project with TPWD entitled "Lesser Prairie-Chicken Ecology in Conservation Reserve Program (CRP) Dominated Landscapes." The goal of this study is to develop an understanding of the ecology of LPCs in CRP at the southern extent of the species range in west Texas to better inform current and future conservation actions. The contract terminates December 31, 2017. The specific objectives of this project include:

- Estimating age specific seasonal and annual survival rates of LPCs in CRP.
- Assessing nesting success of sub-adult and adult LEPC hens in enrolled and expired CP1 and CP2 (native grass mix), CP10 (CP1 converted to CP2) and CP38 dominated landscapes.
- Identifying which, if any, land use practices on CRP lands (burning, plowing, haying, shredding) are positive/detrimental to species persistence.
- Assessing distribution of nests relative to leks and anthropogenic features (e.g., roads, power lines, etc.).
- Identifying movement patterns and habitat use characteristics of LPC broods in relation to habitat availability, including spatial distribution of CRP lands, and differences in land use.
- Estimating available invertebrate species and biomass in habitats used by broods.
- Determining age specific patterns of seasonal habitat and space use by LPCs.
- Quantifying patch and landscape characteristics (juxtaposition and amount) of CRP lands needed for LPC conservation in these areas.

• Collecting environmental data to assess the role of weather on the life history strategy of the species in CRP dominated landscapes.

There is a research project currently underway through KSU with field sites in the Kansas mixed grass, Kansas shortgrass, and sand sagebrush sites in Colorado and Kansas. The students working on this project have completed 2 field seasons and the 3rd is just getting under way. Next summer (2017) will be the final field season and the reports will be completed by June 30, 2017. The research is being supported by a PR grant from KDWPT, funding from CPW, NRCS, and FSA. The objectives of the work are as follows:

1. Evaluate population demography including survival, nest success, and recruitment in each population.
2. Evaluate seasonal habitat selection with emphasis on nesting and brood site selection in each population.
3. Evaluate adult weekly, monthly, and seasonal movements and homes ranges in each population.
4. Evaluate the impacts of energy development and other anthropogenic activities on habitat use, movements, and survival in each population.
5. Compare vital rates among populations and model future population change based on demographic data.
6. Identify the effect of grassland patch size, habitat fragmentation, and level of connectivity on vital rates of LPC populations.
7. Conduct a risk assessment to evaluate the relative effects of potential limiting factors on each population.
8. Evaluate potential radio-mark handicap between 2 radio transmitter types
9. Determine daily survival of LPC chicks
10. Identify risk of fence collisions
11. Evaluate the benefits of mechanical brush management
12. Evaluate the benefits of prescribed grazing on demography

The CPW are conducting some prairie chicken habitat management related research. Some of the things that we are looking at overlaps with the KSU project, and some are standalone projects. Here are some of the areas that CPW are looking at:

- The establishment and persistence of switchgrass, yellow Indian grass, big bluestem, and little bluestem in the presence and absence of sideoats gramma and western wheat. We have a problem with CRP fields that have become mono-cultures of western wheat and sod forming sideoats gramma. We are trying to determine if competition from western wheat and sideoats are to blame for the loss of switchgrass, yellow indian, big blue , and little blue in most of our SE Colorado CRP fields.

- Evaluate LPC utilization of patches within CRP fields that have received disking and forb interseeding treatments.

- Evaluate the effectiveness of various levels of disking in CRP for establishing interseeded forbs.

- Evaluate the effect that various levels of disking in CRP have on grass density, species composition, visual obstruction, and grass form (sod vs. bunch).

- Evaluate lesser prairie chicken utilization of ungrazed pastures vs. pastures grazed at a 50% utilization rate. Evaluate whether or not paying for grazing deferment on pastures around leks is a worthwhile and effective management tool.

CONCLUSION

Overall, the RWP allowed for economic development to continue in a seamless manner by providing an efficient mechanism to voluntarily conserve the LPC and/or comply with the ESA. Without the RWP, there could have been significant regulatory delays in obtaining take permits, disruption to economic activity in an area vital to state and national interests, and little incentive to conserve LPC habitat on private lands. The RWP encourages participants to enact proactive and voluntary conservation activities promoting LPC conservation. Implementation was tracked through a committee structure using adaptive management. Goals and objectives associated with population levels, habitat conservation objectives, and funding streams were conducted by the adaptive management process.

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APPENDICES

Appendix A. Over view of line item ledger to track individual impact units and conservation offset units.

Overview

- All service areas currently have a positive credit balance.
- As the result of the listing of the LPC on May 12, 2014, the Impact Estimator Tool was critical to the initial implementation of this program as it allowed for companies to continue to develop on rapid schedules, while allowing time for field habitat assessments after mitigation. However, the tool required WAFWA acquire additional conservation to ensure mitigation before the estimates were reconciled. Reconciliation reduces impact units by an average of 33% and releases twice that amount in offset units for use elsewhere. That reconciliation process is detailed in the summary tables below.
- The Impact Estimator tool will be phased out by the end of 2015 to simplify credit tracking. WAFWA has added staff to reduce the need for this tool.
- The Mixed Grass region has more need for credit than all the other regions. Credit balances in this region are currently positive, but limited. A conditionally approved conservation contract is awaiting signature that will greatly enhance the credit balance in this region and the signatures are expected in the first week of April. We expect that contract will cover all credit needs for the coming year for this region.
- Additional conservation contracts for the Shortgrass region are in currently in preparation, but the demand for credit in that region has decreased substantially with the decline in oil prices.
- Credit balances represented in this ledger represent only the first half of the annual credit generated from the current conservation contracts. The remainder will be generated upon the completion of breeding season habitat assessments which begin in April. Those additional credits are not reflected in these summaries and ledgers.

Appendix B. Glossary for offset/impact unit ledger.

Ledger Glossary

Term	Description
Entry Date	Date of debit (impact project invoice) or credit (conservation contract credit release)
ID	Unique identifier for an Impact or Offset
Primary CHAT	The dominant crucial habitat category in which the credits or debits occur for a given entry
Charge Type	Defines the nature of the debit or credit entry
Impact unit	A debit of habitat based on impacts from a project to be mitigated. Units are an annual, such that a project must be offset with a set number in perpetuity.
Offset Credit	A credit of habitat used to offset an impact unit or debit. Credits are generated annually from property enrolled in conservation contracts or easements based on unimpacted acreage and habitat quality.
Impact Estimate	This is a debit calculated based on the WAFWA Impact Estimator Tool, which uses spatial data to estimate habitat quality, debits and mitigation costs. Due to the uncertainty associated with the spatial data and the requirements to ensure mitigation before impact, this tool over estimates impacts by about 300% on average.
Impact HEG	This is a debit based on actual field habitat assessment.
Impact Reconcile	An impact Estimate is matched up with an Impact HEG (field habitat assessment). This matching generally reduces the impact units and releases offset credits for use elsewhere. On average a reconciliation releases 66% of the offset units that were committed by the initial Impact estimate. In a minority of occasions, generally 5% or less, the reconciliation creates additional impact units if the tool underestimated the habitat quality of the impact project.
Conservation Offset	Identifies a conservation contract that produces Offset credit. A contract releases half of the estimated annual offset credit for the contract on the signature date and the fall of each subsequent year. The remaining credits are released upon the completion of breeding season habitat monitoring.
Offset Site ID	The unique identifier for the conservation contract that is matched up with a debit of impact units
Offset Site Balance	The number of unused offset credits for a specific conservation contract
Ecoregion Offset Balance	The number of remaining offset credits for the entire service area or ecoregion

Appendix C. Sand Sagebrush Summary Ledger.

Source	Available Offset Units
Remaining Conservation Contracts	3,942.16
Unreconciled Estimates	348.48
Subtotal	**4,290.64**
Conditionally Approved Contracts	0.00
Total	**4,290.64**

Sand Sagebrush Estimate Reconciliation Summary

	Count	Total Units
Estimates	73	-584.82
HEGs	3	0.00
Reconciled	3	2.28
Unreconciled	70	-582.54
Offsets from Unreconciled		348.48
Impact Balance		-582.54
Adj Impact Balance		-390.30

	Count	Units
Reconciled CH1	2	1.84
Reconciled CH2	0	0.00
Reconciled CH3	0	0.00
Reconciled CH4	1	0.44
Total		2.28

Sand Sagebrush Ledger

Sandsage Entry Date	ID	Primary CHAT	charge Type	impact type	Impact units	Offset Credits	Offsetting Site ID	Offset Site Balance	Ecoregion Offset Unit Balance
5/7/2014	2	4	impact estimate	well	-0.1		81	4173.8	-0.1
5/7/2014	3	4	impact estimate	well	-0.1		81	4173.7	-0.2
5/7/2014	4	4	impact estimate	well	-0.1		81	4173.6	-0.3
5/7/2014	5	3	impact estimate	well	-0.2		81	4173.4	-0.5
5/7/2014	6	4	impact estimate	well	-0.3		81	4173.1	-0.8
5/19/2014	7	4	impact estimate	well	-0.3		81	4172.9	-1.0
5/19/2014	8	4	impact estimate	well	-0.4		81	4172.5	-1.4
6/2/2014	9	1	impact estimate	well	-0.2		81	4172.3	-1.6
6/10/2014	10	4	impact estimate	well	0.0		81	4172.3	-1.6
6/10/2014	11	4	impact estimate	well	-0.2		81	4172.2	-1.7

6/10/2014	12	4	impact estimate	well	-0.2		81	4172.0	-1.9
6/10/2014	13	4	impact estimate	well	-0.1		81	4171.9	-2.0
6/10/2014	14	4	impact estimate	well	-7.5		81	4164.5	-9.5
6/10/2014	15	4	impact estimate	well	-0.1		81	4164.3	-9.6
6/16/2014	16	3	impact estimate	well	0.0		81	4164.3	-9.6
6/30/2014	17	1	impact estimate	well	-69.8		81	4094.5	-79.4
6/30/2014	18	1	impact estimate	well	-30.9		81	4063.7	-110.2
6/30/2014	19	4	impact estimate	well	-0.2		81	4063.5	-110.4
6/30/2014	20	4	impact estimate	well	-0.2		81	4063.3	-110.6
6/30/2014	21	1	impact estimate	well	-3.2		81	4060.1	-113.8
7/1/2014	22	1	impact estimate	well	-1.8		81	4058.2	-115.7
7/1/2014	23	1	impact estimate	well	-76.6		81	3981.7	-192.2
7/10/2014	24	1	impact estimate	well	-37.2		81	3944.5	-229.4
7/18/2014	25	1	impact estimate	well	-0.7		81	3943.8	-230.1
7/24/2014	26	4	impact estimate	well	-0.2		81	3943.5	-230.4
7/28/2014	27	4	impact estimate	well	-0.2		81	3943.4	-230.6
8/25/2014	28	4	impact estimate	well	-0.2		81	3943.2	-230.7
8/25/2014	29	4	impact estimate	well	-0.2		81	3943.0	-230.9
8/25/2014	30	1	impact estimate	well	-24.4		81	3918.6	-255.3
8/25/2014	31	4	impact estimate	well	0.0		81	3918.6	-255.3
9/9/2014	32	4	impact estimate	well	-0.1		81	3918.5	-255.4
9/9/2014	33	4	impact estimate	well	-0.1		81	3918.4	-255.5
9/9/2014	34	4	impact estimate	well	-0.2		81	3918.3	-255.6
9/9/2014	35	4	impact estimate	well	-0.3		81	3918.0	-255.9
9/11/2014	36	4	impact estimate	well	-0.2		81	3917.8	-256.1
9/11/2014	37	4	impact estimate	well	-0.2		81	3917.6	-256.4
9/11/2014	38	4	impact estimate	well	-0.2		81	3917.3	-256.6
9/11/2014	39	3	impact estimate	well	-0.1		81	3917.3	-256.6
9/26/2014	40	4	impact estimate	well	-0.3		81	3917.0	-256.9
10/10/2014	41	1	impact estimate	well	-1.2		81	3915.9	-258.1
10/10/2014	42	1	impact estimate	well	-0.7		81	3915.1	-258.8
10/10/2014	43	4	impact estimate	well	-0.9		81	3914.2	-259.7
10/10/2014	44	1	impact estimate	well	-20.3		81	3893.9	-280.0
10/10/2014	45	3	impact estimate	well	-18.2		81	3875.7	-298.2
10/10/2014	22	1	impact HEG	well	0.0		81	3875.7	-298.2
10/10/2014	22	1	impact reconcile	well		1.8		3875.7	-296.3
10/13/2014	48	1	impact estimate	well	0.0		81	3875.7	-296.3
10/13/2014	49	1	impact estimate	well	0.0		81	3875.7	-296.3

10/28/2014	50	1	impact estimate	well	-41.5		81	3834.3	-337.8
10/28/2014	51	1	impact estimate	well	-42.6		81	3791.7	-380.4
10/28/2014	52	4	impact estimate	well	0.0		81	3791.7	-380.4
10/28/2014	53	4	impact estimate	well	0.0		81	3791.7	-380.4
11/5/2014	54	4	impact estimate	well	0.0		81	3791.7	-380.4
11/5/2014	55	4	impact estimate	well	0.0		81	3791.7	-380.4
11/5/2014	56	4	impact estimate	well	0.0		81	3791.7	-380.4
11/12/2014	57	1	impact estimate	well	-37.7		81	3754.0	-418.1
11/17/2014	58	4	impact estimate	well	-0.2		81	3753.8	-418.3
11/17/2014	59	4	impact estimate	well	0.0		81	3753.8	-418.3
11/21/2014	60	4	impact estimate	well	-0.2		81	3753.6	-418.5
11/21/2014	61	4	impact estimate	well	0.0		81	3753.6	-418.5
12/5/2014	62	4	impact estimate	well	-0.2		81	3753.4	-418.7
12/5/2014	63	4	impact estimate	well	0.0		81	3753.4	-418.7
12/22/2014	64	1	impact estimate	well	0.0		81	3753.4	-418.7
1/12/2015	65	5	impact estimate	well	0.0		81	3753.4	-418.7
1/12/2015	66	4	impact estimate	well	-1.2		81	3752.2	-419.9
1/15/2015	67	1	impact estimate	well	-28.1		81	3724.1	-448.0
1/15/2015	68	3	impact estimate	well	-0.9		81	3723.1	-448.9
1/15/2015	69	3	impact estimate	well	-33.7		81	3689.4	-482.7
1/15/2015	70	3	impact estimate	well	-44.5		81	3644.9	-527.1
1/15/2015	71	3	impact estimate	well	-54.1		81	3590.9	-581.2
1/21/2015	72	1	impact estimate	well	0.0		81	3590.9	-581.2
1/21/2015	73	4	impact estimate	well	-0.7		81	3590.1	-581.9
1/21/2015	74	4	impact estimate	well	-0.4		81	3589.7	-582.4
2/2/2015	72	1	impact HEG	well	0.0		81	3589.7	-582.4
2/2/2015	72	1	impact reconcile	well		0.0		3589.7	-582.4
2/2/2015	74	4	impact HEG	well	0.0		81	3589.7	-582.4
2/2/2015	74	4	impact reconcile	well		0.4		3589.7	-581.9
2/12/2015	79	4	impact estimate	well	-0.1		81	3589.6	-582.0
2/17/2015	80	4	impact estimate	well	-0.5		81	3589.1	-582.5
2/27/2015	81	1	Cons. Offset			4173.9			3591.4
3/312015			Available Reconcile Offset			350.76			3942.16

Appendix D. Short Grass Summary Ledger.

Shortgrass Credit Availability Summary

Source	Available Offset Units
Remaining Conservation Contracts	211.6
Unreconciled Estimates	390.16
Subtotal	**601.76**
Conditionally Approved Contracts	0.00
Total	**601.76**

Shortgrass Estimate Reconciliation Summary

	count	units
Estimates	85	-608.39
HEGs	34	-385.06
Reconciled	6	17.24
Unreconciled	78	-591.15
Offsets from Unreconciled		390.16
Impact Balance		-976.21
Adj Impact Balance		-781.13

	count	units
Reconciled CH1	1	3.49
Reconciled CH2	0	0.00
Reconciled CH3	2	1.38
Reconciled CH4	4	12.37
Total		17.24

Shortgrass Ledger

SHORTGRASS Entry Date	ID	Primary CHAT	charge Type	impact type	Impact units	Offset Credits	Offsetting Site ID	Offset Site Balance	Ecoregion Offset Balance
5/21/2014	2	4	impact estimate	well	-0.61		60	145.9	-0.6
5/21/2014	3	4	impact estimate	well	-0.23		60	145.7	-0.8
5/22/2014	4	1	impact estimate	well	0.00		60	145.7	-0.8
5/22/2014	5	4	impact estimate	well	-2.89		60	142.8	-3.7
5/22/2014	6	4	impact estimate	well	-6.70		60	136.1	-10.4
5/26/2014	7	4	impact estimate	well	-0.31		60	135.8	-10.7
5/29/2014	8	4	impact estimate	well	-0.50		60	135.3	-11.2
5/29/2014	9	4	impact estimate	well	0.00		60	135.3	-11.2
5/29/2014	10	4	impact estimate	well	-1.17		60	134.1	-12.4
6/2/2014	11	4	impact estimate	well	-0.28		60	133.8	-12.7
6/2/2014	12	3	impact estimate	well	-1.39		60	132.4	-14.1
6/3/2014	13	4	impact estimate	well	-0.74		60	131.7	-14.8
6/3/2014	14	4	impact estimate	well	0.00		60	131.7	-14.8
6/3/2014	15	4	impact estimate	well	0.00		60	131.7	-14.8

6/4/2014	16	4	impact estimate	well	0.00		60	131.7	-14.8
6/4/2014	17	3	impact estimate	well	-20.98		60	110.7	-35.8
6/11/2014	18	3	impact estimate	well	-0.90		60	109.8	-36.7
6/19/2014	19	4	impact estimate	well	-0.50		60	109.3	-37.2
6/25/2014	20	4	impact estimate	well	-0.50		60	108.8	-37.7
6/30/2014	21	4	impact HEG	well	-9.52		60	99.3	-47.2
7/1/2014	22	1	impact estimate	well	-54.97		60	44.3	-102.2
7/10/2014	23	1	impact estimate	well	-28.03		60	16.3	-130.2
7/10/2014	24	3	impact estimate	well	0.00		60	16.3	-130.2
7/10/2014	25	4	impact estimate	well	-3.48		60	12.8	-133.7
7/17/2014	26	4	impact estimate	well	-0.23		60	12.6	-133.9
7/25/2014	27	3	impact HEG	well	-33.91		129	1007.4	-167.8
7/25/2014	28	3	impact HEG	well	-1.12		129	1006.3	-169.0
8/5/2014	29	1	impact estimate	well	-3.49		129	1002.8	-172.5
8/5/2014	30	1	impact estimate	well	-25.21		129	977.6	-197.7
8/5/2014	31	4	impact estimate	well	-1.28		129	976.3	-198.9
8/14/2014	32	4	impact estimate	well	-0.50		129	975.8	-199.4
9/11/2014	33	3	impact estimate	well	-0.84		129	975.0	-200.3
9/11/2014	34	3	impact estimate	well	-0.47		129	974.5	-200.8
9/11/2014	35	4	impact estimate	well	-0.25		129	974.2	-201.0
9/11/2014	36	4	impact HEG	well	-13.57		129	960.7	-214.6
9/11/2014	37	4	impact HEG	well	-21.76		129	938.9	-236.3
9/15/2014	38	3	impact HEG	well	-2.02		129	936.9	-238.4
9/15/2014	39	3	impact HEG	well	-14.87		129	922.0	-253.2
9/17/2014	40	4	impact HEG	well	0.00		129	922.0	-253.2
9/17/2014	41	3	impact HEG	well	-0.78		129	921.2	-254.0
9/18/2014	42	3	impact estimate	well	-0.84		129	920.4	-254.8
9/18/2014	43	1	impact estimate	well	-2.67		129	917.7	-257.5
9/18/2014	44	1	impact estimate	well	-30.87		129	886.9	-288.4
9/19/2014	45	1	impact HEG	well	-15.52		129	871.3	-303.9
9/19/2014	46	1	impact HEG	well	-19.14		129	852.2	-323.0
9/19/2014	47	1	impact HEG	well	-47.14		129	805.1	-370.2
9/19/2014	48	1	impact HEG	well	0.00		129	805.1	-370.2
9/19/2014	49	1	impact HEG	well	-16.54		129	788.5	-386.7
9/19/2014	50	1	impact HEG	well	-7.42		129	781.1	-394.1
9/19/2014	51	1	impact HEG	well	-41.89		129	739.2	-436.0
9/19/2014	52	1	impact HEG	well	-38.11		129	701.1	-474.1
9/23/2014	53	4	impact HEG	well	0.00		129	701.1	-474.1
9/23/2014	54	1	impact HEG	well	-8.44		129	692.7	-482.6

9/26/2014	55	1	impact estimate	well	-1.50		129	691.2	-484.1
9/26/2014	56	3	impact estimate	well	-8.83		129	682.3	-492.9
9/29/2014	57	4	impact estimate	well	-0.22		129	682.1	-493.1
10/7/2014	58	3	impact HEG	well	-18.25		129	663.9	-511.4
10/13/2014	59	3	impact HEG	well	-9.44		129	654.4	-520.8
10/20/2014	60	1	Cons. Offset			146.50			-374.3
10/31/2014	61	4	impact estimate	well	-0.68		129	653.7	-375.0
10/31/2014	62	4	impact HEG	well	0.00		129	653.7	-375.0
11/3/2014	63	4	impact estimate	well	-10.38		129	643.4	-385.4
11/5/2014	64	4	impact estimate	well	-0.57		129	642.8	-386.0
11/5/2014	65	4	impact estimate	well	-0.16		129	642.6	-386.1
11/5/2014	66	3	impact estimate	well	-0.56		129	642.1	-386.7
11/5/2014	67	4	impact estimate	well	-0.24		129	641.8	-386.9
11/5/2014	68	4	impact estimate	well	-0.14		129	641.7	-387.1
11/5/2014	69	4	impact estimate	well	-0.24		129	641.4	-387.3
11/5/2014	70	4	impact estimate	well	-0.03		129	641.4	-387.3
11/6/2014	42	3	impact HEG	well	-0.84		129	640.6	-388.2
11/6/2014	42	3	impact reconcile			0.84	129	640.6	-387.3
11/10/2014	73	1	impact HEG	well	-32.99		129	607.6	-420.3
11/12/2014	74	4	impact estimate	well	-0.25		129	607.3	-420.6
11/13/2014	75	3	impact estimate	well	-6.79		129	600.5	-427.4
11/13/2014	76	3	impact estimate	well	-12.12		129	588.4	-439.5
11/14/2014	77	1	impact estimate	well	-1.55		129	586.9	-441.0
11/18/2014	78	3	impact estimate	well	-33.35		129	553.5	-474.4
11/17/2014	29	1	impact HEG	well	-3.49		129	550.0	-477.9
11/17/2014	29	1	impact reconcile			3.49	129	550.0	-474.4
11/17/2014	31	4	impact HEG	well	-1.28		129	548.8	-475.7
11/17/2014	31	4	impact reconcile			1.28	129	548.8	-474.4
11/17/2014	83	3	impact HEG	well	-1.40		129	547.4	-475.8
11/17/2014	84	3	impact HEG	well	-8.38		129	539.0	-484.2
11/20/2014	85	4	impact estimate	well	-0.89		129	538.1	-485.0
11/20/2014	86	4	impact estimate	well	-0.41		129	537.7	-485.5
11/20/2014	87	4	impact estimate	well	-1.28		129	536.4	-486.7
11/25/2014	88	4	impact estimate	well	-10.82		129	525.6	-497.6
11/25/2014	89	3	impact HEG	well	-13.88		129	511.7	-511.4
12/2/2014	90	3	impact HEG	well	-2.55		129	509.1	-514.0
12/4/2014	91	4	impact estimate	well	-0.80		129	508.3	-514.8
12/4/2014	92	3	impact estimate	well	-38.36		129	470.0	-553.1
12/4/2014	93	4	impact estimate	well	-1.35		129	468.6	-554.5

12/5/2014	94	4	impact estimate	well	-1.68		129	467.0	-556.2
12/5/2014	95	3	impact estimate	well	-22.58		129	444.4	-578.8
12/8/2014	96	1	impact estimate	well	-36.84		129	407.5	-615.6
12/22/2014	97	4	impact estimate	well	-0.22		129	407.3	-615.8
1/21/2015	98	3	impact estimate	well	-2.84		129	404.5	-618.7
1/22/2015	99	4	impact estimate	well	-34.89		129	369.6	-653.5
1/22/2015	100	1	impact estimate	well	-56.13		129	313.5	-709.7
2/12/2015	101	3	impact estimate	well	-0.54		129	312.9	-710.2
2/12/2015	102	4	impact estimate	well	-0.13		129	312.8	-710.3
2/12/2015	103	4	impact estimate	well	-0.14		129	312.6	-710.5
2/13/2015	101	3	impact HEG	well	-0.54		129	312.1	-711.0
2/13/2015	101	3	impact reconcile			0.54	129	312.1	-710.5
2/13/2015	102	4	impact HEG	well	-0.13		129	312.0	-710.6
2/13/2015	102	4	impact reconcile			0.13	129	312.0	-710.5
2/13/2015	103	4	impact HEG	well	-0.14		129	311.8	-710.6
2/13/2015	103	4	impact reconcile			0.14	129	311.8	-710.5
2/17/2015	88	4	impact HEG	well	0.00		129	311.8	-710.5
2/17/2015	88	4	impact reconcile			10.82	129	311.8	-699.7
2/24/2015	112	4	impact estimate	well	-20.68		129	291.2	-720.3
2/24/2015	113	4	impact estimate	well	-0.33		129	290.8	-720.7
2/24/2015	114	4	impact estimate	well	-0.09		129	290.7	-720.8
2/25/2015	115	4	impact estimate	well	-6.88		129	283.9	-727.6
2/25/2015	116	4	impact estimate	well	-0.09		129	283.8	-727.7
2/25/2015	117	4	impact estimate	well	-21.87		129	261.9	-749.6
2/25/2015	118	4	impact estimate	well	-6.27		129	255.6	-755.9
2/25/2015	119	4	impact estimate	well	0.00		129	255.6	-755.9
2/25/2015	120	4	impact estimate	well	0.00		129	255.6	-755.9
2/26/2015	121	4	impact estimate	well	-20.68		129	234.9	-776.6
2/27/2015	122	4	impact estimate	well	-0.36		129	234.6	-776.9
3/5/2015	123	4	impact estimate	well	-0.57		129	234.0	-777.5
3/6/2015	124	4	impact estimate	well	-0.42		129	233.6	-777.9
3/17/2015	125	2	impact estimate	well	-15.02		129	218.6	-792.9
3/17/2015	126	2	impact estimate	well	-35.03		129	183.5	-828.0
3/17/2015	127	4	impact estimate	well	-0.67		129	182.9	-828.6
3/17/2015	128	2	impact estimate	well	-1.09		129	181.8	-829.7
3/30/2015	129	1	Cons. Offset			1041.3			211.6
3/31/2015			Available Reconcile Offset			390.16			601.76

Appendix E. Shinnery Oak Summary Ledger.

Shinnery Oak Credit Availability Summary

Source	Available Offset Units
Remaining Conservation Contracts	4,251.3
Unreconciled Estimates	258.07
SubTotal	**4,509.37**
Conditionally approved Contracts	0.00
Total	**4,509.37**

Shinnery Oak Estimate Reconciliation Summary

	Count	Total Units
Estimates	30	-476.55
HEGs	19	-25.07
Reconciled	7	85.54
Unreconciled	23	-391.01
Offsets from Reconcile		258.07
Impact balance		-416.08
Adj Impact Balance		287.05

	Count	Cnits
Reconciled CH1	0	0.00
Reconciled CH2	0	0.00
Reconciled CH3	1	82.40
Reconciled CH4	6	3.14
Total		85.54

Shinnery Oak Ledger

Shinnery Oak Entry Date	ID	Primary CHAT	charge Type	impact type	Impact units	Offset Credits	Offsetting Site ID	Offset Site Balance	Ecoregion Offset Balance
6/9/2014	2	3	impact estimate	well	-27.9		8	123.6	-27.9
6/9/2014	3	4	impact estimate	well	-13.0		8	110.6	-40.9
6/9/2014	4	3	impact estimate	well	-37.8		8	72.8	-78.7
6/9/2014	5	3	impact estimate	well	-40.3		8	32.5	-119.0
6/9/2014	6	3	impact estimate	well	-25.1		8	7.4	-144.1
6/9/2014	7	3	impact estimate	well	-36.8		12	99.8	-180.8
6/30/2014	8	1	Cons. Offset			151.5			-29.3
7/17/2014	9	4	impact estimate	well	-8.0		12	91.7	-37.4
7/17/2014	10	3	impact estimate	well	-25.4		12	66.4	-62.7

7/25/2014	11	3	impact HEG	well	0.0		12	66.4	-62.7
7/29/2015	12	1	Cons. Offset			136.5			73.8
8/5/2014	13	3	impact estimate	well	-24.4		12	42.0	49.4
9/12/2014	14	3	impact estimate	well	-1.4		12	40.6	48.0
9/12/2014	15	5	impact estimate	well	0.0		12	40.6	48.0
9/16/2014	16	3	impact estimate	well	-49.9		60	4329.5	-1.9
9/16/2014	17	3	impact estimate	well	-48.2		60	4281.3	-50.1
10/13/2014	18	3	impact estimate	well	0.0		60	4281.3	-50.1
10/13/2014	19	3	impact estimate	well	-106.5		60	4174.9	-156.6
10/13/2014	20	3	impact estimate	well	0.0		60	4174.9	-156.6
10/28/2014	21	3	impact estimate	well	-11.6		60	4163.2	-168.2
11/5/2014	22	4	impact estimate	well	0.0		60	4163.2	-168.2
11/5/2014	23	4	impact estimate	well	-3.0		60	4160.3	-171.2
11/5/2014	24	4	impact estimate	well	0.0		60	4160.3	-171.2
11/5/2014	25	4	impact estimate	well	0.0		60	4160.3	-171.2
11/5/2014	26	4	impact estimate	well	0.0		60	4160.3	-171.2
11/6/2014	22	4	impact HEG	well	0.0		60	4160.3	-171.2
11/6/2014	22	4	impact reconcile	well	0.0	0.0	60	4160.3	-171.2
11/6/2014	23	4	impact HEG	well	0.0		60	4160.3	-171.2
11/6/2014	23	4	impact reconcile	well	0.0	3.0	60	4160.3	-168.2
11/6/2014	24	4	impact HEG	well	0.0		60	4160.3	-168.2
11/6/2014	24	4	impact reconcile	well	0.0	0.0	60	4160.3	-168.2
11/6/2014	25	4	impact HEG	well	0.0		60	4160.3	-168.2
11/6/2014	25	4	impact reconcile	well	0.0	0.0	60	4160.3	-168.2
11/6/2014	26	4	impact HEG	well	0.0		60	4160.3	-168.2
11/6/2014	26	4	impact reconcile	well	0.0	0.0	60	4160.3	-168.2
11/10/2014	37	3	impact estimate	well	-0.8		60	4159.5	-169.0
12/22/2014	38	4	impact estimate	well	-0.6		60	4158.9	-169.6
1/20/2015	39	4	impact estimate	well	0.0		60	4158.9	-169.6
1/20/2015	40	4	impact estimate	well	0.0		60	4158.9	-169.6
1/20/2015	41	4	impact estimate	well	0.0		60	4158.9	-169.6
1/20/2015	42	4	impact estimate	well	0.0		60	4158.9	-169.6
1/22/2015	43	4	impact estimate	well	-0.2		60	4158.7	-169.8
1/28/2015	19	3	impact HEG	well	-24.1		60	4134.6	-193.9
1/28/2015	19	3	impact reconcile	well	0.0	82.4	60	4134.6	-111.5
2/12/2015	43	4	impact HEG	well	0.0		60	4134.6	-111.5
2/12/2015	43	4	impact reconcile	well	0.0	0.2	60	4134.6	-111.3
2/12/2015	48	4	impact HEG	well	0.0		60	4134.6	-111.3

2/12/2015	49	4	impact HEG	well	0.0		60	4134.6	-111.3
2/12/2015	50	4	impact HEG	well	0.0		60	4134.6	-111.3
2/12/2015	51	4	impact HEG	well	0.0		60	4134.6	-111.3
2/12/2015	52	4	impact HEG	well	0.0		60	4134.6	-111.3
2/12/2015	53	4	impact HEG	well	0.0		60	4134.6	-111.3
2/12/2015	54	4	impact HEG	well	0.0		60	4134.6	-111.3
2/12/2015	55	4	impact HEG	well	0.0		60	4134.6	-111.3
2/12/2015	56	4	impact HEG	well	0.0		60	4134.6	-111.3
2/12/2015	57	4	impact HEG	well	0.0		60	4134.6	-111.3
2/13/2015	58	3	impact estimate	well	-15.8		60	4118.8	-127.1
3/11/2015	59	4	impact HEG	well	-1.0		60	4117.8	-128.1
3/30/2015	60	1	Cons. Offset			4379.4			4251.3
3/31/2015			Available Reconcile Offset			258.07			**4,509.37**

Appendix F. Mixed Grass Summary Ledger.

Mixed Grass Credit Availability Summary

Source	Available Offset Units
Remaining Conservation Contracts	-1795.30
Unreconciled Estimates	3,648.26
Subtotal	**1,852.96**
Conditionally approved Contracts	11,246.6
Total	**13,099.56**

Mixed Grass Estimate Reconciliation Summary

	Count	Total Units
Estimates	292	-7,318.81
HEGs	157	-2,376.59
Reconciled	68	1,791.15
Unreconciled	224	-5,527.66
Impact Balance		-7,904.25
Adj Impact Balance		1824.13

	Count	Units
Reconcile CH1	16	387.63
Reconcile CH2	8	313.80
Reconcile CH3	36	1,072.80
Reconcile CH4	8	16.92
Total		1791.15

Mixed Grass Ledger

Mixed Grass Entry Date	ID	Primary CHAT	charge Type	impact type	Impact units	Offset Credits	Offsetting Site ID	Offset Site Balance	Ecoregion Offset Balance
5/6/2014	2	2	impact estimate	well	-116.0		445	3905.1	-116.0
5/6/2014	3	3	impact estimate	well	-129.8		445	3775.3	-245.7
5/6/2014	4	2	impact estimate	well	-30.6		445	3744.7	-276.3
5/6/2014	5	1	impact estimate	well	-139.3		445	3605.4	-415.6
5/6/2014	6	4	impact estimate	well	0.0		445	3605.4	-415.6
5/6/2014	7	4	impact estimate	well	0.0		445	3605.4	-415.6
5/13/2014	8	1	impact estimate	well	-39.1		445	3566.3	-454.7
5/19/2014	9	3	impact estimate	well	-37.1		445	3529.3	-491.7
5/19/2014	10	3	impact estimate	well	-63.3		445	3466.0	-555.0

5/19/2014	11	3	impact estimate	well	-52.2		445	3413.8	-607.2
5/19/2014	12	3	impact estimate	well	-136.4		445	3277.4	-743.6
5/19/2014	13	2	impact estimate	well	-119.0		445	3158.5	-862.6
5/19/2014	14	3	impact estimate	well	-93.9		445	3064.6	-956.4
5/19/2014	15	1	impact estimate	well	-61.8		445	3002.8	-1018.3
5/19/2014	16	3	impact estimate	well	-73.8		445	2928.9	-1092.1
5/19/2014	17	1	impact estimate	well	0.0		445	2928.9	-1092.1
5/19/2014	18	1	impact estimate	well	0.0		445	2928.9	-1092.1
5/19/2014	19	4	impact estimate	well	-38.6		445	2890.3	-1130.7
5/19/2014	20	2	impact estimate	well	0.0		445	2890.3	-1130.7
5/19/2014	21	3	impact estimate	well	-23.2		445	2867.2	-1153.8
5/19/2014	22	1	impact estimate	well	-21.8		445	2845.4	-1175.6
5/19/2014	23	3	impact estimate	well	-35.8		445	2809.6	-1211.4
5/22/2014	24	4	impact estimate	well	-8.1		445	2801.5	-1219.5
5/22/2014	25	4	impact estimate	well	-48.8		445	2752.7	-1268.3
5/29/2014	26	2	impact estimate	well	-65.4		445	2687.4	-1333.6
6/4/2014	27	4	impact estimate	well	-0.7		445	2686.6	-1334.4
6/5/2014	28	3	impact estimate	well	-2.6		445	2684.1	-1336.9
6/11/2014	29	3	impact estimate	well	0.0		445	2684.1	-1336.9
6/11/2014	30	5	impact estimate	well	0.0		445	2684.1	-1336.9
6/11/2014	31	1	impact estimate	well	0.0		445	2684.1	-1336.9
6/11/2014	32	3	impact estimate	well	-31.6		445	2652.5	-1368.5
6/11/2014	33	3	impact estimate	well	0.0		445	2652.5	-1368.5
6/11/2014	34	5	impact estimate	well	0.0		445	2652.5	-1368.5
6/11/2014	35	3	impact estimate	well	-1.4		445	2651.1	-1370.0
6/11/2014	36	3	impact estimate	well	-16.0		445	2635.0	-1386.0
6/11/2014	37	1	impact estimate	well	-31.0		445	2604.1	-1416.9
6/11/2014	38	1	impact estimate	well	-31.0		445	2573.1	-1447.9
6/11/2014	39	3	impact estimate	well	-8.3		445	2564.8	-1456.2
6/11/2014	40	3	impact estimate	well	-5.4		445	2559.5	-1461.5
6/11/2014	41	3	impact estimate	well	-2.5		445	2557.0	-1464.1
6/16/2014	42	3	impact estimate	well	-38.5		445	2518.5	-1502.5
6/16/2014	43	1	impact estimate	well	-0.5		445	2518.0	-1503.0
6/17/2014	44	3	impact estimate	well	-10.6		445	2507.4	-1513.6
6/17/2014	45	3	impact estimate	well	-1.2		445	2506.2	-1514.8
6/17/2014	46	4	impact estimate	well	-0.6		445	2505.6	-1515.4
6/19/2014	47	3	impact estimate	well	-25.8		445	2479.7	-1541.3
6/19/2014	48	3	impact estimate	well	-3.7		445	2476.0	-1545.0

6/20/2014	49	3	impact estimate	well	-17.0		445	2458.9	-1562.1
6/20/2014	50	4	impact estimate	well	-0.8		445	2458.1	-1562.9
6/20/2014	51	3	impact estimate	well	-0.2		445	2457.9	-1563.1
6/20/2014	52	3	impact estimate	well	0.0		445	2457.9	-1563.1
6/20/2014	53	5	impact estimate	well	0.0		445	2457.9	-1563.1
6/20/2014	54	1	impact estimate	well	-0.6		445	2457.4	-1563.6
6/24/2014	55	3	impact estimate	well	-25.5		445	2431.9	-1589.1
6/24/2014	56	3	impact estimate	well	-9.0		445	2422.9	-1598.1
6/24/2014	57	2	impact estimate	well	0.0		445	2422.9	-1598.1
6/24/2014	58	3	impact estimate	well	-20.2		445	2402.7	-1618.3
6/24/2014	59	4	impact estimate	well	-0.3		445	2402.4	-1618.6
6/24/2014	60	3	impact estimate	well	-99.5		445	2302.9	-1718.1
6/26/2014	61	1	impact HEG	well	-81.2		445	2221.7	-1799.3
6/30/2014	62	4	impact estimate	well	0.0		445	2221.7	-1799.3
6/30/2014	63	4	impact estimate	well	-2.5		445	2219.2	-1801.8
7/10/2014	64	2	impact estimate	well	0.0		445	2219.2	-1801.8
7/10/2014	65	3	impact estimate	well	-55.3		445	2163.9	-1857.1
7/10/2014	66	3	impact estimate	well	-45.3		445	2118.6	-1902.4
7/11/2014	67	2	impact estimate	well	-65.1		445	2053.5	-1967.5
7/11/2014	68	3	impact estimate	well	-1.4		445	2052.1	-1968.9
7/11/2014	69	4	impact estimate	well	-2.9		445	2049.2	-1971.8
7/11/2014	70	4	impact estimate	well	-0.2		445	2049.0	-1972.0
7/14/2014	71	1	impact estimate	well	-36.7		445	2012.3	-2008.7
7/14/2014	72	3	impact estimate	well	-71.2		445	1941.1	-2079.9
7/15/2014	73	3	impact estimate	well	-13.8		445	1927.3	-2093.7
7/17/2014	74	3	impact estimate	well	-29.1		445	1898.2	-2122.8
7/17/2014	75	3	impact estimate	well	-29.3		445	1868.9	-2152.1
7/17/2014	76	3	impact estimate	well	-17.1		445	1851.8	-2169.2
7/17/2014	77	1	impact estimate	well	-83.5		445	1768.3	-2252.7
7/17/2014	78	1	impact estimate	well	-87.3		445	1681.0	-2340.0
7/21/2014	79	1	impact estimate	well	0.0		445	1681.0	-2340.0
7/21/2014	80	3	impact estimate	well	-7.7		445	1673.3	-2347.7
7/22/2014	81	3	impact estimate	well	-10.7		445	1662.6	-2358.4
7/22/2014	82	3	impact HEG		0.0		445	1662.6	-2358.4
7/22/2014	83	4	impact HEG		-27.7		445	1634.9	-2386.1
7/25/2014	84	3	impact estimate	well	-24.5		445	1610.4	-2410.6
7/28/2014	85	3	impact estimate	well	-33.8		445	1576.6	-2444.4
7/29/2014	86	4	impact estimate	well	-0.5		445	1576.1	-2444.9
7/31/2014	87	3	impact estimate	well	-2.4		445	1573.7	-2447.3

7/31/2014	88	1	impact estimate	well	-58.1		445	1515.6	-2505.4
7/31/2014	89	1	impact estimate	well	-60.1		445	1455.6	-2565.4
7/31/2014	90	3	impact estimate	well	-29.2		445	1426.4	-2594.6
8/4/2014	91	3	impact estimate	well	-45.9		445	1380.5	-2640.5
8/4/2014	92	3	impact estimate	well	-19.1		445	1361.4	-2659.6
8/4/2014	93	3	impact estimate	well	-20.3		445	1341.1	-2679.9
8/4/2014	94	3	impact estimate	well	-33.8		445	1307.3	-2713.7
8/4/2015	95	3	impact HEG	well	-33.0		445	1274.3	-2746.7
8/7/2014	97	1	impact estimate	well	-15.9		445	1258.4	-2762.6
8/8/2014	98	1	impact estimate	well	-10.7		445	1247.7	-2773.3
8/8/2014	99	3	impact estimate	well	-19.5		445	1228.2	-2792.8
8/8/2014	100	3	impact estimate	well	-55.3		445	1172.9	-2848.1
8/8/2014	101	3	impact estimate	well	-28.3		445	1144.6	-2876.4
8/8/2014	102	3	impact estimate	well	-1.2		445	1143.4	-2877.6
8/8/2014	103	3	impact estimate	well	-25.6		445	1117.8	-2903.2
8/11/2014	104	3	impact estimate	well	-19.9		445	1097.9	-2923.1
8/11/2014	105	3	impact HEG	well	0.0		445	1097.9	-2923.1
8/11/2014	106	3	impact HEG	well	-14.2		445	1083.7	-2937.3
8/11/2014	107	1	impact HEG	well	0.0		445	1083.7	-2937.3
8/11/2014	108	1	impact HEG	well	-19.7		445	1064.0	-2957.0
8/11/2014	109	1	impact HEG	well	-25.8		445	1038.2	-2982.8
8/11/2014	110	1	impact HEG	well	0.0		445	1038.2	-2982.8
8/12/2014	15	1	impact HEG	well	-7.3		445	1030.9	-2990.1
8/12/2014	15	1	reconcile	well	0.0	54.53	445	1030.9	-2935.6
8/13/2014	113	1	impact estimate	well	-67.6		445	963.3	-3003.2
8/13/2014	114	1	impact estimate	well	-42.8		445	920.5	-3045.9
8/13/2014	115	3	impact estimate	well	-39.0		445	881.6	-3084.9
8/13/2014	64	2	impact HEG	well	0.0		445	881.6	-3084.9
8/13/2014	64	2	reconcile	well	0.0	0.00	445	881.6	-3084.9
8/13/2014	118	1	impact HEG	well	-18.5		445	863.1	-3103.3
8/13/2014	119	3	impact HEG	well	-30.8		445	832.3	-3134.2
8/14/2014	120	3	impact estimate	well	-22.9		445	809.5	-3157.0
8/14/2014	121	3	impact estimate	well	-49.0		445	760.5	-3206.0
8/14/2014	122	3	impact estimate	well	0.0		445	760.5	-3206.0
8/15/2014	123	1	impact estimate	well	0.0		445	760.5	-3206.0
8/15/2014	124	3	impact HEG	well	-6.0		445	754.5	-3211.9
8/19/2014	125	3	impact HEG	well	-30.5		445	724.0	-3242.4
8/19/2014	126	3	impact HEG	well	-40.6		445	683.5	-3283.0
8/21/2014	127	3	impact estimate	well	-6.3		445	677.2	-3289.3

8/21/2014	128	3	impact estimate	well	-9.2		445	668.0	-3298.5
8/21/2014	129	3	impact estimate	well	-4.7		445	663.3	-3303.2
8/21/2014	130	1	impact HEG	well	-39.8		445	623.5	-3343.0
8/22/2014	131	3	impact estimate	well	-20.6		445	602.8	-3363.6
8/25/2014	132	1	impact estimate	well	-85.8		445	517.1	-3449.4
8/25/2014	133	3	impact estimate	well	-55.3		445	461.8	-3504.7
8/25/2014	134	3	impact estimate	well	-35.9		445	425.9	-3540.6
8/25/2014	135	3	impact estimate	well	0.0		445	425.8	-3540.6
8/25/2014	136	3	impact estimate	well	-51.1		445	374.8	-3591.7
8/25/2014	137	1	impact estimate	well	-26.6		445	348.2	-3618.3
8/25/2014	138	4	impact estimate	well	-45.4		445	302.8	-3663.7
8/25/2014	139	4	impact estimate	well	-1.0		445	301.8	-3664.7
8/25/2014	140	3	impact estimate	well	-12.8		445	289.0	-3677.5
8/25/2014	141	4	impact estimate	well	-6.2		445	282.8	-3683.7
8/25/2014	2	2	impact HEG	well	-11.3		445	271.5	-3694.9
8/25/2014	2	2	reconcile	well	0.0	104.68	445	271.5	-3590.3
8/25/2014	144	2	impact HEG	well	0.0		445	271.5	-3590.3
8/25/2014	145	2	impact HEG	well	-6.3		445	265.2	-3596.6
8/26/2014	146	3	impact estimate	well	-25.5		445	239.7	-3622.1
8/26/2014	147	1	impact HEG	well	-29.9		445	209.8	-3652.0
8/26/2014	148	1	impact HEG	well	-30.5		445	179.3	-3682.5
8/27/2014	71	1	impact HEG	well	-29.5		445	149.8	-3712.0
8/27/2014	71	1	reconcile	well	0.0	7.12	445	149.8	-3704.9
8/27/2014	72	3	impact HEG	well	-21.5		445	128.3	-3726.3
8/27/2014	72	3	reconcile	well	0.0	49.76	445	128.3	-3676.6
8/27/2014	153	1	impact HEG	well	-14.5		445	113.8	-3691.1
8/27/2014	154	1	impact HEG	well	0.0		445	113.8	-3691.1
8/27/2014	155	1	impact HEG	well	0.0		445	113.8	-3691.1
8/27/2014	156	1	impact HEG	well	0.0		445	113.8	-3691.1
8/27/2014	157	1	impact HEG	well	-36.2		445	77.6	-3727.3
8/27/2014	158	1	impact HEG	well	-46.6		445	31.0	-3773.9
8/27/2014	159	3	impact HEG	well	-7.3		445	23.7	-3781.2
8/28/2014	160	4	impact estimate	well	-10.7		445	13.0	-3791.9
8/28/2014	161	3	impact estimate	well	-1.8		445	11.2	-3793.7
8/29/2014	162	1	impact estimate	well	-52.8		524	11193.8	-3846.6
8/29/2014	12	3	impact HEG	well	-13.0		524	11180.8	-3859.6
8/29/2014	12	3	reconcile	well	0.0	123.42	524	11180.8	-3736.1
8/29/2014	49	3	impact HEG	well	-2.1		524	11178.7	-3738.2
8/29/2014	49	3	reconcile	well	0.0	14.97	524	11178.7	-3723.2

8/29/2014	68	3	impact HEG	well	-17.6		524	11161.1	-3740.9
8/29/2014	68	3	reconcile	well	0.0	-16.25	524	11161.1	-3757.1
8/29/2014	100	3	impact HEG	well	0.0		524	11161.1	-3757.1
8/29/2014	100	3	reconcile	well	0.0	55.3	524	11161.1	-3701.8
8/29/2014	171	2	impact HEG	well	0.0		524	11161.1	-3701.8
9/2/2014	172	1	impact estimate	well	-35.4		524	11125.7	-3737.2
9/2/2014	173	1	impact estimate	well	-68.6		524	11057.0	-3805.9
9/2/2014	174	1	impact estimate	well	-21.7		524	11035.4	-3827.6
9/2/2014	9	3	impact HEG	well	-13.0		524	11022.4	-3840.5
9/2/2014	9	3	reconcile	well	0.0	24.08	524	11022.4	-3816.4
9/3/2014	177	3	impact estimate	well	0.0		524	11022.4	-3816.4
9/3/2014	178	2	impact estimate	well	-44.4		524	10977.9	-3860.9
9/3/2014	179	4	impact estimate	well	-0.3		524	10977.6	-3861.2
9/3/2014	180	3	impact estimate	well	-10.6		524	10967.1	-3871.8
9/5/2014	181	1	Cons. Offset			520.9			-3350.9
9/8/2014	182	3	impact estimate	well	-25.5		524	10941.6	-3376.4
9/8/2014	183	3	impact estimate	well	-10.2		524	10931.4	-3386.5
9/8/2014	184	3	impact estimate	well	0.0		524	10931.4	-3386.5
9/8/2014	98	1	impact HEG	well	-12.4		524	10919.0	-3398.9
9/8/2014	98	1	reconcile	well	0.0	3.45	524	10919.0	-3395.5
9/8/2014	187	3	impact HEG	well	-25.5		524	10893.5	-3421.0
9/9/2014	188	3	impact estimate	well	-0.8		524	10892.7	-3421.8
9/9/2014	189	4	impact estimate	well	-0.4		524	10892.2	-3422.2
9/10/2014	190	3	impact estimate	well	-38.2		524	10854.0	-3460.5
9/10/2014	191	3	impact estimate	well	-14.3		524	10839.8	-3474.7
9/10/2014	192	4	impact estimate	well	-18.7		524	10821.1	-3493.4
9/10/2014	193	4	impact estimate	well	-18.6		524	10802.5	-3511.9
9/10/2014	194	4	impact estimate	well	-0.7		524	10801.9	-3512.6
9/10/2014	195	3	impact estimate	well	-10.1		524	10791.8	-3522.7
9/10/2014	196	4	impact estimate	well	-6.6		524	10785.1	-3529.3
9/10/2014	197	4	impact estimate	well	-6.6		524	10778.5	-3535.9
9/10/2014	198	3	impact estimate	well	-73.8		524	10704.8	-3609.7
9/10/2014	5	2	impact HEG	well	-16.2		524	10688.6	-3625.9
9/10/2014	5	2	reconcile	well	0.0	14.4	524	10688.6	-3611.6
9/10/2014	11	3	impact HEG	well	0.0		524	10688.6	-3611.6
9/10/2014	11	3	reconcile	well	0.0	63.26	524	10688.6	-3548.3
9/10/2014	12	3	impact HEG	well	0.0		524	10688.6	-3548.3
9/10/2014	12	3	reconcile	well	0.0	52.20	524	10688.6	-3496.1
9/10/2014	205	1	impact HEG	well	0.0		524	10688.6	-3496.1

9/11/2014	115	1	impact HEG	well	0.0		524	10688.6	-3496.1
9/11/2014	115	1	reconcile	well	0.0	42.77	524	10688.6	-3453.3
9/11/2014	116	3	impact HEG	well	-27.7		524	10660.9	-3481.0
9/11/2014	116	3	reconcile	well	0.0	11.31	524	10660.9	-3469.7
9/11/2014	210	1	impact HEG	well	0.0		524	10660.9	-3469.7
9/11/2014	211	3	impact estimate	well	-25.5		524	10635.4	-3495.2
9/11/2014	212	3	impact estimate	well	-13.5		524	10621.9	-3508.7
9/11/2014	213	3	impact estimate	well	-36.0		524	10585.9	-3544.7
9/11/2014	214	1	impact estimate	well	-1.6		524	10584.3	-3546.3
9/11/2014	215	3	impact estimate	well	-14.9		524	10569.3	-3561.2
9/11/2014	216	3	impact estimate	well	-4.0		524	10565.3	-3565.3
9/15/2014	217	4	impact estimate	well	-0.5		524	10564.8	-3565.8
9/15/2014	14	2	impact HEG	well	0.0		524	10564.8	-3565.8
9/15/2014	14	2	reconcile	well	0.0	118.98	524	10564.8	-3446.8
9/15/2014	17	3	impact HEG	well	-15.6		524	10549.2	-3462.4
9/15/2014	17	3	reconcile	well	0.0	58.25	524	10549.2	-3404.1
9/15/2014	43	3	impact HEG	well	-11.1		524	10538.1	-3415.2
9/15/2014	43	3	reconcile	well	0.0	27.38	524	10538.1	-3387.8
9/15/2014	99	1	impact HEG	well	-8.9		524	10529.2	-3396.8
9/15/2014	99	1	reconcile	well	0.0	1.78	524	10529.2	-3395.0
9/15/2014	100	3	impact HEG	well	-16.6		524	10512.6	-3411.6
9/15/2014	100	3	reconcile	well	0.0	2.91	524	10512.6	-3408.7
9/15/2014	102	3	impact HEG	well	-14.1		524	10498.5	-3422.7
9/15/2014	102	3	reconcile	well	0.0	14.20	524	10498.5	-3408.5
9/15/2014	230	3	impact HEG	well	0.0		524	10498.5	-3408.5
9/15/2014	231	3	impact HEG	well	0.0		524	10498.5	-3408.5
9/18/2014	232	3	impact estimate	well	-15.9		524	10482.6	-3424.5
9/18/2014	15	3	impact HEG	well	-13.4		524	10469.3	-3437.8
9/18/2014	15	3	reconcile	well	0.0	80.54	524	10469.3	-3357.3
9/18/2014	235	3	impact HEG	well	-13.6		524	10455.7	-3370.9
9/18/2014	236	4	impact HEG	well	-11.2		524	10444.5	-3382.1
9/18/2014	237	3	impact HEG	well	-11.4		524	10433.0	-3393.5
9/18/2014	238	1	impact HEG	well	0.0		524	10433.0	-3393.5
9/22/2014	239	4	impact estimate	well	-25.0		524	10408.0	-3418.5
9/22/2014	240	3	impact estimate	well	0.0		524	10408.0	-3418.5
9/22/2014	241	3	impact estimate	well	-8.6		524	10399.4	-3427.1
9/22/2014	242	3	impact estimate	well	-28.2		524	10371.2	-3455.3
9/22/2014	4	3	impact HEG	well	-34.3		524	10336.9	-3489.6
9/22/2014	4	3	reconcile	well	0.0	95.44	524	10336.9	-3394.2

9/22/2014	245	3	impact HEG	well	-41.3		524	10295.6	-3435.5
9/22/2014	246	4	impact HEG	well	-0.1		524	10295.5	-3435.6
9/22/2014	247	4	impact HEG	well	-3.3		524	10292.2	-3438.9
9/22/2014	248	4	impact HEG	well	-2.1		524	10290.1	-3441.0
9/23/2014	249	3	impact HEG	well	-28.0		524	10262.1	-3469.0
9/23/2014	250	1	impact HEG	well	-42.4		524	10219.7	-3511.4
9/23/2014	251	4	impact HEG	well	-2.0		524	10217.7	-3513.4
9/26/2014	252	3	impact estimate	well	-13.2		524	10204.5	-3526.6
8/6/2014	96	3	impact HEG	transmission	-377.20		181	143.7	-3903.8
9/30/2014	254	3	impact HEG	well	-16.4		181	127.4	-3920.2
9/30/2014	255	3	impact HEG	well	-4.3		181	123.1	-3924.4
10/2/2014	256	3	impact estimate	well	-42.4		181	80.7	-3966.8
10/2/2014	257	1	impact estimate	well	0.0		181	80.7	-3966.8
10/2/2014	258	4	impact estimate	well	-19.2		181	61.5	-3986.0
10/2/2014	259	3	impact estimate	well	-41.9		181	19.6	-4027.9
10/2/2014	260	3	impact estimate	well	-8.4		181	11.2	-4036.3
10/2/2014	261	4	impact estimate	well	-6.0		181	5.2	-4042.3
10/2/2014	262	3	impact estimate	well	-18.4		524	10186.1	-4060.7
10/2/2014	263	3	impact estimate	well	-5.4		524	10228.2	-4066.0
10/2/2014	264	3	impact estimate	well	-5.2		524	10175.5	-4071.2
10/2/2014	265	3	impact estimate	well	-38.1		524	10137.4	-4109.3
10/2/2014	266	3	impact estimate	well	-23.6		524	10113.9	-4132.9
10/2/2014	267	3	impact estimate	well	-9.1		524	10104.8	-4142.0
10/2/2014	268	2	impact HEG	well	-18.1		524	10086.7	-4160.0
10/6/2014	269	1	impact estimate	well	-52.0		524	10034.7	-4212.1
10/6/2014	270	4	impact estimate	well	-0.7		524	10034.0	-4212.8
10/6/2014	271	1	impact estimate	well	-49.3		524	9984.6	-4262.1
10/6/2014	272	1	impact estimate	well	-22.9		524	9961.7	-4285.0
10/6/2014	273	4	impact HEG	well	-12.4		524	9949.3	-4297.4
10/6/2014	274	3	impact HEG	well	-9.9		524	9939.4	-4307.4
10/7/2014	275	4	impact estimate	well	-2.0		524	9937.4	-4309.4
10/7/2014	276	3	impact estimate	well	-1.5		524	9935.9	-4310.9
10/8/2014	277	3	impact estimate	well	0.0		524	9935.9	-4310.9
10/8/2014	278	3		well	-10.5		524	9925.4	-4321.4
10/13/2014	279	4	impact estimate	well	-2.0		524	9923.4	-4323.4
10/13/2014	92	3	impact HEG	well	-16.5		524	9906.9	-4339.9
10/13/2014	92	3	reconcile	well	0.0	29.44	524	9906.9	-4310.4
10/14/2014	282	1	impact HEG		-7.3		524	9899.6	-4317.7

10/14/2014	283	1	impact HEG		-12.0		524	9887.6	-4329.7
10/15/2014	114	1	impact HEG		-43.7		524	9844.0	-4373.3
10/15/2014	114	1	reconcile		0.0	24.0	524	9844.0	-4349.4
10/16/2014	286	3	impact estimate	well	-39.1		524	9804.9	-4388.5
10/16/2014	287	3	impact estimate	well	-38.7		524	9766.2	-4427.2
10/16/2014	288	3	impact estimate	well	-14.9		524	9751.3	-4442.1
10/16/2014	289	4	impact estimate	well	-0.7		524	9750.6	-4442.7
10/18/2014	290	4	impact estimate	well	-0.5		524	9750.1	-4443.2
10/20/2014	291	3	impact HEG	well	-16.6		524	9733.5	-4459.8
10/20/2014	292	3	impact HEG	well	-4.0		524	9729.5	-4463.9
10/20/2014	293	4	impact HEG	well	-22.1		524	9707.4	-4486.0
10/20/2014	294	1	impact HEG	well	-31.5		524	9675.9	-4517.5
10/20/2014	295	1	impact HEG	well	-27.7		524	9648.2	-4545.2
10/21/2014	296	3	impact estimate	well	-11.6		524	9636.6	-4556.8
10/21/2014	297	4	impact estimate	well	0.0		524	9636.6	-4556.8
10/21/2014	298	4	impact estimate	well	0.0		524	9636.6	-4556.8
10/21/2014	299	1	impact estimate	well	-69.8		524	9566.8	-4626.6
10/21/2014	296	3	impact HEG	well	0.0		524	9566.8	-4626.6
10/21/2014	296	3	reconcile	well	0.0	11.6	524	9566.8	-4615.0
10/21/2014	297	4	impact HEG	well	0.0		524	9566.8	-4615.0
10/21/2014	297	4	reconcile	well	0.0	0.00	524	9566.8	-4615.0
10/21/2014	298	4	impact HEG	well	0.0		524	9566.8	-4615.0
10/21/2014	298	4	reconcile	well	0.0	0.00	524	9566.8	-4615.0
10/27/2014	306	3	impact estimate	well	-12.7		524	9554.0	-4627.7
10/27/2014	307	3	impact estimate	well	-1.1		524	9553.0	-4628.8
10/27/2014	308	4	impact estimate	well	-12.9		524	9540.1	-4641.6
10/27/2014	309	3	impact estimate	well	-25.5		524	9514.6	-4667.1
10/27/2014	310	3	impact estimate	well	-13.8		524	9500.8	-4680.9
10/27/2014	257	1	impact HEG	well	0.0		524	9500.8	-4680.9
10/27/2014	257	1	reconcile	well	0.0	0.00	524	9500.8	-4680.9
10/28/2014	313	4	impact estimate	well	-0.9		524	9499.9	-4681.9
10/28/2014	314	3	impact estimate	well	-26.1		524	9473.8	-4707.9
10/28/2014	315	3	impact estimate	well	-14.9		524	9458.9	-4722.9
10/28/2014	316	3	impact estimate	well	-33.8		524	9425.1	-4756.6
10/28/2014	317	4	impact estimate	well	-9.4		524	9415.7	-4766.0
10/28/2014	318	4	impact estimate	well	-31.5		524	9384.2	-4797.5
10/28/2014	319	2	impact estimate	well	-45.8		524	9338.5	-4843.3
10/28/2014	320	3	impact HEG	well	-5.9		524	9332.5	-4849.2
10/28/2014	321	2	impact HEG	well	-39.1		524	9293.4	-4888.3

10/28/2014	322	3	impact HEG	well	-0.1		524	9293.3	-4888.4
10/28/2014	323	3	impact HEG	well	-20.0		524	9273.4	-4908.4
10/28/2014	324	3	impact HEG	well	-6.1		524	9267.3	-4914.4
10/29/2014	325	3	impact estimate	well	-8.6		524	9258.7	-4923.0
10/29/2014	326	4	impact estimate	well	-0.6		524	9258.1	-4923.6
10/29/2014	327	4	impact HEG	well			524	9258.1	-4923.6
10/30/2014	328	1	impact estimate	well	-39.3		524	9218.8	-4963.0
10/30/2014	329	3	impact estimate	well	-53.4		524	9165.4	-5016.4
10/31/2014	330	4	impact estimate	well	-1.1		524	9164.3	-5017.4
10/31/2014	331	3	impact estimate	well	-48.8		524	9115.6	-5066.2
10/31/2014	332	1	impact estimate	well	-50.2		524	9065.3	-5116.4
10/31/2014	333	3	impact estimate	well	-44.6		524	9020.8	-5161.0
10/31/2014	380	1	impact HEG	well	0.0		524	9020.8	-5161.0
10/31/2014	380	1	reconcile	well	0.0	1.2	524	9020.8	-5159.8
10/31/2014	381	1	impact HEG	well	0.0		524	9020.8	-5159.8
10/31/2014	381	1	reconcile	well	0.0	0.94	524	9020.8	-5158.9
11/3/2014	338	4	impact estimate	well	-0.2		524	9020.6	-5159.0
11/3/2014	339	4	impact estimate	well	0.0		524	9020.6	-5159.0
11/3/2014	340	1	impact estimate	well	-39.9		524	8980.7	-5198.9
11/3/2014	341	3	impact estimate	well	-33.3		524	8947.5	-5232.1
11/3/2014	338	4	impact HEG	well	0.0		524	8947.5	-5232.1
11/3/2014	338	4	reconcile	well	0.0	0.16	524	8947.5	-5232.0
11/3/2014	339	4	impact HEG	well	0.0		524	8947.5	-5232.0
11/3/2014	339	4	reconcile	well	0.0	0.00	524	8947.5	-5232.0
11/4/2014	133	1	impact HEG	well	-17.3		524	8930.2	-5249.3
11/4/2014	133	1	reconcile	well	0.0	68.45	524	8930.2	-5180.9
11/4/2014	213	3	impact HEG	well	-27.9		524	8902.3	-5208.7
11/4/2014	213	3	reconcile	well	0.0	8.15	524	8902.3	-5200.6
11/4/2014	350	3	impact HEG	well	-2.7		524	8899.6	-5203.3
11/4/2014	351	3	impact HEG	well	-17.9		524	8881.7	-5221.2
11/4/2014	352	1	impact HEG	well	-38.5		524	8843.2	-5259.7
11/4/2014	353	3	impact HEG	well	-13.8		524	8829.4	-5273.5
11/4/2014	354	3	impact HEG	well	-33.5		524	8795.9	-5307.0
11/4/2014	355	1	impact HEG	well	-26.1		524	8769.8	-5333.1
11/6/2014	356	1	impact estimate	well	-1.9		524	8767.9	-5335.0
11/6/2014	357	2	impact estimate	well	-26.1		524	8741.7	-5361.1
11/6/2014	358	3	impact estimate	well	-37.9		524	8703.8	-5399.1
11/6/2014	359	2	impact estimate	well	-11.9		524	8691.9	-5411.0
11/6/2014	360	1	impact estimate	well	-14.7		524	8677.2	-5425.7

11/6/2014	361	3	impact estimate	well	-19.0		524	8658.2	-5444.7
11/6/2014	128	3	impact HEG	well	0.0		524	8658.2	-5444.7
11/6/2014	128	3	reconcile	well	0.0	6.31	524	8658.2	-5438.4
11/6/2014	190	3	impact HEG	well	0.0		524	8658.2	-5438.4
11/6/2014	190	3	reconcile	well	0.0	38.22	524	8658.2	-5400.2
11/6/2014	366	3	impact HEG	well	-11.2		524	8647.0	-5411.3
11/6/2014	367	1	impact HEG	well	-16.5		524	8630.5	-5427.8
11/7/2014	368	4	impact estimate	well	0.0		524	8630.5	-5427.8
11/7/2014	369	3	impact estimate	well	-13.9		524	8616.6	-5441.7
11/7/2014	370	4	impact estimate	well	-23.8		524	8592.8	-5465.5
11/7/2014	371	3	impact estimate	well	-13.8		524	8579.0	-5479.3
11/7/2014	372	4	impact estimate	well	-23.5		524	8555.6	-5502.8
11/7/2014	373	1	impact estimate	well	-61.3		524	8494.3	-5564.1
11/7/2014	374	1	impact estimate	well	-72.6		524	8421.7	-5636.7
11/7/2014	375	3	impact estimate	well	0.0		524	8421.7	-5636.7
11/7/2014	376	4	impact estimate	well	-9.9		524	8411.8	-5646.5
11/7/2014	377	4	impact estimate	well	-23.8		524	8388.0	-5670.3
11/7/2014	356	1	impact HEG	well	0.0		524	8388.0	-5670.3
11/7/2014	356	1	reconcile	well	0.0	1.89	524	8388.0	-5668.4
11/10/2014	380	1	impact estimate	well	-1.2		524	8386.8	-5669.6
11/10/2014	381	1	impact estimate	well	-0.9		524	8385.9	-5670.6
11/10/2014	382	3	impact estimate	well	-25.5		524	8360.4	-5696.0
11/10/2014	211	3	impact HEG	well	-29.9		524	8330.5	-5726.0
11/10/2014	211	3	reconcile	well	0.0	-4.41	524	8330.5	-5730.4
11/10/2014	286	3	impact HEG	well	-19.5		524	8311.0	-5749.8
11/10/2014	286	3	reconcile	well	0.0	19.62	524	8311.0	-5730.2
11/10/2014	287	3	impact HEG	well	0.0		524	8311.0	-5730.2
11/10/2014	287	3	reconcile	well	0.0	38.73	524	8311.0	-5691.5
11/10/2014	368	4	impact HEG	well	0.0		524	8311.0	-5691.5
11/10/2014	368	4	reconcile	well	0.0	0.00	524	8311.0	-5691.5
11/10/2014	391	3	impact HEG	well	-5.0		524	8306.0	-5696.5
11/12/2014	392	3	impact estimate	well	-25.7		524	8280.3	-5722.2
11/12/2014	393	3	impact estimate	well	-19.3		524	8261.0	-5741.5
11/12/2014	394	1	impact estimate	well	-54.5		524	8206.6	-5795.9
11/13/2014	395	2	impact estimate	well	-58.9		524	8147.7	-5854.8
11/13/2014	396	4	impact estimate	well	-0.6		524	8147.1	-5855.4
11/13/2014	397	3	impact estimate	well	-15.7		524	8131.4	-5871.1
11/13/2014	398	3	impact estimate	well	-1.8		524	8129.6	-5872.9
11/13/2014	399	1	impact estimate	well	-34.1		524	8095.6	-5906.9

11/13/2014	400	3	impact estimate	well	-2.8		524	8092.7	-5909.8
11/13/2014	401	1	impact estimate	well	-35.3		524	8057.4	-5945.1
11/13/2014	402	1	impact estimate	well	-35.4		524	8022.0	-5980.5
11/13/2014	403	1	impact estimate	well	-35.4		524	7986.5	-6016.0
11/13/2014	404	3	impact estimate	well	-25.5		524	7961.1	-6041.5
11/14/2014	48	3	impact HEG	well	-16.7		524	7944.4	-6058.1
11/14/2014	48	3	reconcile	well	0.0	9.17	524	7944.4	-6048.9
11/14/2014	68	2	impact HEG	well	-48.3		524	7896.1	-6097.2
11/14/2014	68	2	reconcile	well	0.0	16.83	524	7896.1	-6080.4
11/14/2014	121	3	impact HEG	well	-5.2		524	7890.9	-6085.6
11/14/2014	121	3	reconcile	well	0.0	17.68	524	7890.9	-6067.9
11/14/2014	239	4	impact HEG	well	-9.2		524	7881.7	-6077.1
11/14/2014	239	4	reconcile	well	0.0	15.82	524	7881.7	-6061.3
11/14/2014	252	3	impact HEG	well	-3.1		524	7878.6	-6064.4
11/14/2014	152	3	reconcile	well	0.0	10.09	524	7878.6	-6054.3
11/14/2014	256	3	impact HEG	well	-34.2		524	7844.5	-6088.5
11/14/2014	256	3	reconcile	well	0.0	8.24	524	7844.5	-6080.2
11/14/2014	417	2	impact HEG	well	0.0		524	7844.5	-6080.2
11/14/2014	418	2	impact HEG	well	0.0		524	7844.5	-6080.2
11/14/2014	419	3	impact HEG	well	-16.3		524	7828.2	-6096.5
11/14/2014	420	3	impact HEG	well	-32.7		524	7795.5	-6129.2
11/17/2014	421	3	impact estimate	well	-55.3		524	7740.2	-6184.5
11/17/2014	422	3	impact HEG	well	-13.1		524	7727.1	-6197.6
11/17/2014	423	1	impact HEG	well	-14.2		524	7712.9	-6211.8
11/18/2014	424	3	impact estimate	well	-49.5		524	7663.4	-6261.3
11/18/2014	425	2	impact estimate	well	-0.1		524	7663.3	-6261.3
11/18/2014	426	3	impact estimate	well	-43.5		524	7619.9	-6304.8
11/18/2014	427	2	impact estimate	well	-54.5		524	7565.4	-6359.3
11/18/2014	428	1	impact estimate	well	-41.4		524	7524.0	-6400.7
11/20/2014	429	4	impact estimate	well	-0.6		524	7523.4	-6401.2
11/20/2014	313	4	impact HEG	well	0.0		524	7523.4	-6401.2
11/20/2014	313	4	reconcile	well	0.0	0.94	524	7523.4	-6400.3
11/24/2014	432	3	impact estimate	well	-6.1		524	7517.4	-6406.4
11/25/2014	433	4	impact estimate	well	-21.8		524	7495.6	-6428.2
11/26/2014	434	2	impact estimate	well	-73.9		524	7421.6	-6502.1
12/1/2014	435	2	impact estimate	well	-48.4		524	7373.2	-6550.5
12/4/2014	436	1	impact estimate	well	-71.7		524	7301.6	-6622.2
12/4/2014	437	1	impact estimate	well	-7.0		524	7294.6	-6629.2
12/4/2014	438	3	impact estimate	well	-24.9		524	7269.7	-6654.1

12/5/2014	439	3	impact estimate	well	-45.3		524	7224.4	-6699.3
12/9/2014	440	3	impact estimate	well	-6.4		524	7218.0	-6705.8
12/9/2014	441	1	impact estimate	well	-51.8		524	7166.2	-6757.6
12/11/2014	442	1	impact estimate	well	-54.8		524	7111.4	-6812.3
12/11/2014	443	3	impact estimate	well	-34.6		524	7076.8	-6846.9
12/15/2014	444	1	impact estimate	well	-34.4		524	7042.4	-6881.4
12/19/2014	445	1	Cons. Offset			4021		7042.4	-2860.4
12/19/2014	446	4	impact estimate	well	-5.7		524	7036.7	-2866.1
12/19/2014	447	4	impact estimate	well	-13.4		524	7023.2	-2879.5
12/22/2014	448	4	impact estimate	well	-32.4		524	6990.9	-2911.9
12/29/2014	449	4	impact estimate	well	-32.2		524	6958.7	-2944.1
12/31/2014	450	3	impact estimate	well	-24.4		524	6934.3	-2968.4
12/31/2014	451	3	impact estimate	well	-50.8		524	6883.5	-3019.3
1/7/2015	452	3	impact estimate	well	-13.6		524	6869.9	-3032.9
1/13/2015	453	3	impact estimate	well	-27.4		524	6842.4	-3060.3
1/16/2015	454	3	impact estimate	well	-6.4		524	6836.0	-3066.8
1/16/2015	455	3	impact estimate	well	-44.6		524	6791.4	-3111.4
1/19/2015	456	1	impact HEG	well	-8.2		524	6783.2	-3119.6
1/20/2015	457	3	impact estimate	well	-26.4		524	6756.8	-3145.9
1/20/2015	458	1	impact estimate	well	-60.6		524	6696.2	-3206.5
1/21/2015	459	3	impact HEG	well	0.0		524	6696.2	-3206.5
1/28/2015	307	3	impact HEG	well	0.0		524	6696.2	-3206.5
1/28/2015	307	3	reconcile	well	0.0	12.73	524	6696.2	-3193.8
1/28/2015	462	3	impact HEG	well	-13.3		524	6683.0	-3207.0
2/1/2015	463	4	impact estimate	well	0.0		524	6683.0	-3207.0
2/1/2015	464	4	impact estimate	well	-32.3		524	6650.7	-3239.3
2/3/2015	396	2	impact HEG	well	0.0		524	6650.7	-3239.3
2/3/2015	396	2	reconcile	well	0.0	58.89	524	6650.7	-3180.4
2/3/2015	425	3	impact HEG	well	0.0		524	6650.7	-3180.4
2/3/2015	425	3	reconcile	well	0.0	49.46	524	6650.7	-3131.0
2/3/2015	426	2	impact HEG	well	0.0		524	6650.7	-3131.0
2/3/2015	426	2	reconcile	well	0.0	0.05	524	6650.7	-3130.9
2/3/2015	427	3	impact HEG	well	0.0		524	6650.7	-3130.9
2/3/2015	427	3	reconcile	well	0.0	43.49	524	6650.7	-3087.4
2/4/2015	473	1	impact estimate	well	-32.8		524	6617.9	-3120.2
2/20/2015	474	3	impact estimate	well	-40.4		524	6577.5	-3160.6
2/20/2015	475	3	impact estimate	well	-11.7		524	6565.8	-3172.3
2/20/2015	476	4	impact HEG	well	-6.5		524	6559.3	-3178.8
2/24/2015	477	4	impact estimate	well	-0.2		524	6559.1	-3179.0

2/25/2015	86	3	impact HEG	well	-5.3		524	6553.8	-3184.3
2/25/2015	86	3	reconcile	well	0.0	19.21	524	6553.8	-3165.1
2/25/2015	164	1	impact HEG	well	-6.8		524	6547.0	-3171.9
2/25/2015	164	1	reconcile	well	0.0	46.04	524	6547.0	-3125.9
2/25/2015	183	3	impact HEG	well	-20.7		524	6526.3	-3146.6
2/25/2015	183	3	reconcile	well	0.0	4.78	524	6526.3	-3141.8
2/25/2015	213	3	impact HEG	well	-7.0		524	6519.3	-3148.8
2/25/2015	213	3	reconcile	well	0.0	6.5	524	6519.3	-3142.3
2/25/2015	315	3	impact HEG	well	-3.4		524	6516.0	-3145.6
2/25/2015	315	3	reconcile	well	0.0	22.72	524	6516.0	-3122.9
2/25/2015	488	1	impact HEG	well	-17.9		524	6498.0	-3140.8
2/25/2015	489	1	impact HEG	well	-18.6		524	6479.4	-3159.4
2/25/2015	490	1	impact HEG	well	0.0		524	6479.4	-3159.4
2/26/2015	491	3	impact estimate	well	-0.7		524	6478.7	-3160.1
2/26/2015	492	3	impact estimate	well	-25.5		524	6453.2	-3185.6
2/26/2015	493	3	impact estimate	well	-25.5		524	6427.7	-3211.1
2/26/2015	494	3	impact estimate	well	-52.2		524	6375.6	-3263.3
2/26/2015	495	3	impact estimate	well	-29.3		524	6346.2	-3292.6
2/27/2015	496	2	impact estimate	well	0.0		524	6346.2	-3292.6
2/27/2015	497	3	impact estimate	well	-21.3		524	6325.0	-3313.9
2/27/2015	498	1	impact estimate	well	-50.9		524	6274.1	-3364.8
2/27/2015	499	1	impact estimate	well	-18.1		524	6256.0	-3382.9
2/27/2015	500	3	impact estimate	well	-19.3		524	6236.6	-3402.2
2/27/2015	501	3	impact estimate	well	-50.3		524	6186.3	-3452.5
3/2/2015	496	2	impact HEG	well	0.0		524	6186.3	-3452.5
3/2/2015	496	2	reconcile	well	0.0	0.00	524	6186.3	-3452.5
3/3/2015	504	4	impact estimate	well	0.0		524	6186.3	-3452.5
3/3/2015	453	3	impact HEG	well	-10.1		524	6176.2	-3462.7
3/3/2015	453	3	reconcile	well	0.0	17.31	524	6176.2	-3445.4
3/3/2015	507	4	impact HEG	well	-11.6		524	6164.6	-3456.9
3/4/2015	504	4	impact HEG	well	0.0		524	6164.6	-3456.9
3/4/2015	504	4	reconcile	well	0.0	0.00	524	6164.6	-3456.9
3/10/2015	510	1	impact HEG	well	-27.0		524	6137.6	-3484.0
3/16/2015	437	1	impact HEG	well	-12.8		524	6124.8	-3496.8
3/16/2015	437	1	reconcile	well	0.0	58.86	524	6124.8	-3437.9
3/16/2015	473	1	impact HEG	well	-14.9		524	6109.9	-3452.8
3/16/2015	473	1	reconcile	well	0.0	17.93	524	6109.9	-3434.8
3/17/2015	422	3	impact HEG	well	-8.3		524	6101.6	-3443.1
3/17/2015	422	3	reconcile	well	0.0	46.98	524	6101.6	-3396.2

3/18/2015	174	1	impact HEG	well	-7.4		524	6094.2	-3403.6
3/18/2015	174	1	reconcile	well	0.0	28.03	524	6094.2	-3375.5
3/18/2015	519	1	impact HEG	well	-8.6		524	6085.6	-3384.2
3/18/2015	329	1	reconcile	well	0.0	30.71	524	6085.6	-3353.5
3/18/2015	329	3	impact HEG	well	-19.1		524	6066.5	-3372.5
3/18/2015	522	1	impact HEG	well	-0.3		524	6066.2	-3372.8
3/31/2015	523	4	Cons. Offset			1,577.5			-1795.3
3/31/2015	524	1	Available Reconcile Offset			3,648.26			1852.96