# Arizona Water Protection Fund Fairchild Draw Riparian Restoration Project Grant No. 07-150WPF

# **Final Report**

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#### EXECUTIVE SUMMARY

The Fairchild Draw Riparian Restoration Project was undertaken to protect and provide for the recovery of approximately 16 acres of wet meadow, including one mile of intermittent stream from the impacts of heavy elk use. Through the construction of an elk exclusion fence, the project was intended to provide native herbaceous riparian species the opportunity to increase in vigor and representation in the plant community. Fencing was also intended to provide for more favorable conditions into which native Bebb's willows could be reintroduced, as well as the natural regeneration of aspen.

Overall, the Fairchild Draw Riparian restoration Project has been very effective at setting the stage for the long-term recovery of this high elevation wet meadow. The herbaceous vegetation responded rapidly and favorably to the exclusion of elk, even within the first growing season following the completion of the exclosure fence. Both the vigor of the plants improved as well as the composition. Average plant height increased from 5.1cm as measure during the baseline surveys conducted in September of 2007, to 47.4cm in September of 2011. The dominance of non-native Kentucky bluegrass declined, from 45.6% in 2007 to 4.8% in 2011, while native species increased. Sedges and rushes, for example, increased from 0.4% in 2007 to 14.8% in 2011. The amount of bare ground decreased, from a high of 28.0% in 2007 to 4.4% in 2011, and when it did occur, was typically a result of recent gopher activity. Vegetation throughout the meadow is now providing protection to the soil, and contributing to reduced stream energy throughout the floodplain during high flow events.

In addition, the exclusion fence is providing a favorable environment for the successful planting and survival of native Bebb's willow, and the natural recruitment of aspen. As of September 2011, over 96% of the Bebb's willow that were planted were still alive. Although not fully recovered, formally exposed headcuts and banks are now well vegetated, with evidence of soil aggradation occurring directly below the headcuts. It is noteworthy that the recovery of the stream channel noted to date has occurred without the need for manipulation of the banks as was originally proposed.

#### ACKNOWLEDGEMENTS

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#### INTRODUCTION

The Fairchild Draw Riparian Restoration Project (Project) is located in the Little Colorado River watershed at the headwaters of the Willow Creek sub-watershed, on the Apache-Sitgreaves National Forests, Coconino County, Arizona (Figure 1). This Project was undertaken to protect and provide for the recovery of approximately 16 acres of wet meadow, including one mile of intermittent stream from the impacts of heavy elk use. Through the construction of an elk exclusion fence, the project was intended to provide native herbaceous riparian species the opportunity to increase in vigor and representation in the plant community. Fencing was also intended to provide for more favorable conditions into which native Bebb's willows could be reintroduced, as well as the natural regeneration of aspen. Also originally included as a part of the project proposal, but not implemented, was the treatment of selected headcuts and the subsequent mulching and reseeding of the treated areas.



Figure 1. Fairchild Draw Riparian Restoration Project area.

In 1999 the Forest Service (FS) completed the Limestone Allotment Management Plan analysis, in compliance with the National Environmental Policy Act. During the analysis the FS recognized both the impacts that ungulates were having to Fairchild Draw and the opportunity to address this issue. During the development of the Limestone allotment management plan, a livestock exclosure was proposed for a portion of Fairchild Draw to eliminate livestock use. At the time, concern over the condition of the riparian area also included concern for the downstream effects to Little Colorado spinedace, a threatened fish that historically occupied Willow Creek, and continues to occupy portions of Clear Creek. Fairchild Draw drains into Willow Creek; Willow Creek drains into Clear Creek, and Clear Creek drains into the Little Colorado River.

Subsequent to the Limestone grazing allotment plan analysis, and in the absence of livestock (livestock have not been permitted within the Project area since 1998), it became evident that impacts from elk were significantly impacting the riparian plant community along the upper portions of Fairchild Draw, and were contributing to deterioration of the meadow and stream channel, as evidenced by the continued development of headcuts, and the prevalence of exposed soil and raw banks. Among the plant species heavily impacted by this grazing was the Blumer's dock (*Rumex orthoneurus*), a plant of special concern to the FS and U.S. Fish and Wildlife Service (FWS), and Bebb's willow (*Salix bebbiana*).

In 2000, the FS submitted an Arizona Water Protection Fund Grant application to protect and enhance approximately 15 acres (0.5 miles) of upper Fairchild Draw by installing an 8-foot high elk exclosure fence and planting Bebb's willow. The grant was awarded (Upper Fairchild Draw Restoration Project, Grant # 00-110WPF), and fence construction was completed in September of 2001.

Since completion of the fence, the protected portion of upper Fairchild Draw had shown significant recovery. Plant vigor had increased, as had abundance of native riparian vegetation. Headcuts and raw banks became well vegetated, no longer showing signs of further degradation. Vegetation throughout the meadow was providing protection to the soil, and contributing to reduced stream energy throughout the floodplain during high flow events.

In 2001 the Arizona Game and Fish Department (Department) began monitoring herbaceous forage utilization in the Fairchild Draw meadow downstream of the Upper Fairchild Draw exclosure. End of season utilization attributed to elk use ranged from 54% to a high of 78% in 2005.

Although the portion of upper Fairchild Draw protected by the exclosure fence showed significant recovery, the remainder of the meadow and stream channel downstream of the exclosure continued to show evidence of continued degradation, as indicated by low plant vigor, loss of native riparian vegetation, dominance of the exotic Kentucky bluegrass, deficient ground cover, raw banks, and active headcuts. As a result, in 2006, the Department submitted an Arizona Water Protection Fund Grant application to protect and enhance the lower meadow.

The primary factor contributing to the continued degradation, and limiting the recovery and restoration of the Fairchild Draw meadow was the ongoing direct impact to the site from elk. Excessive use by elk resulted in over utilization of herbaceous forage and browse. This led to low plant vigor, loss of native riparian vegetation, dominance of the exotic Kentucky bluegrass, deficient ground cover, raw banks, and active headcuts. For Fairchild Draw to recover, it was essential that access to the meadow by elk be minimized.

#### Project Goals and Objectives

The Goals of the Fairchild Draw Restoration Project was to protect and provide conditions favorable for the recovery of the 16 acres of wet meadow, including 1 mile of intermittent stream channel within the project area.

#### Objectives

- 1. Protect and restore the native plant community
  - a. Increase the vigor of native herbaceous riparian species
  - b. Minimize the presence and influence of exotic Kentucky bluegrass
  - c. Restore native Bebb's willow to the plant community
  - d. Provide for natural aspen recruitment
- 2. Protect and restore degraded conditions of the drainage morphology
  - a. Repair and revegetate existing headcuts and raw banks to halt existing erosion
  - b. Improve ground cover throughout the meadow
  - c. Aggradation within existing downcuts to restore morphology and function of the meadow.

### SCOPE OF WORK

Achieving the stated project goals and objectives were to be accomplished through the implementation of three task items. The first and most crucial was the construction of the elk exclusion fence. This would eliminate the primary causative agent contributing to the continued degradation, and limiting the recovery and restoration of the Fairchild Draw meadow. The second task was to be the treatment of select headcuts that were unlikely to recover on their own. Treatment of the headcuts would result in reduced bank angels, and would be followed by mulching and seeding of the treated soils. This task was to be implemented to hasten recovery, where natural revegetation was unlikely to occur. The third task was the planting of native Bebb's willow which no longer occurred within the project area.

#### Exclosure Fence Construction

The Fairchild Draw Riparian Restoration Project grant application included the proposed construction of approximately 2.2 miles (approximately 11,616 feet) of 8' tall elk exclosure fencing, which would protect and provide for the recovery of approximately 16 acres of wet meadow, including 1 mile of intermittent stream from the impacts of continued heavy elk use. To accomplish this, it was proposed that two new eight foot tall elk exclosures be constructed in Fairchild Draw. A gap of approximately 200' in length between the two exclosures was incorporated into the design to provide for a movement corridor across the meadow for large-

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bodied wildlife species such as deer, elk, and bear. The bottom wire was to be elevated at least 12" off the ground to facilitate small animal movement at virtually any point along the length of the exclosure fence. Two 12' gates (one per exclosure) and four walk-thru gates (two per exclosure) would also be installed. The 12' gates would facilitate the removal of elk should they gain access to the exclosure, as well as provide for vehicular access for the implementation of potential future restoration activities. The walk-through gates would primarily function to facilitate public access.



Figure 2.Example walk-through gate construction



Figure 4. Example of height from ground to bottom wire



Figure 3. Example vehicular access gate construction



Figure 5. General view of fence

Hopkins Fence Company began construction of the exclosure fence in mid November 2007. Construction continued through a series of early winter snow events until, in late December 2007, the Forest Service closed Forest Road 300 for the remainder of the winter. Construction resumed in May 2008 following the reopening of Forest Road 300, and was finally completed on July 17, 2008. On July 18, 2008 a final inspection of the completed fence was conducted, at which time all H-braces, corners and gates were GPS's, and the constructed fence length was measured (Figure 6).



Figure 6. Completed Exclosure Fence Map



Figure 7. Example double H brace construction



Figure 8. Example of corner construction

The length of completed fence totaled 12,162 feet (as measured with Hip-Chain). The total area within exclosure fences totaled 14.9 acres (measured with ArcMap). The discrepancy between the proposed 16 acres of protected wet meadow and 14.9 acres realized is primarily due to the need to avoid an archeological site that was identified by the Forest Service during a survey conducted shortly before fence construction began.

Schedule of Materials and Machinery Used

- 4' 12 ga. Field Fence (2 rows,8' total height with bottom 12" above ground)
- 10' 1.33 T-posts (10' spacing)
- 12' 2 <sup>1</sup>/<sub>2</sub>" Scd 40 Black Pipe (corner uprights)
- 10' 2 <sup>1</sup>/<sub>2</sub>" Scd 40 Black Pipe (horizontal corner braces)
- Hog Rings (spaced 8" to 12" apart to connect the rows of field fence)
- Wire Clips (attach field fence to T-posts)
- Post Mix (for all Black Pipe uprights)

- Diesel powered Dandy Digger To drill holes and pound t-posts
- Gas powered two man auger To drill holes in dirt
- Gas powered ATV To haul materials
- Gas powered chainsaw (2) To brush fence line
- Gas powered Miller 6000 Stick Welder To weld corners
- Gas powered pickups (2) To haul men and materials



Figure 9. Fence material staging area



Figure 10. Dandy Digger

#### Treating Cutslopes and Native Seeding

Numerous active headcuts and raw banks were found throughout the project area prior to implementation of the project. At the time of the writing of the grant proposal, it was believed that these headcuts would not readily heal. Channel bank treatment activities associated with the Fairchild Draw Riparian Restoration project were therefore proposed.

Seven proposed treatment sites were identified (B1 through B7) with the aid of the Apache-Sitgreaves National Forests Forest Hydrologist during a field visit in May of 2007 (Figure 11). Treatments were proposed to occur in September - October of 2008 following cessation of summer rains. Headcuts and vertical banks were to be pulled back to a 2:1 angle utilizing hand



Figure 11. Bank Treatment Site Location Map

tools. The disturbed soils were then to be seeded with native grass and sedge species consisting of 80% Nebraska sedge and 20% tufted hairgrass. Following application of seed, loose soil was to be lightly packed, with weed free mulch hand-spread over the treated area.

Although implementation of headcut treatments was to have occured the fall following completion of the elk exclosure fence, fortuitous delays associated with coordination with the Army Corps of Engineers allowed the potential for natural recovery of the cutslopes to became evident. On August 31, 2009 the Department contacted the Project Manager with the Arizona Water Protection Fund to request a field visit to the project site to discuss the need to proceed with bank treatments given the current rate of recovery. A site visit was conducted on September 3, 2009 with the Project Manager. On September 25<sup>th</sup>, a request was made by the Department to the Project Manager for a modification to the deliverables for the Fairchild Draw Riparian Restoration Project to no longer require that bank treatment and reseeding occur as a part of this project.

Based on the observed state of recovery of the project area as a whole, and the rate of bank revegetation, it was felt that the need to perform bank treatment activities was no longer justified. Natural recovery was occurring faster than anticipated and was expected to continue. Figures 12 though 18 contrasts the proposed bank treatment sites as they looked in May of 2007 and in September of 2011 after four years of natural recovery.

In addition, there was concern that at that point there was a greater risk to the recovery of the project area by performing activities that would leave the banks temporarily unprotected from the effects of high flow events than would be gained by a potential accelerated rate of recovery. On September 28<sup>th</sup> the Department received approval to forgo bank treatment.



Figure 12. Proposed bank treatment area B1, May 2007 (left), and natural recovery September 2011 (right)



Figure 13. Proposed bank treatment area B2, May 2007 (left), and natural recovery September 2011 (right)



Figure 14. Proposed bank treatment area B3, May 2007 (left), and natural recovery September 2011 (right)



Figure 15. Proposed bank treatment area B4, September 2007 (left), and natural recovery September 2011 (right)



Figure 16. Proposed bank treatment area B5, May 2007 (left), and natural recovery September 2011 (right)



Figure 17. Proposed bank treatment area B5, May 2007 (left), and natural recovery September 2011 (right)



Figure 18. Proposed bank treatment area B5, May 2007 (left), and natural recovery September 2011 (right)

#### **Bebb's Willow Planting**

The Fairchild Draw Riparian Restoration Project grant application included the proposed planting of 100 Bebb's willow saplings in order to reestablish this native willow within the project area. The planting of Bebb's willow, which were to be purchased from the Natural Resource Conservation Service's Plant Material Center, in Los Lunas, New Mexico was to occur over a three-year period following the construction of the elk exclosure fence. Roughly a third of the willows were to be planted each year.

Spacing the plantings over three years was intended to mitigate for potential occurrence of drought or other severe environmental conditions which could impact plant survivability. The first planting was proposed to consist of roughly 33 plants, which would be planted in August 2008, after the onset of summer rains when summer soil moisture levels were anticipated to be more favorable for plant survival. Subsequent plantings were to occur in 2009 and 2010.

Although funding for one hundred Bebb's willow plants was provided for in the original grant, due to the high survival rate for the 2008 and 2009 plantings, and that the treating of cutslopes and native seeding was not going to occur, it was requested of the Project Manager with the Arizona Water Protection Fund to allow those unspent funds to be used for the purchase of an additional 100 willows for the 2010 planting season. A limited availability of willows from the Plant Material Center in 2010 and 2011 reduced the number of plants that could be purchased in 2010 to 30. An extension of the grant allowed for a 2011 planting at which time 50 Bebb's willow were purchased and planted. In total 180 Bebb's willow plants were been planted over a four year period.

On August 6<sup>th</sup> 2008, an initial 50 Bebb's willow in 4"x4"x14" one gallon tree pots were purchased from the Plant Material Center in Los Lunas, New Mexico and transported to the Pinetop Regional Office of the Arizona Game and Fish Department. Due to favorable spring and summer precipitation, it was decided to increase the initial planting from 33 plants to 50.

On August 7<sup>th</sup> the willows were transported to Fairchild Draw. That day the specific planting locations were selected with the aid of a soil moisture meter in conjunction with evidence of historic willow stumps. Planting sites were within the area shown in a 1931 photograph where it was documented that willows previously occurred. Utilizing posthole diggers, holes were dug for each plant. In all but one instance the holes were dug sufficiently deep to reach the water table.



Figure 19. Bebb's willows prior to planting, August 2008. Figure 20. Digging holes for willows, August 2008.



On August 8<sup>th</sup>, planting of the willows occurred. Each of the 50 planting locations were GPS'd. The total depth of each hole was recorded as was the depth to the water table (Appendix A). The plants were tagged with 1½ inch aluminum, dye stamped tags and photographed.



Figures 21 and 22. Example of hole dug by posthole digger, August 2008

The 2009 plantings occurred on July 28<sup>th</sup> and 29<sup>th</sup>. Spring and early summer precipitation had once again been favorable, and it was decided to again increase the planting from the planned 33 plants to 50. Planting occurred directly downstream of the 2008 planting following the same protocol as in 2008.

The 2010 plantings occurred on August 21<sup>st</sup>. Thirty Bebb's willow plants in 4"x4"x14" one gallon tree pots purchased from the Plant Material Center in Los Lunas, New Mexico were planted directly downstream of the 2009 planting locations, following the 2008 protocol.



Figures 23 and 24. Example of planted Bebb's willow, August 2008.



Figure 25. Bebb's willow 2008 – 2011 planting locations

The 2011 plantings occurred on August 23<sup>rd</sup>. Fifty Bebb's willow plants in 4"x4"x14" one gallon tree pots purchased on August 22<sup>nd</sup> from the Plant Material Center in Los Lunas, New Mexico were transported to Fairchild Draw. Planting sites were directly downstream of the 2010 planting locations. Unlike past years, a significant number of holes were not dug sufficiently deep to reach the water table (Appendix A). This was due to three factors; shorter plants, more difficult digging conditions, and drier site conditions. Due to poor growing conditions at the plant material center over the previous year, the willows purchased were significantly shorter. In addition, this section of Fairchild Draw contained a higher rock content below the soil surface, which limited the ability to dig in certain areas. Finally, this portion of Fairchild Draw was generally drier than the areas planted in 2008, 2009, and 2010.





Figures 26 and 27. Example of planted Bebbs' willow, August 2011.

#### Monitoring

The overarching goal of the Fairchild Draw Riparian Restoration Project was to protect and provide conditions favorable for the recovery of the Fairchild Draw meadow, including the intermittent stream channel within the project area. Specifically, the Project hoped to achieve the following:

- 1. Protect and restore the native plant community
  - a. Increase the vigor of native herbaceous riparian species
  - b. Minimize the presence and influence of exotic Kentucky bluegrass
  - c. Restore native Bebb's willow to the plant community
  - d. Provide for natural aspen recruitment
- 2. Protect and restore degraded conditions of the drainage morphology
  - a. Repair and revegetate existing headcuts and raw banks to halt existing erosion
    - b. Improve groundcover throughout the meadow
    - c. Provide for conditions that promote aggradation within the existing downcuts to restore morphology and function of the meadow

A monitoring plan was developed to help the Arizona Water Protection Fund, as well as the Department assess the success of the Project at achieving its stated goals, objectives, and methodologies. Monitoring included assessing the exclosure fence, both its effectiveness at excluding large bodied ungulates, as well as its overall condition. Another component of monitoring was to document the response of the native vegetation within the project area to the exclusion of elk. Finally, it was important to monitor the condition of the Bebb's willow which were planted as part of this project.

#### **Exclosure Fence Condition Monitoring**

The integrity of the exclosure fence was monitored at least twice per year. The perimeter of the fence was walked, and the condition of the fence inspected, typically in May and September of each year (Figure 28). The type and location of any damage to the fence was recorded, and photographs of the damage were taken. If the damage was severe enough to compromise the integrity of the exclosure fence, that was noted as well. Damage was repaired as soon as it was feasible to do so.

In 2008 exclosure fence condition monitoring was conducted on September 18, only two months following the completion of fence construction activities. Fence damage was recorded at one location near the upstream end of the upstream exclosure (UTM 493652/3814117) and was the result of an aspen tree falling onto the fence (Figure 29). Damage was minimal and consisted of the upper panel of field wire being pushed downward less than three feet. This damage did not compromise the integrity of the fence due to the branches of the aspen, which effectively filled the gap in the fence. At the time of the inspection, the aspen tree was cut off of the fence and the upper panel was pulled back up into place and secured to the t-post.



Figure 28. Exclosure fence perimeter and monitoring locations



Figure 29. Fence damage from aspen, September 18, 2008.

In 2009, exclosure fence condition monitoring was conducted on May 3 and September 10. No damage to the fence was detected on either occasion.

In 2010, exclosure fence condition monitoring was conducted on May 9 and September 10. The fence was in generally good condition. During this monitoring period, damage to the fence occurred as a result of a single large aspen falling from the inside of the exclosure across the fence (UTM 493600/3814934). The tree was cut off of the fence and the fence was repaired the same day as the May 9 inspection. A human caused cut in the north side of the upper exclosure fence was also found and repaired. In addition a few of the welds on the H-brace pipes were beginning to show signs of cracking. It is uncertain at this time whether the cracks in the welds pose any risk to the long-term integrity if the fence.



Figure 30. Fence damage from aspen, May 9, 2010.

In 2011, exclosure fence condition monitoring was conducted on April 19 and September 8. The April monitoring showed continued expansion of the cracks in the H-braces that were noted in

2010. In total, eight welds showed signs of cracking (Figures 31 and 32). Due to concerns related to welding and wildfire risk, repair work was not performed until November 16<sup>th</sup>, after the first snow fall had fully ameliorated fire risk.





Figures 31 and 32. Cracked welds, April 2011.

In addition, short segments of the fence began to lean inward. T-posts and fence wire were used to pull the fence segments back.



Figures 33 and 34. Leaning fence stabilization, April 2011.

#### **Exclosure Fence Effectiveness Monitoring**

The effectiveness of the fence to exclude elk and livestock was monitored at least twice per year, typically in May and September. This was accomplished through visual inspection of the interior of the exclosure area for any signs (i.e. hoof prints, scat, trampling, grazing, and browsing) of elk or cattle entry into or use within the exclosure.

In 2008 exclosure fence effectiveness monitoring was conducted on September 18. At the time of the monitoring there was no sign that elk or any other large ungulate had gained access to the interior of the exclosures. There was however, evidence at one location where the terrain dipped (UTM 493681/3814497) that the bottom of the fence had been pushed upward. To reduce the chances of large bodied ungulates successfully penetrating the exclosure at this location in the

future, a number of pieces of large woody debris were placed along the bottom of the fence (Figure 35).



Figure 35 Large woody debris placed along bottom of fence, September 2008.

In 2009, exclosure fence effectiveness monitoring was conducted on May 3 and September 10. During the May 3 monitoring, one yearling elk was observed within the upstream exclosure. Upon being detected, it quickly moved further downstream, exiting the exclosure by crawling under the fence at the point where the exclosure fence crosses the channel. In response, the bottom of the fence was modified at that location by adding an additional bottom wire and t-post, to reduce the gap between the ground and bottom wire. In other areas, additional wire was added to segments of the fence where the ground dipped and the resulting gap between the ground and the bottom wire was greater than 12 inches.

During the September 10 monitoring, elk sign, including tracks and scat were observed within the upstream exclosure. Upon further inspection it was determined that a small elk, likely a yearling was accessing the exclosure through the northeast corner walk-through gate. To counter this, the access gate was wired closed.

In 2010, exclosure fence effectiveness monitoring was conducted on May 9 and September 10. Some elk sign was observed at this time within the upper exclosure. With virtually no detectible impact to the vegetation within the exclosure, it is believed that one to only a few animals were entering the exclosure. These animals were likely entering the exclosure through a human caused cut in the north side of the upper exclosure fence which was subsequently repaired.

In 2011, exclosure fence effectiveness monitoring was conducted on April 19, and September 8. No evidence of elk or livestock use was observed in 2011.

#### **Native Plant Community Monitoring**

Vigor of native herbaceous riparian species, percent composition of exotic Kentucky bluegrass, and percent groundcover were monitored along five permanent, 25.5 meter long monitoring transects running perpendicular to the channel (Figure 28). Transects were established to document change at representative sites within the exclosure. Monitoring was conducted in September of 2007 through 2011. The ends of each transect were GPS'd and marked with t-posts

and 1-1/2 inch diameter die stamped aluminum tags. Data was recorded at each half meter interval, beginning 0.5 meters from the east stake. At each data collection point plant height (in centimeters utilizing a meter stick) and ground cover type (i.e. bare ground, litter, Kentucky bluegrass, sedge, rush, etc.) were recorded. Plants were identified to species as knowledge and plant identification skills permitted. Digital photographs showing the length of each transect were taken during each transect monitoring event (For field data, see Appendix B)



Figure 36. Example transect monitoring site.

#### **Bebb's Willow and Aspen Recruitment Monitoring**

Bebb's willow were monitored to determine percent plant survival in September of 2008 through 2011. Plants were considered alive if they had attached green leaves or the stems were still pliable. Although the monitoring plan stated that an attempt would be made to determine causes of plant mortality, in practice the causes of plant mortality could not be determined. The occurrence and location of new aspen shoots were also recorded and GPS'd (For field data, see Appendix C).

#### **Photo Point Monitoring**

Thirteen photo points were established, five at the locations of the native plant community transect, seven at the proposed bank repair and revegetation sites, and one in the vicinity of a 1931 photo point location (Figure 28). Photo points were established to document change within the exclosure over time to provide visual documentation of the overall response of the plant community. All photo points were GPS'd, and marked with t-posts and 1 <sup>1</sup>/<sub>2</sub> inch diameter die stamped aluminum tags. Digital photos were taken in September of 2007 through 2011 from a height of one meter above ground level (Appendix D). Photographs were initially taken utilizing an Olympus Stylus 400 digital camera, and in later years with a Nikon D80. The compass direction of each picture was recorded, with multiple photographs from a single photo point often taken. Baseline photographs were taken prior to initiation of restoration activities.

#### **RESULTS AND DISCUSSION**

#### Exclosure Fence

The exclosure fence was a vital component of the Project, and has proved very effective at limiting elk and livestock from accessing the project area, while allowing smaller animals such as coyotes and porcupines to access the meadow. To date, the exclosure fence has served well at allowing the meadow to recover naturally, and for the planted Bebb's willow to avoid being excessively browsed. Only minor modification to the fence have been required, including adding some additional wire or large woody debris to areas of the fence where undulating topography resulted in gaps between the ground and the bottom wire that could have allowed calf and yearling elk to enter the exclosure.

Maintenance of the fence has consisted of removing two downed trees from the fence and repairing the damage that they had caused. The need for such activities had been expected, and is not considered to have been excessive. Of greater concern, however, is the cracking of the welds on the H-braces and the inward leaning of portions of the fence. Annual inspection of these welds and prompt repair will be key in maintaining the integrity of the fence.

#### Native Plant Community

The native plant community responded favorably and rapidly to the exclusion of elk from the project area. Project objectives included increasing the vigor of native herbaceous plant species, minimizing the presence of Kentucky bluegrass, and increasing ground cover thereby limiting the amount of exposed soil susceptible to erosion. Transect monitoring results showed positive outcomes for each of these objectives.

Plant vigor, as measured by plant height, increased dramatically from that measured during the baseline monitoring. Table 1 summarizes plant height data for each of the five transects, from the baseline monitoring data collected in 2007 through the 2011 annual monitoring. Average plant height for all herbaceous species measured was 47.4 cm in 2011 compared to just 5.1 cm in 2007. Plant height continued to increase each year following construction of the fence. Figures 37 though 39 help illustrate the rapid response of the herbaceous plant community.

Removing grazing pressure also resulted in the reduction of the relative amount of Kentucky bluegrass within the project area. Each of the five transects showed large reductions in Kentucky bluegrass as a percentage of ground cover (Table 2). Bare ground showed similar declines at each of the transects. Simultaneously, sedges and rushes increased, though this response was not observed at all of the transects.

Averaging all five transects showed that the percentage of Kentucky bluegrass declined from the 2007 high of 45.6% to 4.8% in 2011 (Table 3). The percentage of bare ground continued to decrease, from an initial high of 28% in 2007 to the current 4.4%. At 14.8%, sedges and rushes are more abundant than the 0.4% observed in 2007.

			Aver	age Plant Height	(cm)	
Transect		Kentucky	Sadga/ Puch	Other Grass	Other Plant	All Dlants
		Bluegrass	Seuge/ Kush	Species	Species	All Flains
2007		5.0	N/A	12.0	2.3	5.4
	2008	12.3	N/A	27.2	14.4	18.3
T-1	2009	18.9	N/A	55.6	13.2	30.8
	2010	35.3	40.0	48.8	24.9	40.4
	2011	16.0	N/A	42.8	8.4	36.0
	2007	6.9	N/A	16.3	1.8	8.3
	2008	10.0	N/A	35.2	10.2	21.0
T-2	2009	25.0	50.0	39.4	15.7	26.3
	2010	40.0	50.6	59.4	24.8	47.3
	2011	32.0	40.5	55.4	20.2	45.8
	2007	4.0	5.0	10.0	1.8	4.5
	2008	11.5	N/A	23.2	14.2	17.6
T-3	2009	19.3	40.0	50.1	16.5	35.0
	2010	N/A	47.0	67.2	24.5	53.1
	2011	30.0	40.4	68.1	34.8	57.1
	2007	4.4	N/A	9.7	1.8	4.5
	2008	11.6	N/A	55.5	8.4	11.3
T-4	2009	16.5	45.0	43.5	13.4	20.8
	2010	35.0	N/A	52.5	18.0	31.9
	2011	20.2	N/A	41.4	16.7	26.7
	2007	3.0	N/A	3.0	2.9	3.0
	2008	15.4	34.7	35.1	19.4	27.9
T-5	2009	N/A	51.0	60.2	16.9	36.5
	2010	N/A	55.6	50.4	22.6	37.6
	2011	48.0	70.1	65.7	39.0	66.9
	2007	5.3	5.0	6.2	2.3	5.1
	2008	12.7	34.7	30.3	12.4	19.3
Average	2009	19.1	48.2	50.6	14.6	29.9
	2010	36.2	51.6	56.9	22.2	42.1
	2011	24.4	59.7	55.3	18.8	47.4
Charter	2008	+7.4	+29.7	+24.1	+10.1	+14.2
form	2009	+13.8	+43.2	+44.4	+12.3	+24.8
form Baseline	2010	+30.9	+46.6	+50.7	+19.8	+37.0
	2011	+19.1	+54.7	+49.1	+16.5	+42.3

Table 1. 2007 - 2011 Average Plant Height

	Percent Ground Cover Type							
Transect		Bare Ground	Kentucky bluegrass	Sedge/ Rush	Other Grass Species	Other Plant Species	Litter	Water
-	2007	32	48	0	8	12	0	0
L	2008	20	18	0	26	32	4	0
, I	2009	10	14	0	30	36	10	0
1	2010	4	4	2	50	28	12	0
	2011	8	4	0	68	14	6	0
	2007	30	36	0	16	12	6	0
Г	2008	14	14	0	32	28	0	12
	2009	16	2	12	16	46	8	0
2	2010	4	4	10	48	26	8	0
	2011	10	2	4	58	20	6	0
	2007	28	42	2	10	12	6	0
Г	2008	8	12	0	38	40	2	0
	2009	0	6	12	46	36	0	0
ω	2010	4	0	12	58	26	0	0
	2011	0	4	22	64	10	0	0
	2007	24	60	0	6	10	0	0
Г	2008	2	32	0	4	62	0	0
	2009	0	4	4	20	72	0	0
4	2010	0	8	0	34	52	6	0
	2011	4	12	0	34	42	8	0
	2007	26	42	0	2	26	4	0
Т	2008	2	16	38	20	24	0	0
	2009	0	0	32	20	48	0	0
U V	2010	0	0	22	24	54	0	0
	2011	0	2	48	48	2	0	0

 Table 2.
 2007 - 2011 Percent ground cover by transect

				Percent	Ground Cov	er Type		
Transect		Bare Ground	Kentucky bluegrass	Sedge/ Rush	Other Grass Species	Other Plant Species	Litter	Water
Aver	age '07	28.0	45.6	0.4	8.4	14.4	3.2	0
Aver	age '08	9.2	18.4	7.6	24.0	37.2	1.2	2.4
Aver	age '09	5.2	5.2	12.0	26.4	47.6	3.6	0
Aver	age '10	2.4	3.2	9.2	42.8	37.2	5.2	0
Aver	age '11	4.4	4.8	14.8	54.4	17.6	4.0	0
	2008	-18.8	-27.2	+7.2	+15.6	+22.8	-2.0	+2.4
e fron eline	2009	-22.8	-40.4	+11.6	+18.0	+33.2	+0.4	0
Chang Base	2010	-25.6	-42.4	+8.8	+34.4	+22.8	+2.0	0
	2011	-23.6	-40.8	+14.4	+46.0	+3.2	+0.8	0

Table 3. 2007 - 2011 Average percent ground cover 2007 through 2011



Figure 37. Transect 2A, September 2007.



Figure 38. Transect 2A, September 2008.



Figure 39. Transect 2A, September 2010.

#### Bebb's Willow and Aspen Recruitment

A total of 180 Bebb's willow were planted over a four year period as part of the Fairchild Draw Riparian Restoration Project (50 in 2008, 50 in 2009, 30 in 2010, and 50 2011). As of September 2011, 173 plants (96.1%) were confirmed to be alive, and seven (3.9%) were confirmed as dead (Table 4). Figure 40 shows the general location of living and dead willows.

Year (Number)	Sept. 2008		Sept. 2009		Sept. 2010		Sept. 2011	
Planted	Alive	Dead	Alive	Dead	Alive	Dead	Alive	Dead
August 2008 (50)	50 (100%)	0	50 (100%)	0	49 (98%)	1	47 (94%)	3
July 2009 (50)	N/A		49 (98%)	1	47 (94%)	3	46 (92%)	4
August 2010 (30)	N/A		N/A		30 (100%)	0	30 (100%)	0
August 2011 (50)	N/A		N/A		N/A		50 (100%)	0
Total (180)	50 (100%)	0	99 (99%)	1	126 (97%)	4	173 (96%)	7

Table 4. Bebb's willow Status as of September 15, 2011

An attempt was made while planting the willows to assure to the greatest extent possible that sufficient soil moisture would be available to the plants between the time of planting and when plant roots grew down into the water table. To accomplish this, an attempt was made to dig each of the holes into which the Bebb's willows were to be planted sufficiently deep to reach ground water. At times this required holes to be dug to the effective digging depth of the posthole diggers. The average depth of the holes was 0.62 meters, with a maximum depth of 0.98 meters and a minimum depth of 0.29 meters. Of the 180 willows planted, 151 of the holes were dug sufficiently deep to reach ground water, with the average depth of the water within the holes at 0.15 meters, and a maximum depth of 0.47 meters. At this time, it cannot be determined to what extent this contributed to the favorable survival rate of the willows.



Figure 40. Bebb's Willow Status - As of September 2011

As was expected, successful aspen recruitment occurred following completion of the exclosure fence. Aspen shoots were recorded during the 2008 monitoring, which was within two months following completion of the exclosure fence. A similar response of aspen was not noted outside of the exclosure fence.



Figure 41. Aspen recruitment, September 2011

#### CONCLUSION AND RECOMMENDATIONS

Overall, the Fairchild Draw Riparian Restoration Project has been very effective at setting the stage for the long-term recovery of this high elevation wet meadow. The herbaceous vegetation responded rapidly and favorably to the exclusion of elk even within the first growing season following the completion of the exclosure fence. Both the vigor of the plants improved as well as the composition. Average plant height increased from 5.1cm in September of 2007 to 47.4 cm in September of 2011. The dominance of non-native Kentucky bluegrass declined, from 45.6% in 2007 to 4.8% in 2011, while native species increased. Sedges and rushes increased from 0.4% in 2007 to 14.8% in 2011. The amount of bare ground decreased, from a high of 28.0% in 2007 to 4.4% in 2011, and when it did occur, was typically a result of recent gopher activity. Vegetation throughout the meadow is now providing protection to the soil, and contributing to reduced stream energy throughout the floodplain during high flow events.

In addition, the exclosure fence has provided a favorable environment for the successful planting and survival of native Bebb's willow, and the natural recruitment of aspen. As of September 2011, over 96% of the Bebb's willow that were planted were still alive. Although not fully recovered, formally exposed headcuts and banks are now well vegetated, with evidence of soil aggradation occurring directly below the headcuts. It is noteworthy that the recovery of the stream channel noted to date has occurred without the need for manipulation of the banks as was originally proposed.

The exclosure fence was, of course, the key component of the Fairchild Draw Riparian Restoration Project. Given current forest, livestock, and elk management, the continued maintenance of the exclosure fence will ultimately determine the long-term success of this project. It is likely that this exclosure fence will need to be maintained well beyond the eleven year minimum to which the Department committed to maintaining it. The Upper Fairchild Draw Riparian Restoration Project (Grant # 00-110WPF) is a case in point, and is briefly discussed below.

#### Upper Fairchild Draw Restoration Project, Grant # 00-110WPF

The Upper Fairchild Draw Restoration Project was very similar to the Fairchild Draw Riparian Restoration Project, both including the construction of an eight foot high elk exclosure fence. The Projects are in close proximity to one another and are within the same meadow (Figure 42).



Figure 42. General locations of the two Fairchild Draw projects.

Construction of the exclosure fence for the Upper Fairchild Draw Restoration Project was completed in September of 2001. Since completion of the fence, the protected portion of upper Fairchild Draw had shown significant recovery. Plant vigor had increased, as had abundance of native riparian vegetation. Headcuts and raw banks became well vegetated, no longer showing signs of further degradation. Vegetation throughout the meadow was providing protection to the soil, and contributing to reduced stream energy throughout the floodplain during high flow events.

In fact, it was the success of this project that encouraged the Department to apply to the Arizona Water Protection Fund for funding for the Fairchild Draw Riparian Restoration Project. Photos from the first Fairchild Draw project taken in 2006 were used in the PowerPoint presentation to the Arizona Water Protection Fund Commission on September 19, 2006 to help demonstrate the expected success of the Fairchild Draw Riparian Restoration Project should it be funded (Figures 43-46).



Figure 43 General view of meadow

Figure 44 Sedge



Figures 45 Bebb's willow

Figure 46 Aspen

In 2010, however, the condition of the Upper Fairchild Draw elk exclosure fence began to significantly deteriorate. A few elk were observed within the exclosure in September of 2010,

and again in April 2011. In September 2011, cattle were found to also be accessing the exclosure.



Figure 47 Cattle in the Upper Fairchild Draw exclosure, 2011.

The impacts of elk and cattle on the meadow within the Upper Fairchild Draw exclosure were dramatic, and highlight the need for continued long-term maintenance of these exclosure fences under current forest, livestock, and elk management. Figures 48 through 51 show the impacts from ungulate access to the Upper Fairchild Draw Restoration project area. Photos were taken in September 2011.



Figure 48. General view of grazed meadow

Figure 49. Grazed sedge



Figure 50. Browsed Bebb's willow



Figure 51. Browsed aspen

#### Recommendations for Future Projects

*Elk Exclosure Fence Construction*: The fence construction specifications for the Fairchild Draw Riparian Restoration Project were generally effective, with minimal required maintenance. The desire to allow access to the exclosure by small mammals by requiring that the bottom wire be 12" above ground level was somewhat problematic. In some spots, where the ground dipped, the gap between the ground and the bottom wire, in combination with an animal pushing up against the bottom wire was sufficient to allow calf and yearling elk to access the exclosure.

Constructing elk exclosure fences to promote small animal access should be encouraged. However, special attention should be given to areas of topographic relief, to ensure that the distance between the ground and bottom wire remains within acceptable limits.

*Elk Exclosure Fence Maintenance*: As the Upper Fairchild Draw Restoration Project has shown (see discussion above), maintenance of exclosure fences should be considered as a likely long-term undertaking. Although site-specific conditions vary from location to location, allowing elk and especially livestock to access formally protected wet meadows will result in at least some level of site degradation. If the continued protection of young browse species, such as willow and aspen are not of concern, an eventual transition from a dual purpose elk and livestock exclosure to a livestock only exclosure should be considered as a longer-term, if not permanent solution. This will minimize ongoing expense and time commitments for fence maintenance, reduce visual impacts resulting from an eight-foot high exclosure fence, and allow greater use by a more diverse assemblage of wildlife species and the public, while still offering significant protection to the financial investment made as well as the natural resources of the wet meadow.

*Treatment of Cutslopes*: In wet meadows where herbaceous vegetation response is relatively quick, and in project areas where the depth of cutbanks is not excessive, project proponents should consider incorporating into their projects a pre-treatment evaluation period during which time the rate and extent of natural recovery can be evaluated, and the need for mechanical manipulation of the banks can be assessed. The Fairchild Draw Riparian Restoration Project demonstrated the potential for natural recovery when excessive grazing pressure is removed.

## APPENDIX A: FAIRCHILD DRAW RIPARIAN RESTORATION PROJECT BEBB'S WILLOW PLANTING DATA

## Arizona Water Protection Fund Fairchild Draw Riparian Restoration Project Grant No. 07-150WPF

Final Report

Submitted by David Dorum Arizona Game and Fish Department

December 31, 2011

The Arizona Water Protection Fund Commission has funded all, or a portion, of this report or project. The views or findings represented in this deliverable are the Grantees and do not necessarily represent those of the Commission or the Arizona Department of Water Resources.
Plant Number         Total Depth of         Depth to Water         Water		Water Depth	UTM	
	Hole (meter)	(meter)	(meter)	(NAD 83, Zone 12)
W001	0.88	0.80	0.08	493677 / 3814360
W002	0.95	0.87	0.08	493670/3814357
W003	0.88	0.72	0.16	493682 / 3814368
W004	0.50	-	0	493687 / 3814375
W005	0.88	0.79	0.09	493681 / 3814369
W006	0.81	0.75	0.06	493679 / 3814378
W007	0.78	0.65	0.13	493690 / 3814369
W008	0.78	0.70	0.08	493688 / 3814379
W009	0.77	0.63	0.14	493691 / 3814377
W010	0.73	0.63	0.10	493692 / 3814375
W011	0.71	0.63	0.08	493691 / 3814379
W012	0.59	0.54	0.05	493693 / 3814385
W013	0.53	0.37	0.16	493697 / 3814381
W014	0.59	0.49	0.10	493685 / 3814396
W015	0.46	0.37	0.09	493687 / 3814392
W016	0.47	0.32	0.15	493689 / 3814386
W017	0.54	0.33	0.21	493689 / 3814397
W018	0.44	0.31	0.13	493689 / 3814393
W019	0.47	0.28	0.19	493696 / 3814390
W020	0.45	0.33	0.12	493701 / 3814387
W021	0.49	0.24	0.25	493705 / 3814378
W022	0.57	0.31	0.26	493702 / 3814389
W023	0.46	0.41	0.05	493689 / 3814395
W024	0.44	0.17	0.27	493700 / 3814393
W025	0.57	0.42	0.15	493692 / 3814396
W026	0.51	0.20	0.31	493696 / 3814397
W027	0.48	0.12	0.36	493701 / 3814397
W028	0.45	0.11	0.34	493700 / 3814399
W029	0.40	0.25	0.15	493700 / 3814405
W030	0.44	0.24	0.20	493689 / 3814404
W031	0.40	0.25	0.15	493701 / 3814400
W032	0.44	0.23	0.21	493699 / 3814406
W033	0.33	0.24	0.09	493697 3814409
W034	0.64	0.30	0.34	493702 / 3814408
W035	0.53	0.34	0.19	493699 / 3814412
W036	0.47	0.24	0.23	493696 / 3814411
W037	0.45	0.26	0.19	493696 / 3814414
W038	0.59	0.39	0.20	493698 / 3814416
W039	0.54	0.29	0.25	493696 / 3814416
W040	0.47	0.24	0.23	493695 / 3814419
W041	0.50	0.15	0.35	493697 / 3814433
W042	0.52	0.12	0.40	493698 / 3814435
W043	0.48	0.18	0.30	493697 / 3814440
W044	0.42	0.09	0.33	493692 / 3814438
W045	0.50	0.09	0.41	493696 / 3814444
W046	0.49	0.08	0.41	493697 / 3814449
W047	0.48	0.14	0.34	493696 / 3814454
W048	0.48	0.10	0.33	493696 / 3814455

Table A-1. 2008 Bebb's willow planting

Plant Number	Total Depth of Hole (meter)	Depth to Water (meter)	Water Depth (meter)	UTM (NAD 83, Zone 12)
W049	0.43	0.15	0.28	493696 / 3814448
W050	0.47	0.15	0.32	493693 / 3814451
Average	0.55	0.29	0.20	
Maximum	0.95	0.87	0.41	
Minimum	0.33	0.08	0	

Table A-2. 2009 Bebb's willow planting

Dland Namh an	Total Depth of	Depth to Water	Water Depth	UTM
Plant Number	Hole (meter)	(meter)	(meter)	(NAD 83, Zone 12)
W051	0.71	0.60	0.11	493676 / 3814526
W052	0.45	0.06	0.39	493679 / 3814531
W053	0.60	0.36	0.24	493679 / 3814517
W054	0.61	0.44	0.17	493680 / 3814515
W055	0.59	0.47	0.12	493679 / 3814513
W056	0.66	0.36	0.30	493686 / 3814508
W057	0.57	0.37	0.20	493687 / 3814506
W058	0.52	0.27	0.25	493686 / 3814507
W059	0.83	0.36	0.47	493665 / 3814501
W060	0.65	0.50	0.15	493678 / 3814501
W061	0.50	0.20	0.30	493686 / 3814508
W062	0.51	0.43	0.08	493682 / 3814509
W063	0.51	0.33	0.18	493686 / 3814533
W064	0.80	0.59	0.21	493682 / 3814536
W065	0.44	0.25	0.19	493690 / 3814492
W066	0.69	0.46	0.23	493692 / 3814499
W067	0.70	0.39	0.31	493693 / 3814488
W068	0.40	0.32	0.08	493695 / 3814488
W069	0.42	0.25	0.17	493691 / 3814480
W070	0.41	0.31	0.10	493689 / 3814477
W071	0.60	0.48	0.12	493694 / 3814473
W072	0.61	0.46	0.15	493689 / 3814471
W073	0.50	0.34	0.16	493686 / 3814470
W074	0.47	0.18	0.29	493689 / 3814460
W075	0.40	0.13	0.27	493691 / 3814457
W076	0.48	0.31	0.17	493695 / 3814450
W077	0.54	0.44	0.10	493694 / 3814455
W078	0.68	0.50	0.18	493699 / 3814462
W079	0.73	0.64	0.09	493702 / 3814464
W080	0.71	0.59	0.12	493701 / 3814468
W081	0.53	0.42	0.11	493699 / 3814471
W082	0.57	0.36	0.21	493697 / 3814465
W083	0.51	0.35	0.16	493691 / 3814480
W084	0.55	0.27	0.28	493691 / 3814477
W085	0.40	0.22	0.18	493694 / 3814480
W086	0.69	0.52	0.17	493699 / 3814475
W087	0.55	0.32	0.23	493701 / 3814480
W088	0.48	0.32	0.16	493693 / 3814477
W089	0.66	0.49	0.17	493701 / 3814475

Plant Number	Total Depth of	Depth to Water	Water Depth	UTM
1 mile i (uniber	Hole (meter)	(meter)	(meter)	(NAD 83, Zone 12)
W090	0.58	0.43	0.15	493698 / 3814484
W091	0.79	0.48	0.31	493697 / 3814501
W092	0.59	0.49	0.10	493692 / 3814491
W093	0.59	0.47	0.12	493697 / 3814495
W094	0.56	0.44	0.12	493696 / 3814498
W095	0.63	0.51	0.12	493691 / 3814499
W096	0.68	0.54	0.14	493691 / 3814501
W097	0.59	0.48	0.11	493685 / 3814494
W098	0.66	0.52	0.14	493679 / 3814517
W099	0.60	0.46	0.14	493677 / 3814521
W100	0.57	0.44	0.13	493700 / 3814487
Average	0.58	0.40	0.18	
Maximum	0.83	0.64	0.47	
Minimum	0.40	0.06	0.08	

Table A-3. 2010 Bebb's willow planting

Dland Namh an	Total Depth of	Depth to Water	Water Depth	UTM
Plant Number	Hole (meter)	(meter)	(meter)	(NAD 83, Zone 12)
W101	0.69	0.53	0.16	493669 / 3814526
W102	0.58	0.42	0.16	493665 / 3814525
W103	0.71	0.49	0.22	493668 / 3814528
W104	0.59	0.37	0.22	493667 / 3814529
W105	0.55	0.27	0.28	493667 / 3814537
W106	0.53	0.34	0.19	493659 / 3814544
W107	0.49	0.42	0.07	493657 / 3814544
W108	0.60	0.47	0.13	493657 / 3814552
W109	0.47	0.35	0.12	493652 / 3814549
W110	0.46	0.15	0.31	493651 / 3814551
W111	0.60	0.34	0.26	493649 / 3814554
W112	0.65	0.54	0.11	493647 / 3814556
W113	0.75	0.63	0.12	493645 / 3814550
W114	0.61	0.44	0.17	493652 / 3814558
W115	0.54	0.34	0.20	493648 / 3814557
W116	0.76	0.51	0.25	493650 / 3814556
W117	0.72	0.52	0.20	493643 / 3814563
W118	0.69	0.57	0.12	493638 / 3814564
W119	0.59	0.48	0.11	493632 / 3814569
W120	0.89	0.60	0.29	493630 / 3814576
W121	0.98	0.85	0.13	493633 / 3814577
W122	0.73	0.45	0.28	493636 / 3814581
W123	0.52	0.29	0.23	493638 / 3814584
W124	0.71	0.54	0.17	493641 / 3814590
W125	0.60	0.21	0.39	493634 / 3814573
W126	0.53	0.23	0.30	493636 / 3814571
W127	0.53	0.29	0.24	493638 / 3814584
W128	0.82	0.58	0.24	493644 / 3814577
W129	0.63	0.35	0.28	493644 / 3814580
W130	0.71	0.42	0.29	493644 / 3814596

Plant Number	Total Depth of Hole (meter)	Depth to Water (meter)	Water Depth (meter)	UTM (NAD 83, Zone 12)
Average	0.64	0.43	0.21	
Maximum	0.98	0.85	0.39	
Minimum	0.46	0.15	0.07	

Table A-4. 2011 Bebb's willow planting data

Dlant Number	Total Depth of	Depth to Water	Water Depth	UTM
Plant Number	Hole (meter)	(meter)	(meter)	(NAD 83, Zone 12)
W131	0.67	0.50	0.17	493634 / 3814612
W132	0.94	0.73	0.21	493633 / 3814615
W133	0.72	0.51	0.21	493640 / 3814616
W134	0.61	0.49	0.12	493643 / 3814617
W135	0.77	0.72	0.05	493647 / 3814618
W136	0.87	-	0	493644 / 3814620
W137	0.74	-	0	493639 / 3814623
W138	0.74	-	0	493640 / 3814638
W139	0.82	-	0	493635 / 3814632
W140	0.80	-	0	493627 / 3814628
W141	0.81	-	0	493631 / 3814637
W142	0.71	-	0	493625 / 3814636
W143	0.78	-	0	493628 / 3814641
W144	0.83	-	0	493626 / 3814645
W145	0.54	-	0	493624 / 3814646
W146	0.60	-	0	493604 / 3814645
W147	0.44	-	0	493619 / 3814656
W148	0.29	-	0	493605 / 3814657
W149	0.40	-	0	493614 / 3814654
W150	0.69	-	0	493614 / 3814661
W151	0.77	-	0	493613 / 3814665
W152	0.75	-	0	493610 / 3814662
W153	0.82	-	0	493609 / 3814664
W154	0.76	-	0	493605 / 3814666
W155	0.68	-	0	493609 / 3814669
W156	0.75	-	0	493609 / 3814673
W157	0.76	-	0	493607 / 3814673
W158	0.85	-	0	493604 / 3814677
W159	0.72	-	0	493604 / 3814682
W160	0.77	-	0	493606 / 3814686
W161	?	?	?	493599 / 3814690
W162	0.81	-	0	493597 / 3814701
W163	0.87	0.77	0.10	493607 / 3814701
W164	0.68	0.62	0.06	493587 / 3814698
W165	0.86	0.76	0.10	493588 / 3814697
W166	0.78	0.67	0.11	493595 / 3814714
W167	0.81	0.80	0.01	493594 / 3814715
W168	0.80	0.74	0.06	493599 / 3814719
W169	0.82	0.77	0.05	493596 / 3814719
W170	0.54	0.44	0.10	493593 / 3814724
W171	0.56	0.47	0.09	493595 / 3814728

Plant Number	Total Depth of Hole (meter)	Depth to Water (meter)	Water Depth (meter)	UTM (NAD 83, Zone 12)
W172	0.72	0.56	0.16	493588 / 3814727
W173	0.61	0.52	0.09	493591 / 3814732
W174	0.77	-	0	493590 / 3814731
W175	0.79	0.78	0.01	493582 / 3814736
W176	0.83	0.82	0.01	493592 / 3814739
W177	0.84	0.83	0.01	493597 / 3814740
W178	0.85	0.74	0.11	493590 / 3814747
W179	0.72	0.65	0.07	493595 / 3814745
W180	0.83	-	0	493588 / 3814748
Average	0.73	0.66	0.04	
Maximum	0.94	>0.87	0.21	
Minimum	0.29	0.44	0	

# APPENDIX B: FAIRCHILD DRAW RIPARIAN RESTORATION PROJECT TRANSECT DATA SHEETS

# Arizona Water Protection Fund Fairchild Draw Riparian Restoration Project Grant No. 07-150WPF

**Final Report** 

Submitted by David Dorum Arizona Game and Fish Department

December 31, 2011

The Arizona Water Protection Fund Commission has funded all, or a portion, of this report or project. The views or findings represented in this deliverable are the Grantees and do not necessarily represent those of the Commission or the Arizona Department of Water Resources. Fairchild Draw Riparian Restoration Project

Turner	Newskaw T 1				
Transect	Number: 1-1	Date	e: Septemb	er 15, 2011	
Transect	Length: 25.5m	Exa	miner(s): L	D. Dorum	
Endpoint	t Stake UTM's (NAD 83)				
S	Stake 1: 493666 / 381	4275			
S	Stake 2: 493644 / 381	4277			
Point	а. <b>т</b>	Height	Point		Height
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)
0.5	Poaceae	36	17.5	Redtop	24
1.0	Poaceae	34	18.0	Redtop	45
1.5	Log	-	18.5	Western yarrow	5
2.0	Redtop	65	19.0	Redtop	44
2.5	Poaceae	25	19.5	Forb	10
3.0	Redtop	52	20.0	Litter	-
3.5	Poaceae	33	20.5	Kentucky bluegrass	19
4.0	Redtop	49	21.0	Redtop	7
4.5	Redtop	50	21.5	Dirt	_
5.0	Poaceae	42	22.0	Western yarrow	17
5.5	Redtop	45	22.5	Redtop	39
6.0	Redtop	45	23.0	Western yarrow	6
6.5	Poaceae	23	23.5	Poaceae	19
7.0	Poaceae	43	24.0	Poaceae	45
7.5	Poaceae	36	24.5	Redtop	46
8.0	Dandelion	7	25.0	Dirt (gopher mound)	-
8.5	Poaceae	19	Photo: T-1.	A	
9.0	Redtop	38			
9.5	Kentucky bluegrass	13			
10	Redtop	46			A A A A A A A A A A A A A A A A A A A
10.5	Redtop	29		P. LARDING	K u Let
11.0	Dandelion	8			
11.5	Redtop	27	and the second		the same of the same
12.0	Dirt (gopher mound)	-	A STREET		STAN MAN
12.5	Dirt (gopher mound)	-			Var
13.0	Dandelion	6		ALLER PLATE AND DE LORGE COMPANY	
13.5	Redtop	40			
14.0	Redtop	47	and the second second		A STATE OF
14.5	Redtop	46	A AND A	La	The second second
15.0	Redtop	55	A A	Careful I and the second	1.0
15.5	Foxtail	83	Last.		
16.0	Litter	-	ALC: NOT THE REAL OF		Winter La sur
16.5	Foxtail	93	1		
17.0	Foxtail	86			
Notes:					

		Transe	ct Data She	et	
Transect	Number: T-1	Dat	e: Septemb	er 10, 2010	
Transect	Length: 25.5m	Exa	miner(s): D	D. Dorum and L. Dorum	
Endpoint	t Stake UTM's (NAD 83)				
S	493666/381	4275			
с С	$1 = \frac{1}{2} = $	1273			
Doint	are 2. 4930447381	42// Unight	Doint		Height
Point (m)	Cover Type	(cm)	Pollit (m)	Cover Type	(cm)
0.5	Western varrow	23	17.5	Poaceae	50
1.0	Kentucky bluegrass	50	18.0	Poaceae	30
1.5	Log	-	18.5	Redtop	70
2.0	Kentucky bluegrass	36	19.0	Clover	4
2.5	Poaceae	24	19.5	Redtop	59
3.0	Rush	40	20.0	Western yarrow	13
3.5	Litter	-	20.5	Clover	9
4.0	Redtop	71	21.0	Poaceae	28
4.5	Kentucky bluegrass	20	21.5	Poaceae	37
5.0	Litter	-	22.0	Forb (peavine?)	46
5.5	Forb	5	22.5	Western yarrow	21
6.0	Redtop	64	23.0	Litter	-
6.5	Redtop	78	23.5	Forb (peavine?)	29
7.0	Poaceae	23	24.0	Poaceae	52
7.5	Poaceae	23	24.5	Bare ground	0
8.0	Poaceae	21	25.0	Pine dropseed	53
8.5	Forb	-	Photo: T-1	A	
9.0	Poaceae	16	Contraction of the second		
9.5	Poaceae	40			
10	Redtop	51			
10.5	Forb	113			
11.0	Redtop	65		The second s	
11.5	Poaceae	32			The second second
12.0	Clover	10			1 41 8
12.5	Redtop	61		and the second	
13.0	Redtop	68	- Constant Parts	in the second second	and the second
13.5	Litter	-	2. 1. 191		14 Marine Mar
14.0	Forb	3	- 41 8 31 4		Fill Strangelle
14.5	Redtop	74	1.4	State and an all the set	A CALLER AND
15.0	Western yarrow	17	and the second	BELL MASH REPORT 17	and a really
15.5	Bare ground	0	- All & Som		出 东,有了高等。
16.0	Forb	6	· · · · · · · · · · · · · · · · · · ·		
10.5	Litter	- 01	-		
17.0	Redtop	81			
Notes:					

Transect Data Sheet						
Transect Number: T-1 Da			te: September 10, 2009			
Transect	Length: 25.5m	Ex	xaminer(s): D. Dorum and L. Dorum			
Endpoint	t Stake UTM's (NAD 83)					
S	$\frac{1}{10000000000000000000000000000000000$	4275				
	$\frac{1}{2}$	4077				
Daint	Stake 2: 493044 / 381		Deint		II. alat	
Point (m)	Cover Type	Height	Point	Cover Type	Height	
(11)	Kantuaku hluagraga	(CIII)	(11)	Earb	(CIII)	
1.0	Kentucky bluegrass	26	17.5	Litter	0	
1.0	L og	20	18.0	Poaceae	31	
2.0	Kentucky bluegrass	21	19.0	Bare ground	0	
2.5	Forb	3	19.5	Western varrow	11	
3.0	Wood	-	20.0	Clover	13	
3.5	Litter	_	20.5	Redton	58	
4.0	Forb	4	20.9	Gopher mound	0	
4.5	Forb	13	21.5	Kentucky bluegrass	17	
5.0	Bare ground	0	22.0	Kentucky bluegrass	22	
5.5	Clover	8	22.5	Yarrow	8	
6.0	Clover	12	23.0	Redton	64	
6.5	Redton	82	23.5	Bare ground	0	
7.0	Clover	12	24.0	Poaceae	21	
7.5	Kentucky bluegrass	17	24.5	Composite	40	
8.0	Redton	67	25.0	Forb	54	
8.5	Poaceae	34	Photo: T-1	A		
9.0	Redton	71		-		
9.5	Clover	12	A CONTRACT		to and	
10	Redtop	86		A REAL PROPERTY AND A REAL	10 17	
10.5	Redtop	82	The Part of the	and the second se		
11.0	Clover	11		A CALLER AND A CALL		
11.5	Poaceae	13	The I part	In File Content	の理論である。	
12.0	Clover	8			A	
12.5	Redtop	69				
13.0	Redtop	70	de re anne			
13.5	Redtop	63	you I am	and the second s	et la	
14.0	Bluegrass	12	and a state of the	and the second states of the second states of the	Mary and AST	
14.5	Litter	-	and a set	And a stand of the stand of the stand	A State State	
15.0	Bare ground	0	in the second second	The Walk of the second second	See Sur	
15.5	Western yarrow	11		The second second second	A REAL PROPERTY OF	
16.0	Gopher mound	0	1 Cale	ALL TRANS. THE SALES	ALC: NO.	
16.5	Forb	11				
17.0	Poaceae	23				
Notes:						

		Transe	ect Data She	et	
Transect	Number: T-1	Dat	e: September 18, 2008		
Transect	Length: 25.5m	Exa	aminer(s): D. Dorum and L. Dorum		
Endpoint	t Stake UTM's (NAD 83)	I			
S	Stake 1: $493666 / 3814$	4275			
	Stake 2: $493644 / 3814$	1273			
Point		Height	Point		Height
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)
0.5	Kentucky bluegrass	22	17.5	Bare ground (gopher mound)	0
1.0	Kentucky bluegrass	14	18.0	Redtop	35
1.5	Log	0	18.5	Redtop	18
2.0	Forb	9	19.0	Bare ground (gopher mound)	0
2.5	Clover	8	19.5	Kentucky bluegrass	8
3.0	Bare ground	0	20.0	Bare ground	0
3.5	Forb	25	20.5	Kentucky bluegrass	15
4.0	Forb	10	21.0	Redtop	24
4.5	Bare ground	0	21.5	Bare ground	0
5.0	Bare ground (gopher mound)	0	22.0	Forb (peavine?)	42
5.5	Kentucky bluegrass	/	22.5	Bare ground	0
6.0	FOID	/	23.0	Poro ground	33
7.0	Redton	33	23.3	Pine dropseed	62
7.0	Kentucky bluegrass	13	24.0	Pine dropseed	70
8.0	Clover	8	25.0	Bare ground	0
8.5	Kentucky bluegrass	6	Photo: T-	1A	
9.0	Redtop	9			
9.5	Kentucky bluegrass	19	The second second		
10	Poaceae	8			A Marsh
10.5	Poaceae	15			
11.0	Forb	9	116		
11.5	Forb	19			
12.0	Redtop	12	-		
12.5	Clover	11			March and
13.0	Redtop	9	Constant and South States		
13.5	Forb	7	and in		
14.0	Kentucky bluegrass	7			- W
14.5	Wood	0		Sales Strates - Providence	
15.0	Redtop	17		the second states in grade to	C BANKS
15.5	Western yarrow	12	Marriel Barriel		Marine States
16.0	Clover	13			
16.5	Forb	8			
17.0	Redtop	42	7		
Notes:					

		Tro		t Data Sha	at .				
Turnerset									
Transect	Transect Number: 1-1				Date: September 18, 2007				
Transect	Length: 25.5m		Exai	miner(s): D	D. Dorum				
Endpoint	t Stake UTM's (NAD 83)								
S	Stake 1: 493666 / 381	4275							
S	Stake 2: 493644 / 381	4277							
Point	Cover Type	Heig	ght	Point	Course Turns	Height			
(m)	Cover Type	(cm	1)	(m)	Cover Type	(cm)			
0.5	Bare ground	0		17.5	Bare ground	0			
1.0	Bare ground (gopher mound)	0		18.0	Kentucky bluegrass	5			
1.5	Kentucky bluegrass	4		18.5	Bare ground	0			
2.0	Kentucky bluegrass	8		19.0	Kentucky bluegrass	5			
2.5	Poaceae	6		19.5	Kentucky bluegrass	6			
3.0	Forb	2		20.0	Kentucky bluegrass	6			
3.5	Kentucky bluegrass	7		20.5	Kentucky bluegrass	9			
4.0	Dandelion	1		21.0	Bare ground	0			
4.5	Dandelion	2		21.5	Bare ground	0			
5.0	Bare ground (gopher mound)	0		22.0	Kentucky bluegrass	16			
5.5	Kentucky bluegrass	4		22.5	Western verrow	0			
6.0	Kentucky bluegrass	2		23.0	Bara ground	0			
7.0	Kentucky bluegrass	6		23.3	Poaceae	29			
7.0	Kentucky bluegrass	3		24.0	Pine dropseed	11			
8.0	Kentucky bluegrass	4		25.0	Bare ground	0			
8.5	Kentucky bluegrass	3		Photo: T-	1A	ů			
9.0	Kentucky bluegrass	2		A Martin					
9.5	Kentucky bluegrass	$\frac{2}{2}$		- ST		E Harris Com			
10	Kontucky bluograss	2		Li alifa.		and the second second			
10	Kentucky bluegrass	<u>∠</u>			and the second sec				
10.5	Kentucky bluegrass	4				101-101			
11.0	Kentucky bluegrass	5		Children Par	Real and the second	With Marine and And			
11.5	Bare ground	0							
12.0	Kentucky bluegrass	6		-Che son	and the second				
12.5	Kentucky bluegrass	8			The second second second	* (****			
13.0	Kentucky bluegrass	3							
13.5	Bare Ground	0		12.225					
14.0	Bare ground (gopher mound)	0							
14.5	Bare ground (gopher mound)	0		Sec. and		No.			
15.0	Bare ground	0				Sales States			
15.5	Poaceae	2							
16.0	Dandelion	2							
16.5	Bare ground	0							
10.5		1							
17.0	Clover								
Notes:									

Transact	Number: T 2	Date	r Data Sile	ar 8 - 2011	
Transact	Inditibel: 1-2	Date			
Transect	Length: 25.5m	Exa	miner(s): L	D. Dorum, L. Dorum	
Endpoint	t Stake UTM's (NAD 83)				
S	Stake 1: 493618 / 38	14677			
S	Stake 2: 493622 / 38	14667			
Point	Cover Ture	Height	Point	Course Turne	Height
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)
0.5	Poacea	31	17.5	Litter	-
1.0	Poacea	81	18.0	Clover	9
1.5	Poacea	75	18.5	Redtop	63
2.0	Redtop	64	19.0	Redtop	51
2.5	Redtop	56	19.5	Western yarrow	16
3.0	Poacea	56	20.0	Clover	7
3.5	Poacea	30	20.5	Clover	10
4.0	Redtop	61	21.0	Dirt (gopher mound)	-
4.5	Kentucky bluegrass	32	21.5	Poacea	63
5.0	Forb	33	22.0	Litter	-
5.5	Poacea	31	22.5	Dirt	-
6.0	Redtop	54	23.0	Pine dropseed	41
6.5	Redtop	67	23.5	Forb	36
7.0	Redtop	72	24.0	Dirt (gopher mound)	-
7.5	Redtop	64	24.5	Pine dropseed	49
8.0	Foxtail	40	25.0	Pine dropseed	66
8.5	Redtop	28	Photo: T-	-2A	
9.0	Forb	12			
9.5	Forb	23			
10	Redtop	56			and an state
10.5	Forb	29	Epo in		
11.0	Sedge	45		all and a second	A BEARLOS
11.5	Redtop	77			
12.0	Redtop	72			HI II
12.5	Dirt (gopher mound)	-			all and make
13.0	Redtop	78			1-1-1
13.5	Dirt		and the second	and the second se	
14.0	Redtop	59	100 100 18 m	a service a service and the service of the	SHALL BURNESS
14.5	Redtop	79		ALTER AND A CONTRACT OF AN	
15.0	Litter	-	a sing		A STATISTICS
15.5	Forb	27	All and and		Contraction States
16.0	Rush	36	的方面是是	A CONTRACT OF	Carl Constant
16.5	Poacea	31			
17.0	Poacea	12			
Notes:					

		Iransed	ct Data Sne	el	
Transect	Number: T-2	Date	e: Septemb	er 10, 2010	
Transect	Length: 25.5m	Exa	miner(s): D	D. Dorum, L. Dorum	
Endpoin	t Stake UTM's (NAD 83)	•			
1	Stake 1: 493618 / 38	14677			
	Stake 2: $103672 / 38$	1/667			
Doint	Stake 2. 495022758	II-i-aht	Doint		Unight
Pollit (m)	Cover Type	(cm)	Pollit (m)	Cover Type	(cm)
(11)	Dongoo	(CIII)	(11)	Forb	2
1.0	Awn222	57	17.5	Push	20
1.0	AWN222	58	18.0	Forb	10
2.0	AWN???	87	19.0	Redton	55
2.0	Redton	69	19.5	Poaceae	24
3.0	Clover	22	20.0	Litter	-
3.5	Kentucky bluegrass	45	20.5	Clover	9
4.0	Redton	68	21.0	Litter	-
4.5	Clover	19	21.5	Litter	_
5.0	Redtop	62	22.0	Bare ground	0
5.5	Forb (peavine?)	53	22.5	Forb	56
6.0	Kentucky bluegrass	35	23.0	Pine dropseed	61
6.5	Redtop	68	23.5	Pinedropseed	7
7.0	Forb	15	24.0	Bare ground	0
7.5	Poaceae	23	24.5	Clover	8
8.0	Redtop	93	25.0	Litter	-
8.5	Poaceae	24	Photo: T-	-2A	•
9.0	Forb	28	1 110101 1		
9.5	Redtop	81			
10	Forb	15		BARNE STREET	AND A SEC
10.5	Redtop	78			and the second second
11.0	Pine dropseed	59	- Average		States Base
11.5	Redtop	86		ALL ALL ALL SUMPLY	W. States
12.0	Redtop	87			
12.5	Redtop	87	the state stranging		and the second second
13.0	Forb	55		and the second sec	
13.5	Redtop	80		a survey and a print of the	A STATE OF THE
14.0	Redtop	83	Alex St.	a the first state of the state of	the Alexander of the second
14.5	Rush	45			Section 20
15.0	Rush	57		THE PARTY OF THE STATE	
15.5	Rush	67	E. States	No 19 10 Automation of the	(1) (注意) 表面
16.0	Rush	55	Star Party	Man Street State Process	The states of the
16.5	Forb	21			
17.0	Poaceae	12			
Notes:					

-		Iranseo	ci Data Sne		
Transect	Number: T-2	Date	e: Septemb	er 10, 2009	
Transect	Length: 25.5m	Exa	miner(s): L	D. Dorum, L. Dorum	
Endpoin	t Stake UTM's (NAD 83)				
	Stake 1: 493618 / 381	4677			
~	Stake 2: $103622 / 381$	1667			
Doint	Stake 2. 493022738	L4007	Doint		Height
ronn (m)	Cover Type	(cm)	rollit (m)	Cover Type	(cm)
0.5	Розсезе	39	17.5	Bare ground	
1.0	Litter		17.5	Sedge	42
1.0	Clover	17	18.5	Clover	13
2.0	Clover	24	19.0	Clover	10
2.0	Poaceae	19	19.5	Bare ground	0
3.0	Clover	14	20.0	Clover	23
3.5	Clover	11	20.5	Forb	3
4.0	Forb	17	21.0	Litter	-
4.5	Clover	13	21.5	Litter	_
5.0	Forb	21	22.0	Forb	18
5.5	Forb	38	22.5	Poaceae	47
6.0	Clover	11	23.0	Litter	-
6.5	Clover	12	23.5	Poaceae	8
7.0	Clover	15	24.0	Bare ground	0
7.5	Clover	14	24.5	Forb	9
8.0	Poaceae	60	25.0	Bare ground	0
8.5	Redtop	85	Photo: T-	-2A	
9.0	Kentucky bluegrass	25	1 110101 1		
9.5	Clover	6			N COR
10	Forb	21		ALL ALL ALL ALL ALL	CHARTS.
10.5	Rush	49			
11.0	Clover	18		「二日子をうした」とうなる	An participa
11.5	Gopher mound	0			- 10.51 F
12.0	Poaceae	18		a hard har man	
12.5	Rush	36			
13.0	Poaceae	39			
13.5	Clover	13	MALLS A	and the second se	and the second
14.0	Forb	15	Section al St.	( to be state the second s	Control State
14.5	Rush	51	Saller State		Ways Except
15.0	Rush	39	教授和王	A Start Start A Start Vie	and the second second
15.5	Rush	83	a presidente	parties of the second second second	AN GREENE SALAN
16.0	Bare ground	0	and the	All soft and soft and	
16.5	Bare ground	0			A CONTRACTOR OF THE REAL
17.0	Bare ground	0			
Notes:					

		Transe	ct Data She	et			
Transect	Number: T-2	Dat	e: Septemb	er 18, 2008			
Transect	Length: 25.5m	Exa	miner(s): D	D. Dorum, L. Dorum			
Endpoin	Endpoint Stake UTM's (NAD 83)						
	Stake 1: 493618 / 381	4677					
S	Stake 2: 493622 / 381	4667					
Point	in 192022 / 201	Height	Point		Height		
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)		
0.5	Poaceae	22	17.5	Water	0		
1.0	Pine dropseed	68	18.0	Bare ground (gopher mound)	0		
1.5	Western yarrow	8	18.5	Forb	14		
2.0	Forb	15	19.0	Bare ground	0		
2.5	Kentucky bluegrass	5	19.5	Redtop	39		
3.0	Pine dropseed	80	20.0	Redtop	48		
3.5	Poaceae	10	20.5	Kentucky bluegrass	18		
4.0	Kontucky bluograss	/ 10	21.0	Reatop	57 17		
4.3 5.0	Forb	10	21.3	Pine dropseed	63		
5.5	Western varrow	5	22.5	Poaceae	12		
6.0	Clover	5	23.0	Bare ground	0		
6.5	Kentucky bluegrass	12	23.5	Pine dropseed	43		
7.0	Redtop	52	24.0	Bare ground	0		
7.5	Redtop	13	24.5	Pine dropseed	16		
8.0	Forb	10	25.0	Bare ground	0		
8.5	Forb	13	Photo: T-	-2A			
9.0	Kentucky bluegrass	6					
9.5	Forb	6		AND AND A GREAT	ale and		
10	Redtop	12			Carlos and		
10.5	Forb	10			10-10-20-2		
11.0	Bare ground	0			A Bar		
11.5	Bare ground	0	the state of the second				
12.0	Kentucky bluegrass	8	-		Martin Martin		
12.5	Poaceae	11	all and the	the second s	A TO CONTRACTS		
13.0	Forb	27					
13.5	Clover	5		and the state of the state of the			
14.0	Kentucky bluegrass	11	Contral.	2. K. S. A.	Carl Shaw		
14.5	Clover	6	a har				
15.0	Water	0			1 1 1		
15.5	Water	0	Gias to		And the		
16.0	Water	0	Landaning Lands Statement				
16.5	Water	0					
17.0	Water	0	1				
Notes:		~	1				
10003.							

		Transe	ect Data She	et		
Transect	Number: T-2	Da	ate: September 18, 2007			
Transect	Length: 25.5m	Exa	aminer(s): D	miner(s): D. Dorum		
Endpoint	t Stake UTM's (NAD 83)	I				
S	493618/3814	4677				
	1,2,3,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,2,1,	1667				
Point	Juke 2. 475022 / 501-	Height	Point		Height	
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)	
0.5	Mountain muhly	16	17.5	Bare ground	0	
1.0	Mountain muhly	17	18.0	Dandelion	2	
1.5	Kentucky bluegrass	5	18.5	Kentucky bluegrass	8	
2.0	Kentucky bluegrass	3	19.0	Clover	2	
2.5	Kentucky bluegrass	6	19.5	Bare ground	0	
3.0	Kentucky bluegrass	4	20.0	Western yarrow	2	
3.5	Bare ground	0	20.5	Pine dropseed	48	
4.0	Poaceae	10	21.0	Bare ground	0	
4.5	Kentucky bluegrass	4	21.5	Bare ground	0	
5.0	Rentucky bluegrass	2	22.0	Litter Ding dropsood	0	
5.5 6.0	Kentucky bluegrass	3	22.3	Pine dropseed	10	
6.5	Litter	0	23.5	Bare ground	0	
7.0	Kentucky bluegrass	5	23.0	Bare ground	0	
7.5	Kentucky bluegrass	5	24.5	Pine dropseed	13	
8.0	Forb	3	25.0	Litter	0	
8.5	Kentucky bluegrass	27	Photo: T-	-2A		
9.0	Kentucky bluegrass	8	all a start of the		14 3- AL	
9.5	Bare ground (gopher mound)	0			10.200	
10	Dandelion	1				
10.5	Kentucky bluegrass	2				
11.0	Poaceae	4	1			
11.5	Kentucky bluegrass	4	- A Google			
12.0	Bare ground	0			and the second second	
12.5	Kentucky bluegrass	7	the most of	and the states of the state of the state of the states of	and the second	
13.0	Kentucky bluegrass	24	A CONTRACT	and the second	Alex Star	
13.5	Kentucky bluegrass	5	and the second		And States	
14.0	Clover	1		And Maria Contra	A CONTRACT OF A CONTRACT OF	
14.5	Kentucky bluegrass	3	ar Sel		March 1	
15.0	Bara ground	0			Carlos Salar	
15.0	Date ground	0				
13.3		0	_			
16.0	Bare ground	0	_			
16.5	Bare ground	0	_			
17.0	Bare ground	0				
Notes:						

		Transe	ct Data She	eet		
Transect	Number: T-3	Dat	e: Septemb	er 8, 2011		
Transect	Length: 25.5m	Exa	aminer(s): D. Dorum, L. Dorum			
Endpoint	Stake UTM's (NAD 83)					
2	$\frac{1}{12}$	4677				
	State 1: 19301073011077					
Deint	dake 2. 493022/381	4007	Deint	[	II. alat	
Point	Cover Type	Height	Point	Cover Type	Height	
0.5	Redton	(CIII) 6/	(11)	Redton	71	
1.0	Pine dropseed	48	18.0	Redtop	83	
1.0	poaceae	29	18.5	Sedge	22	
2.0	Redton	59	19.0	Redton	75	
2.5	Redtop	68	19.5	Redtop	53	
3.0	Redtop	70	20.0	Forb	85	
3.5	Rush	47	20.5	Redtop	75	
4.0	Redtop	65	21.0	Redtop	80	
4.5	Redtop	87	21.5	Poaceae	34	
5.0	Redtop	74	22.0	Kentucky bluegrass	38	
5.5	Redtop	75	22.5	Kentucky bluegrass	22	
6.0	Redtop	61	23.0	Western yarrow	9	
6.5	Redtop	74	23.5	Poaceae	44	
7.0	Sedge	45	24.0	Western yarrow	19	
7.5	Redtop	83	24.5	Forb (peavine?)	43	
8.0	Redtop	89	25.0	Poaceae	24	
8.5	Foxtail	84	Photo: T-	-3A		
9.0	Redtop	58				
9.5	Redtop	79			1	
10	Sedge	33	A COLOR	Land and the second		
10.5	Sedge	27	C. A.C.			
11.0	Sedge	27	last and			
11.5	Redtop	63	THE REAL PROPERTY.	The second second	Same and	
12.0	Sedge	49				
12.5	Forb	18				
13.0	Redtop	83	All and a second	and the second se	1. 19 19 19	
13.5	Redtop	86	and a second		and the second second	
14.0	Redtop	96	and the second	in the second second	March all all all all all all all all all al	
14.5	Redtop	84			a water a state	
15.0	Redtop	61		A State of the second		
15.5	Sedge	46		MARCHAN LANDAR MARCHAN AND AND AND AND AND AND AND AND AND A		
16.0	Sedge	57				
16.5	Sedge	49	_			
17.0	Sedge	42				
Notes:						

# Fairchild Draw Riparian Restoration Project Grant No. 07-150WPF

-	N. 1. E.A.	Transee	ci Data Sne					
Transect	Number: T-3	Date	e: Septemb	er 10, 2010				
Transect	Length: 25.5m	Exa	miner(s): D	D. Dorum, L. Dorum				
Endpoin	t Stake UTM's (NAD 83)							
	Stake 1: 493618 / 381	4677						
	Stake 2: 493622 / 3814667							
Point		Height	Point		Height			
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)			
0.5	Redton	54	17.5	Redton	83			
1.0	Redtop	46	18.0	Redtop	90			
1.5	Clover	10	18.5	Redtop	65			
2.0	Redtop	71	19.0	Rush	55			
2.5	Redtop	56	19.5	Forb	17			
3.0	Redtop	74	20.0	Redtop	96			
3.5	Poaceae	22	20.5	Redtop	88			
4.0	Redtop	85	21.0	Redtop	80			
4.5	Foxtail	103	21.5	Forb	47			
5.0	Redtop	74	22.0	Redtop	72			
5.5	Redtop	80	22.5	Forb (peavine?)	38			
6.0	Redtop	82	23.0	Bare ground	0			
6.5	Poaceae	38	23.5	Poaceae	27			
7.0	Redtop	80	24.0	Fern	43			
7.5	Poaceae	45	24.5	Western yarrow	9			
8.0	Redtop	69	25.0	Poaceae	29			
8.5	Clover	15	Photo: T-	-3A				
9.0	Redtop	75						
9.5	Clover	35	- AL					
10	Redtop	81	CONTRACT OF					
10.5	Redtop	72	- 4-12		and the second			
11.0	Rush	50	19 2	LANS AND				
11.5	Rush	31						
12.0	Clover	16			50 A 10			
12.5	Dandelion	14						
13.0	Clover	19	- Nelvine	L. L. Additional Stream of the second				
13.5	Foxtail	8/	AND IN COLUMN	and a second	STATES AND AND			
14.0	Bare ground (gopher mound)	0	the thread is		Phillipping and			
14.5	Poaceae	25	- Magazin		Charles a Mark			
15.0	Kush Mint	46	1.1.1.1.1.1.1		Stand Street			
15.5	Buch	40	- Martin	and the second second second second	<b>新兴学校,任</b> 中学校			
16.5	Clover	49			The sea where the			
10.5	Push	51	-					
17.0	KUSII	51						
Notes:								

		Transec	ct Data She	eet	
Transect	Number: T-3	Date	e: Septemb	er 10, 2009	
Transect	Length: 25.5m	Exa	miner(s): D	D. Dorum, L. Dorum	
Endpoin	t Stake UTM's (NAD 83)				
, second s	Stake 1: 493631 / 38	14963			
5	Stake 2: 493626 / 383	14969			
Point		Height	Point		Height
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)
0.5	Poaceae	24	17.5	Rush	43
1.0	Forb	5	18.0	Redtop	100
1.5	Poaceae	21	18.5	Redtop	88
2.0	Forb	5	19.0	Clover	15
2.5	Clover	10	19.5	Kentucky bluegrass	20
3.0	Redtop	80	20.0	Rush	32
3.5	Clover	13	20.5	Forb	9
4.0	Poaceae	26	21.0	Forb	18
4.5	Poaceae	33	21.5	Kentucky bluegrass	24
5.0	Redtop	69	22.0	Redtop	78
5.5	Poaceae	18	22.5	Western yarrow	13
6.0	Redtop	73	23.0	Forb	36
6.5	Redtop	70	23.5	Poaceae	13
7.0	Redtop	53	24.0	Fern	82
7.5	Forb	15	24.5	Poaceae	17
8.0	Clover	12	25.0	Redtop	69
8.5	Redtop	54	Photo: T-	-3A	
9.0	Forb	10			
9.5	Clover	15		A CALLER AND A CALLER AND A	
10	Poaceae	28			A State State
10.5	Redtop	80			
11.0	Rush	41			
11.5	Redtop	40	And a second		
12.0	Forb	9			
12.5	Forb	8			
13.0	Poaceae	23	- Contraction of the contraction		Contraction and
13.5	Poaceae	23	and played		Commission Balling
14.0	Redtop	73		the second states and	Contraction of the
14.5	Forb	8			
15.0	Rush	35			A Castal
15.5	Rush	50	-		A NUMBER OF
16.0	Rush	39			At Manual States
16.5	Kentucky bluegrass	14			
17.0	Clover	14			
Notes:					

		Transee	ct Data She	eet	
Transect	Number: T-3	Date	e: Septemb	er 18, 2008	
Transect	Length: 25.5m	Exa	miner(s): [	D. Dorum, L. Dorum	
Endpoint	t Stake UTM's (NAD 83)	•			
	Stake 1: 493631 / 381	4963			
S	Stake 2: 493626 / 381	4969			
Point		Height	Point		Height
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)
0.5	Bare ground (ant hill)	0	17.5	Forb	12
1.0	Redtop	32	18.0	Woody debris	0
1.5	Redtop	21	18.5	Poaceae	42
2.0	Forb	6	19.0	Redtop	12
2.5	Forb	3	19.5	Kentucky bluegrass	9
3.0	Forb	6	20.0	Clover	8
3.5	Bare ground	0	20.5	Forb	19
4.0	Kentucky bluegrass	0	21.0	Reatop Para ground (gonhar mound)	10
4.3	Redton	33	21.3	Bare ground (gopher mound)	0
5.0	Redtop	11	22.5	Forb (peavine?)	31
6.0	Kentucky bluegrass	7	23.0	Spike muhly	55
6.5	Forb	6	23.5	Fern	50
7.0	Redtop	12	24.0	Spike muhly	26
7.5	Kentucky bluegrass	22	24.5	Forb (peavine?)	24
8.0	Redtop	37	25.0	Western yarrow	8
8.5	Clover	13	Photo: T-	-3A	
9.0	Clover	10			
9.5	Redtop	13			and they
10	Redtop	13	Contract of the second		
10.5	Redtop	9		and the second se	
11.0	Forb	15	2 TA		
11.5	Poaceae	28	and a competence	Contraction of the second s	en start at
12.0	Kentucky bluegrass	8	and the second		the state of
12.5	Forb	14	and the second		No.
13.0	Redton	15	Constant -		and a Mark
13.5	Redton	31	R. C. B. Mr.		California California
14.0	Badton	20			
14.0	Clover	10		Contract descent of the	A. Contraction
14.5	Clover	12			
15.0	Poaceae	12	- Palate a		- 18 A. A.
15.5	Forb	6			State State
16.0	Forb	13	4		
16.5	Forb	9	1		
17.0	Forb	18			
Notes:					

		Transe	ect Data She	et		
Transect	Transect Number: T-3 Date: September 18, 2007					
Transect	Length: 25.5m	Ex	aminer(s): D	D. Dorum		
Endpoin	t Stake UTM's (NAD 83)					
	Stake 1: 493631 / 381	4963				
Stake 2: 493626 / 3814969						
Point		Height	Point		Height	
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)	
0.5	Pine dropseed	9	17.5	Kentucky bluegrass	3	
1.0	Bare ground	0	18.0	Kentucky bluegrass	10	
1.5	Bare ground	0	18.5	Kentucky bluegrass	2	
2.0	Bare ground	0	19.0	Kentucky bluegrass	6	
2.5	Kentucky bluegrass	3	19.5	Dandelion	2	
3.0	Litter	0	20.0	Bare ground	0	
3.5	Bare ground	0	20.5	Kentucky bluegrass	3	
4.0	Rentucky bluegrass	4	21.0	Bare ground	0	
4.5	Poaceae	0	21.3	Sedge	0	
5.0	Kentucky bluegrass	4	22.5	Dandelion	3	
6.0	Litter	0	23.0	Spike muhly	6	
6.5	Kentucky bluegrass	4	23.5	Litter	0	
7.0	Kentucky bluegrass	5	24.0	Kentucky bluegrass	5	
7.5	Poaceae	3	24.5	Spike muhly	28	
8.0	Kentucky bluegrass	4	25.0	Bare ground	0	
8.5	Bare ground (gopher mound)	0	Photo: T-	3A		
9.0	Bare ground (gopher mound)	0	Store Carl			
9.5	Kentucky bluegrass	10				
10	Kentucky bluegrass	3	and the second second			
10.5	Kentucky bluegrass	3		And a state of the		
11.0	Dandelion	2			and the second second	
11.5	Kentucky bluegrass	3	and the second			
12.0	Clover	1			1 Contraction	
12.5	Kentucky bluegrass	4		and the second	10 m	
13.0	Bare ground	0				
13.5	Bare ground (gopher mound)	0				
14.0	Kentucky bluegrass	2			A Contraction	
14.0	Kontucky bluograss	1	-			
14.5	Each	1			State of the second	
15.0	FOID	2				
15.5	Kentucky bluegrass	2				
16.0	Dandelion	l	_			
16.5	Bare ground	0	_			
17.0	Kentucky bluegrass	3				
Notes:						

		Transeo	et Data She	eet	
Transect	Number: T-4	Date	e: Septemb	er 8, 2011	
Transect	Length: 25.5m	Exa	miner(s): D	D. Dorum, L. Dorum	
Endpoin	t Stake UTM's (NAD 83)			· · · · · · · · · · · · · · · · · · ·	
1	Stake 1: 493618 / 38	14677			
	Stake 2: $103672 / 38$	1/667			
Doint	Stake 2. 4930227 38	14007	Doint		Unight
Pollit (m)	Cover Type	(cm)	Pollit (m)	Cover Type	(cm)
(11)	Padton	(CIII)	(11)	Forh	
1.0	Clover	17	17.3	Dandalion	22
1.0	Redton	66	18.0	Dandelion	6
2.0	Redtop	66	10.5	Dandelion	0
2.0	Forb	10	19.0	Kentucky bluegrass	14
2.5	Redton	50	20.0	L itter	14
3.0	Redtop	57	20.0	Dandelion	13
4.0	Eoxtail	60	20.5	Dandelion	17
4.0	Western varrow	19	21.0	Dandenon Dirt (gopher mound)	-
5.0	Kentucky bluegrass	16	22.0	Forb	12
5.5	Redton	46	22.0	Kentucky bluegrass	21
6.0	Poaceae	22	22.5	Poaceae	21
6.5	Western varrow	16	23.5	Dandelion	16
7.0	Poaceae	29	23.5	Clover	4
7.5	Poaceae	36	24.5	Poaceae	16
8.0	Western varrow	12	25.0	Forb	20
8.5	Dirt	-	Photo: T.	-4 A	20
9.0	Litter	-	1 11010. 1	77.1	
9.5	Forb	9	and a station		
10	Redtop	23	- AL FIL	A CARLES AND A CARLES	A. 342
10.5	Kentucky bluegrass	20			fran At
11.0	Forb	7			a second
11.5	Redtop	49			the second of
12.0	Litter	-			at the me state
12.5	Redtop	44	- Harrison and a second		
13.0	Poaceae	32			No. No. of Concession, Name
13.5	Clover	11		15 - The second s	a alt the
14.0	Poaceae	24	With providence and		
14.5	Dandelion	17			Martin Martin
15.0	Kentucky bluegrass	23			
15.5	Litter	-	and a star		
16.0	Forb	29			
16.5	Kentucky bluegrass	27			
17.0	Forb	79	1		
Notes:					
10000					

		Transe	ct Data She	eet					
Transect	Transect Number: T-4 Date: September 10, 2010								
Transect	Transect Length: 25.5m Examiner(s): D. Dorum, L. Dorum								
Endpoin	Endpoint Stake UTM's (NAD 83)								
	Stake 1: 493618 / 38	4677							
	Stales 2: $403672 / 38^{-1}$	1/667							
Doint	Stake 2. 4930227 38.	L4007	Doint	1	Haight				
Pollit (m)	Cover Type	(cm)	Pollit (m)	Cover Type	(cm)				
0.5	Розсезе	(CIII)	17.5	Western varrow	18				
1.0	Clover	20	18.0	Redton	63				
1.0	Kentucky bluegrass	45	18.5	Dandelion	16				
2.0	Redton	81	19.0	Dandelion	9				
2.0	Clover	19	19.5	Western varrow	16				
3.0	Redton	88	20.0	Poaceae	20				
3.5	Redton	72	20.5	Dandelion	14				
4.0	Foxtail	97	21.0	Clover	13				
4.5	Clover	26	21.5	Dandelion	9				
5.0	Clover	18	22.0	Western varrow	15				
5.5	Dandelion	23	22.5	Litter	-				
6.0	Kentucky bluegrass	28	23.0	Poaceae	29				
6.5	Western yarrow	23	23.5	Clover	8				
7.0	Litter	-	24.0	Clover	14				
7.5	Western yarrow	15	24.5	Litter	-				
8.0	Clover	18	25.0	Western yarrow	16				
8.5	Kentucky bluegrass	38	Photo: T-	-4A	1				
9.0	Dandelion	19							
9.5	Clover	10			S Pr.				
10	Western yarrow	59	The states of	Ala As and a	JACK BURGE				
10.5	Poaceae	25	A CAN	A CARLER AND	A DESCRIPTION				
11.0	Poaceae	52		A CALLER .	1100				
11.5	Poaceae	30	A hard		A CARACT				
12.0	Poaceae	52							
12.5	Forb	14			Br Bran				
13.0	Poaceae	64		A STATE OF	HE WEEL				
13.5	Clover	16	1 11/1/	the second state and	- mentantes an				
14.0	Poaceae	58	Margaria Mite	water & with and the state of the	all the second				
14.5	Poaceae	48	1 par la						
15.0	Kentucky bluegrass	29	1	The fact that the second	1 action				
15.5	Redtop	49	1 mart	11/1 Starting (1)	1 And Alter				
16.0	Dandelion	20	A Vision	The Mart - Martines and Assan A	ACAN BALL				
16.5	Poaceae	16			a menyangkan kangkan pala di di				
17.0	Western yarrow	21							
Notes:									

Transact	Number: T-1	Date	e Sentemb	$\frac{2}{2}$	
Transact	Longth: 25.5m	- Dau Evo	minor(a). T		
Transect	Length: 25.5m	Exa	miner(s): L	D. Dorum, L. Dorum	
Endpoint	t Stake UTM's (NAD 83)				
S	Stake 1: 493684 / 381	5279			
S	Stake 2: 493664 / 381	5276			
Point	Cover Type	Height	Point	Cover Type	Height
(m)		(cm)	(m)	Cover Type	(cm)
0.5	Clover	17	17.5	Clover	17
1.0	Clover	19	18.0	Clover	12
1.5	Clover	15	18.5	Clover	12
2.0	Clover	14	19.0	Redtop	42
2.5	Redtop	52	19.5	Clover	25
3.0	Clover	10	20.0	Kentucky bluegrass	40
4.0	Poaceae	41	20.5	Western varrow	14
4.5	Redton	60	21.5	Kentucky bluegrass	19
5.0	Forb	14	22.0	Western varrow	10
5.5	Clover	12	22.5	Clover	12
6.0	Western yarrow	13	23.0	Clover	7
6.5	Clover	13	23.5	Western yarrow	15
7.0	Clover	16	24.0	Poaceae	16
7.5	Redtop	61	24.5	Western yarrow	12
8.0	Western yarrow	14	25.0	Clover	11
8.5	Clover	13	Photo: T-	-4A	
9.0	Clover	10			01:00-0900000000
9.5	Clover	14			1. 1. 1.
10	Clover	12	an and		
10.5	Western yarrow	9		A CONTRACTOR OF	and the second
11.0	Mint	20			14/200
11.5	Redtop	58			She was a line
12.0	Poaceae	31			and the state of t
12.5	Poaceae	34	i mander	in the state of the state of the	AND AND
13.0	Rush	44	and the first	The second second second	and the second
13.5	Clover	8			the start ye
14.0	Rush	46			
14.5	Clover	13			
15.0	Forb	12	the star		
15.5	Clover	7	_		
16.0	Clover	19	-		
16.5	Clover	10	-		
17.0	Clover	10			
17.0	Ciover	11			
Notes:					
l					

		Transe	ct Data She	eet					
Transect	Transect Number: T-4Date: September 18, 2008								
Transect	Length: 25.5m	Exa	miner(s): I	D. Dorum, L. Dorum					
Endpoin	t Stake UTM's (NAD 83)	•							
	Stake 1: 493684 / 38	15279							
	Stake 2: 493664 / 38	15276							
~ Point		Height	Point		Height				
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)				
0.5	Clover	9	17.5	Clover	8				
1.0	Forb	4	18.0	Clover	6				
1.5	Clover	5	18.5	Western yarrow	10				
2.0	Forb	9	19.0	Pine dropseed	50				
2.5	Kentucky bluegrass	11	19.5	Western yarrow	10				
3.0	Kentucky bluegrass	8	20.0	Kentucky bluegrass	14				
3.5	Kentucky bluegrass	7	20.5	Kentucky bluegrass	17				
4.0	Clover	10	21.0	Kentucky bluegrass	17				
4.5	Kontucky bluograss	10	21.5	Earb	9				
5.5	Kentucky bluegrass	10	22.0	Clover	7				
6.0	Clover	9	22.5	Kentucky bluegrass	5				
6.5	Kentucky bluegrass	6	23.5	Western varrow	8				
7.0	Kentucky bluegrass	8	24.0	Western yarrow	11				
7.5	Western yarrow	13	24.5	Western yarrow	4				
8.0	Clover	8	25.0	Western yarrow	8				
8.5	Kentucky bluegrass	10	Photo: T	-4A					
9.0	Clover	7							
9.5	Clover	11		and the second second second	and the second				
10	Clover	7							
10.5	Forb	6	and letter 1	P State of the second second	And the second				
11.0	Kentucky bluegrass	8		TO A STATE SALLED TO					
11.5	Redton	61	The second second		Section of the second				
12.0	Forh	6	an all states of the						
12.0	Mint	20		100 Mar	and the second s				
12.5	Clover	10	a filmeters						
13.0	Clover	10			The second second				
15.5		10	- And S		A STATE OF STATE				
14.0	Forb	12							
14.5	Kentucky bluegrass	17		a star asses the second					
15.0	Bare ground	0		Carla The section of the section					
15.5	Kentucky bluegrass	12	THE SAME						
16.0	Kentucky bluegrass	17							
16.5	Clover	4							
17.0	Clover	3							
Notes:									

Transect Data Sheet									
Transect	Number: T-4		· Sentemb	er 18, 2007					
Transect	Length: 25.5m	1	Evar	vaminar(s): D. Dorum					
Enducint	Ctales LITM2s (MAD 02)		LA	iiiiiei(s). I	D: Dorum				
Endpoint	Stake UTM S (NAD 83)								
S	take 1: 493684 / 381	15279							
S	Stake 2: 493664 / 381	15276							
Point	Course Turns	Heig	sht	Point	Course Turns	Height			
(m)	Cover Type	(cm	(cm) (m) Cover Type (cr						
0.5	Kentucky bluegrass	6		17.5	Bare ground	0			
1.0	Kentucky bluegrass	3		18.0	Kentucky bluegrass	2			
1.5	Kentucky bluegrass	5		18.5	Kentucky bluegrass	2			
2.0	Kentucky bluegrass	4		19.0	Kentucky bluegrass	9			
2.5	Bare ground	0		19.5	Kentucky bluegrass	4			
3.0	Kentucky bluegrass	8		20.0	Poaceae	3			
3.5	Kentucky bluegrass	6		20.5	Bare ground	0			
4.0	Kentucky bluegrass	3		21.0	Kentucky bluegrass	4			
4.5	Kentucky bluegrass	3		21.5	Kentucky bluegrass	5			
5.0	Bare ground	0		22.0	Kentucky bluegrass	4			
5.5	Bare ground	0		22.5	Bare ground	0			
6.0	Kentucky bluegrass	6		23.0	3				
6.5	Kentucky bluegrass	4		23.5	Kentucky bluegrass	3			
7.0	Minute muhly	9		24.0	Kentucky bluegrass	4			
7.5	Bare ground	0		24.5	Kentucky bluegrass	5			
8.0	Kentucky bluegrass	2		25.0	Western yarrow	2			
8.5	Western yarrow	2		Photo: T-	4A				
9.0	Minute muhly	12							
9.5	Bare ground	0							
10	Kentucky bluegrass	3			1000 · 1	1. Carto			
10.5	Bare ground	0							
11.0	Kentucky bluegrass	8							
11.5	Wolfstall	5							
12.0	Kentucky bluegrass	4		1-1-20		Contraction B			
12.5	Kentucky bluegrass	3		and the second second		The second state			
13.0	Classer	/		For work and		1 Contractor			
13.5	Clover Dore ground	2				17-34-62			
14.0	Dare ground	0			A CARLES AND A CARLES				
14.5	Bare ground	0		A PARE X	CARLENDER DE LA				
15.0	Kentucky bluegrass	4							
15.5	Kentucky bluegrass	3		a la series					
16.5	Kentucky bluegrass	5		and selen	A TRACTOR AND A LONG	1. 10. 10.			
17.0	Kentucky bluegrass								
17.0	Kentucky bluegrass	4							
Notes:									

		Transec	et Data She	et					
Transect	Transect Number: T-5 Date: September 8, 2011								
Transect	Length: 25.5m	Exa	miner(s): D	). Dorum					
Endpoint	t Stake UTM's (NAD 83)								
Linapoint	Stake 1: $103618 / 38^{\circ}$	14677							
	$\frac{1}{2}$	14077							
	Stake 2: 493622 / 38	14667	D						
Point	Cover Type	Height	Point	Cover Type	Height				
(m)	Calaa	(cm)	(m)	Duch	(cm)				
0.5	Seage	48	17.5	Rush	66				
1.0	Kedtop	19	18.0	Rusn Desease	00				
1.5	Remucky bluegrass	40	18.5	Poaceae	/1				
2.0	Forb	37	19.0	Poaceae	40 85				
2.5	Fortail	41	19.5	Poscese					
3.0	Foxtail	75	20.0	Fortail	65				
3.5	Push	68	20.3	Push	60				
4.0	Rush	78	21.0	Sedge	86				
<del>4</del> .5	Poaceae	78	21.5	Rush	81				
5.5	Poaceae	74	22.0	Sedge	78				
6.0	Poaceae	70	22.5	Rush	89				
6.5	Sedge	88	23.5	Poaceae	32				
7.0	Poaceae	68	23.5	Poaceae	37				
7.5	Redton	72	24.5	Poaceae	34				
8.0	Sedge	66	25.0	Redton	58				
8.5	Poaceae	96	Photo: T-	54	00				
9.0	Sedge	83	T noto: T		Des State				
9.5	Sedge	85	-	and the second s	State and St				
10	Sedge	76							
10.5	Foxtail	74		The State of Manufacture of P					
11.0	Redtop	73			6 - 16 - 16 - 16 - 16 - 16 - 16 - 16 -				
11.5	Poaceae	69							
12.0	Redtop	77							
12.5	Sedge	78							
13.0	Foxtail	109	State of State of State	The second s					
13.5	Rush	80		the second se					
14.0	Rush	63	Calman .	A and A and A A.	Hallath in				
14.5	Rush	67	A Real P	King the state of	KAN - D				
15.0	Rush	64	-24	State of the second s	Sales ( Sec. 2				
15.5	Rush	55							
16.0	Rush	46							
16.5	Rush	61							
17.0	Poaceae	51							
Notes:									

Transact	Transect Data Sheet									
Transect	Inumber: 1-5			er 10, 2010						
Transect	Length: 25.5m	Exa	miner(s): L	D. Dorum, L. Dorum						
Endpoint	t Stake UTM's (NAD 83)									
S	Stake 1: 493618 / 381	4677								
S	Stake 2: 493622 / 381	4667								
Point		Height	Point		Height					
(m)	Cover Type	(cm)	(m)	Cover Type	(cm)					
0.5	Rush	54	17.5	Clover	26					
1.0	Foxtail	52	18.0	Clover	13					
1.5	Poaceae	72	18.5	Rush	60					
2.0	Redtop	94	19.0	Clover	23					
2.5	Poaceae	58	19.5	Poaceae	32					
3.0	Clover	41	20.0	Forb	23					
3.5	Redtop	94	20.5	Rush	54					
4.0	Foxtail	104	21.0	Mint	39					
4.5	Poaceae	21	21.5	Mint	18					
5.0	Forb	20	22.0	Mint	28					
5.5	Clover	15	22.5	Rush	52					
6.0	Clover	27	23.0	Clover	19					
6.5	Poaceae	28	23.5	Rush	61					
7.0	Sedge	53	24.0	Clover	23					
7.5	Clover	22	24.5	Clover	19					
8.0	Clover	32	25.0	Clover	14					
8.5	Poaceae	16	Photo: T-	-5A	•					
9.0	Clover	23								
9.5	Poaceae	26	date	in allo						
10	Clover	20		Carl Carl and the second						
10.5	Clover	23		ALL PERFORMANCE	Baken Astrono					
11.0	Clover	18	Self in the		A States					
11.5	Rush	44								
12.0	Clover	19			ALC STANK					
12.5	Clover	20								
13.0	Clover	21	geta							
13.5	Poaceae	21	a Handy	and the station have a	and the second second					
14.0	Sedge	63	AND STREET	the state of the s						
14.5	Rush	52		AND	TV I LEAD					
15.0	Rush	72		A CALL AND A						
15.5	Clover	18	1		17 40 1 1					
16.0	Sedge	47	1 Tine	SALE AND	ale and the second					
16.5	Poaceae	41	Carl							
17.0	Redtop	46								
Notes:										

		Transec	ct Data She	eet	
Transect	Number: T-5	Date	e: Septemb	er 10, 2009	
Transect	Length: 25.5m	Exa	miner(s): D	D. Dorum, L. Dorum	
Endpoin	t Stake UTM's (NAD 83)				
1	Stake 1: 493747 / 38	15475			
	Stale 2: $402728 / 28$	15405			
Deint	Stake 2. 493/28/38	13493	Deint	1	II. alat
Point	Cover Type	Height	Point	Cover Type	Height
(11)	Padton	(CIII)	(111)	Forh	(CIII)
0.5	Sadga	52	17.3	FOID	65
1.0	Fortail	84	18.0	Forceae	17
2.0	Forth	24	19.0	Forb	17
2.0	Rush	50	19.0	Poaceae	60
3.0	Redton	75	20.0	Forb	15
3.5	Foxtail	93	20.5	Rush	40
4.0	Rush	67	21.0	Clover	14
4.5	Clover	15	21.5	Clover	10
5.0	Clover	14	22.0	Forb	9
5.5	Rush	47	22.5	Forb	15
6.0	Forb	31	23.0	Clover	43
6.5	Forb	12	23.5	Rush	52
7.0	Rush	57	24.0	Rush	50
7.5	Rush	39	24.5	Clover	13
8.0	Clover	28	25.0	Forb	15
8.5	Rush	49	Photo: T-	-5A	
9.0	Forb	9	1 110101 1		
9.5	Sedge	53			
10	Rush	64	Bendend	hall and	
10.5	Forb	17	and the second second	A Real Property of the second	and a state of the
11.0	Forb	18	All and a second second	NAL AND SE	3450
11.5	Rush	70		AF SE TERMENTARY (S	
12.0	Forb	12	5 C 17 5 1		1
12.5	Forb	16			
13.0	Poaceae	31	the second second	the state of the s	ad the second of the
13.5	Forb	15			N. Contraction
14.0	Poaceae	66		and the second of the second second	
14.5	Poaceae	43			
15.0	Rush	47			
15.5	Clover	19			
16.0	Rush	47			
16.5	Poaceae	23			
17.0	Rush	32			
Notes:					

Transect Length:     25.5m     Examiner(s):     D. Dorum, L. Dorum       Endpoint Stake UTM's (NAD 83)     Stake 1:     493747/3815475       Stake 2:     493728/3815495       Point     Cover Type     Height (m)     Point (m)     Cover Type       0.5     Clover     8     17.5     Rush     46       1.0     Rush     23     18.0     Poaceae     10       1.5     Foxtail     71     18.5     Clover     9       3.0     Poaceae     21     20.0     Rush     24       2.5     Rush     27     19.5     Clover     12       2.0     Rush     41     21.0     Clover     12       2.0     Rush     32     22.0     Clover     17       5.5     Redop     49     20.5     Kentucky bluegrass     18       4.0     Rush     31     21.0     Clover     17       5.0     Rush     32     22.0     Clover     15       5.5     Kentucky bluegrass     17     22.5     Rush     41       6.0     Forb     24     23.0     Kentucky bluegrass     17       5.5     Kentucky bluegrass     17     24.5     Rush     15	TT (		Iransed	<u>Ct Data She</u>						
Transect Length:       25.5m       [Examiner(s): D. Dorum, L. Dorum         Endpoint Stake UTM's (NAD 83)         Stake 1: 493747/3815475         Stake 1: 493747/3815475         Stake 2: 493728/3815495         Point Cover Type Height (cm)       Point Cover Type Height (cm)         0.5       Clover       8       17.5       Rush       46         1.0       Rush       23       18.0       Poaceae       10       10         1.5       Foxtail       71       18.5       Clover       9       30       Poaceae       21       20.0       Rush       24         3.5       Redtop       49       20.5       Kentucky bluegrass       16       22         4.0       Rush       41       21.0       Clover       22       4.5       Poaceae       9       21.5       Clover       17       22.5       Rush       41       6.0       Forb       24       23.0       Kentucky bluegrass       7       6.5       Kentucky bluegrass       17       22.5       Rush       41       6.0       Forb       29       24.5       Kentucky bluegrass       19       7.5       Forb       29	Transect	Transect Number: 1-5 Date: September 18, 2008								
Endpoint Stake 1: 493747/3815475 Stake 1: 493747/3815495 Point Cover Type (cm) Cover Type Height (cm) Cover Type (cm) (cm) (cm) Cover Type (cm) (cm) (cm) (cm) (cm) (cm) (cm) (cm)	Transect	Length: 25.5m	Exa	miner(s): L	D. Dorum, L. Dorum					
Stake 1: $493747/3815475$ Stake 2: $493728/3815495$ Point (m)       Cover Type       Height (cm)       Point (cm)       Cover Type       Height (cm)         0.5       Clover       8       17.5       Rush       46         1.0       Rush       23       18.0       Poaceae       10         1.5       Foxtail       71       18.5       Clover       9         2.0       Rush       40       19.0       Kentucky blugrass       16         2.5       Rush       21       20.0       Rush       24         3.5       Redop       49       20.5       Kentucky blugrass       18         4.0       Rush       41       21.0       Clover       22         4.5       Poaccae       9       21.5       Clover       17         5.0       Rush       32       22.0       Clover       15         5.5       Kentucky blugrass       14       23.5       Rush       41         6.0       Forb       21       24.0       Kentucky blugrass       19         7.5       Forb       21       24.0       Kentucky blugr	Endpoint	Stake UTM's (NAD 83)								
Stake 2:         493728 / 3815495           Point (m)         Cover Type         Height (cm)           0.5         Clover         8         17.5         Rush         46           1.0         Rush         23         18.0         Poaceae         10           1.5         Foxtail         71         18.5         Clover         15           2.0         Rush         40         19.0         Kentucky bluegrass         16           2.5         Rush         27         19.5         Clover         9           3.0         Poaceae         21         20.0         Rush         24           3.5         Redtop         49         20.5         Kentucky bluegrass         18           4.0         Rush         41         21.0         Clover         17           5.0         Rush         32         22.0         Clover         15           5.5         Kentucky bluegrass         17         2.5         Rush         41           6.0         Forb         24         23.0         Kentucky bluegrass         19           7.0         Forb         31         25.5         Rush         15 <td>S</td> <td>take 1: 493747 / 38</td> <td>315475</td> <td></td> <td></td> <td></td>	S	take 1: 493747 / 38	315475							
Point (m)         Cover Type         Height (cm)         Point (m)         Cover Type         Height (cm)           0.5         Clover         8         17.5         Rush         46           1.0         Rush         23         18.0         Poaceae         10           1.5         Foxtail         71         18.5         Clover         9           2.0         Rush         40         19.0         Ketucky bluegrass         16           2.0         Rush         27         19.5         Clover         9           3.0         Poaceae         21         20.0         Rush         24           3.5         Redtop         49         20.5         Kentucky bluegrass         18           4.0         Rush         41         21.0         Clover         22           5         Poaceae         9         21.5         Clover         17           5.0         Rush         32         22.0         Clover         17           5.5         Kentucky bluegrass         17         22.5         Rush         41           6.0         Forb         24         23.0         Kentucky bluegrass         17           7.5	S	take 2: 493728 / 38	315495							
(m)         Cover 1ype         (cm)         (m)         Cover 1ype         (cm)           0.5         Clover         8         17.5         Rush         46           1.0         Rush         23         18.0         Poaceae         10           1.5         Foxtail         71         18.5         Clover         15           2.0         Rush         40         19.0         Kentucky bluegrass         16           2.5         Rush         27         19.5         Clover         9           3.0         Poaceae         21         20.0         Rush         24           3.5         Redtop         49         20.5         Kentucky bluegrass         18           4.0         Rush         41         21.0         Clover         22           4.0         Rush         32         22.0         Clover         15           5.5         Kentucky bluegrass         17         22.5         Rush         41           6.0         Forb         24         23.0         Kentucky bluegrass         15           7.0         Forb         11         24.0         Kentucky bluegrass         17           8.0	Point	Cover Turo	Height	Point	Cover Ture	Height				
0.5         Clover         8 $17.5$ Rush         46 $1.0$ Rush $23$ $18.0$ Poaceae $10$ $1.5$ Foxtail $71$ $18.5$ Clover $15$ $2.0$ Rush $40$ $19.0$ Kentucky bluegrass $16$ $2.5$ Rush $27$ $19.5$ Clover $9$ $3.0$ Poaceae $21$ $20.0$ Rush $24$ $3.5$ Redtop $49$ $20.5$ Kentucky bluegrass $18$ $4.0$ Rush $41$ $21.0$ Clover $21$ $5.5$ Rentucky bluegrass $17$ $22.5$ Rush $41$ $6.0$ Forb $24$ $23.0$ Kentucky bluegrass $7$ $6.5$ Kentucky bluegrass $14$ $23.5$ Rush $41$ $6.0$ Forb $21$ $23.0$ Kentucky bluegrass $19$ $7.5$ Forb $29$ $24.5$	(m)	Cover Type	(cm)	(m)	Cover Type	(cm)				
10         Rush         23         18.0         Poacae         10           1.5         Foxtail         71         18.5         Clover         15           2.0         Rush         40         19.0         Kentucky bluegrass         16           2.5         Rush         27         19.5         Clover         9           3.0         Poaceae         21         20.0         Rush         24           4.0         Rush         41         21.0         Clover         22           4.5         Poaceae         9         21.5         Clover         17           5.0         Rush         32         22.0         Clover         15           5.5         Kentucky bluegrass         17         22.5         Rush         41           6.0         Forb         24         23.0         Kentucky bluegrass         7           6.5         Kentucky bluegrass         14         23.5         Rush         41           6.5         Kentucky bluegrass         19         25.0         Rush         15           7.5         Forb         29         24.5         Kentucky bluegrass         17           8.0         Fo	0.5	Clover	8	17.5	Rush	46				
1.5         Foxtail         71         18.5         Clover         15           2.0         Rush         40         19.0         Kentucky bluegrass         16           2.5         Rush         27         19.5         Clover         9           3.0         Poaceae         21         20.0         Rush         24           3.5         Redtop         49         20.5         Kentucky bluegrass         18           4.0         Rush         41         21.0         Clover         22           4.5         Poaceae         9         21.5         Clover         17           5.0         Rush         32         22.0         Clover         15           5.5         Kentucky bluegrass         17         22.5         Rush         41           6.0         Forb         24         23.0         Kentucky bluegrass         7           6.5         Kentucky bluegrass         14         23.5         Rush         15           7.0         Forb         31         25.0         Rush         15           7.0         Forb         31         25.0         Rush         45           9.0         Foxtail	1.0	Rush	23	18.0	Poaceae	10				
2.0         Rush         40         19.0         Kentucky bluegrass         16           2.5         Rush         27         19.5         Clover         9           3.0         Poaceae         21         20.0         Rush         24           3.5         Redtop         49         20.5         Kentucky bluegrass         18           4.0         Rush         41         21.0         Clover         22           4.5         Poaceae         9         21.5         Clover         17           5.0         Rush         32         22.0         Clover         15           5.5         Kentucky bluegrass         17         22.5         Rush         41           6.0         Forb         24         23.0         Kentucky bluegrass         7           6.5         Kentucky bluegrass         14         23.5         Rush         15           7.5         Forb         29         24.5         Kentucky bluegrass         17           8.0         Forb         31         25.0         Rush         45           8.5         Rush         49         Photo: T-5A         90         10           10.5         R	1.5	Foxtail	71	18.5	Clover	15				
2.5         Rush         27         19.5         Clover         9           3.0         Poaceae         21         20.0         Rush         24           3.5         Redtop         49         20.5         Kentucky bluegrass         18           4.0         Rush         41         21.0         Clover         22           4.5         Poaceae         9         21.3         Clover         17           5.0         Rush         32         22.0         Clover         15           5.5         Kentucky bluegrass         17         22.5         Rush         41           6.0         Forb         24         23.0         Kentucky bluegrass         7           6.5         Kentucky bluegrass         14         23.5         Rush         41           7.0         Forb         11         24.0         Kentucky bluegrass         19           7.5         Forb         31         25.0         Rush         45           8.5         Rush         49         Photo: T-5A         9.0         Foxtail         60           10.5         Rush         25         11.0         Forb         26         11.1         14.0 <td>2.0</td> <td>Rush</td> <td>40</td> <td>19.0</td> <td>Kentucky bluegrass</td> <td>16</td>	2.0	Rush	40	19.0	Kentucky bluegrass	16				
3.0         Poaceae         21         20.0         Rush         24           3.5         Redtop         49         20.5         Kentucky bluegrass         18           4.0         Rush         41         21.0         Clover         22           4.5         Poaceae         9         21.5         Clover         17           5.0         Rush         32         22.0         Clover         15           5.5         Kentucky bluegrass         17         22.5         Rush         41           6.0         Forb         24         23.0         Kentucky bluegrass         7           6.5         Kentucky bluegrass         14         23.5         Rush         15           7.0         Forb         11         24.0         Kentucky bluegrass         19           7.5         Forb         29         24.5         Kentucky bluegrass         17           8.0         Forb         31         25.0         Rush         45           9.0         Foxtail         50         9         16         16.5           9.5         Sedge         49         10         Forb         26           11.5         Rush <td>2.5</td> <td>Rush</td> <td>27</td> <td>19.5</td> <td>Clover</td> <td>9</td>	2.5	Rush	27	19.5	Clover	9				
3.5       Redtop       49       20.5       Kentucky bluegrass       18         4.0       Rush       41       21.0       Clover       22         4.5       Poaceae       9       21.5       Clover       17         5.0       Rush       32       22.0       Clover       15         5.5       Kentucky bluegrass       17       22.5       Rush       41         6.0       Forb       24       23.0       Kentucky bluegrass       7         6.5       Kentucky bluegrass       14       23.5       Rush       15         7.0       Forb       11       24.0       Kentucky bluegrass       19         7.5       Forb       29       24.5       Kentucky bluegrass       17         8.0       Forb       31       25.0       Rush       45         8.5       Rush       49       Photo: T-5A         9.0       Foxtail       50       10       Foxtail       60         11.0       Forb       26       11       13.0       Rush       17         13.0       Rush       17       13       15       14.0       Forb       26         14.5       <	3.0	Poaceae	21	20.0	Rush	24				
4.0     Rush     41     21.0     Clover     22       5.0     Rush     32     22.0     Clover     15       5.0     Rush     32     22.0     Clover     15       5.5     Kentucky bluegrass     17     22.5     Rush     41       6.0     Forb     24     23.0     Kentucky bluegrass     7       6.5     Kentucky bluegrass     14     23.5     Rush     15       7.0     Forb     24     23.0     Kentucky bluegrass     19       7.5     Forb     29     24.5     Kentucky bluegrass     17       8.0     Forb     31     25.0     Rush     45       9.0     Foxtail     50     9.1     Rush     45       9.0     Foxtail     50     9.1     Forb     26       11.5     Rush     40     10     Forb     26       11.5     Rush     41     13.0     Rush     17       13.5     Kentucky bluegrass     15     16     Poaceae       14.5     Rush     34     15     16.5     Poaceae       15.5     Poaceae     25     16.0     Poaceae     23       16.5     Poaceae     24 </td <td>3.5</td> <td>Redtop</td> <td>49</td> <td>20.5</td> <td>Kentucky bluegrass</td> <td>18</td>	3.5	Redtop	49	20.5	Kentucky bluegrass	18				
4.3       Foaceae       3       21.3       Clover       17         5.0       Rush       32       22.0       Clover       15         5.5       Kentucky bluegrass       17       22.5       Rush       41         6.0       Forb       24       23.0       Kentucky bluegrass       7         6.5       Kentucky bluegrass       14       23.5       Rush       15         7.0       Forb       11       24.0       Kentucky bluegrass       19         7.5       Forb       29       24.5       Kentucky bluegrass       17         8.0       Forb       31       25.0       Rush       45         9.0       Foxtail       50       9       9.5       Sedge       49         9.0       Foxtail       50       9       9.5       Sedge       49         10       Foxtail       69       10       Foxtail       69         11.5       Rush       410       17       13.5       Kush       41         13.0       Rush       17       13.5       Kentucky bluegrass       15         14.0       Forb       26       14.5       Rush       34       15 </td <td>4.0</td> <td>Ponceno</td> <td>41</td> <td>21.0</td> <td>Clover</td> <td>17</td>	4.0	Ponceno	41	21.0	Clover	17				
3.3       100       100       100       100         5.5       Kentucky bluegrass       17       22.5       Rush       41         6.0       Forb       24       23.0       Kentucky bluegrass       7         6.5       Kentucky bluegrass       14       23.5       Rush       41         7.0       Forb       11       24.0       Kentucky bluegrass       19         7.5       Forb       29       24.5       Kentucky bluegrass       19         7.5       Forb       29       24.5       Kentucky bluegrass       17         8.0       Forb       31       25.0       Rush       45         8.5       Rush       49       Photo: T-5A       90       Foxtail       50         9.0       Foxtail       69       10       Foxtail       69       10       Foxtail       69         10.5       Rush       40       12.0       Rush       41       13.0       Rush       17         13.5       Kentucky bluegrass       15       17       13.5       Kentucky bluegrass       15         14.0       Forb       26       14.5       Rush       34       15.0       Rush	4.J 5.0	Rush	32	21.5	Clover	17				
10         Forb         24         23.0         Kentucky bluegrass         11           6.0         Forb         14         23.5         Rush         15           7.0         Forb         11         24.0         Kentucky bluegrass         19           7.5         Forb         29         24.5         Kentucky bluegrass         17           8.0         Forb         31         25.0         Rush         45           8.5         Rush         49         Photo: T-5A         45           9.0         Forbatil         50         50         50           9.5         Sedge         49         Photo: T-5A         5           11.0         Forb         26         11.5         Rush         40           12.0         Rush         41         13.0         Rush         17           13.5         Kentucky bluegrass         15         14.0         Forb         26           14.5         Rush         34         15         17         13.5         13.0         17           13.5         Poaceae         25         16.0         Poaceae         25         16.0         Poaceae         23           16	5.5	Kentucky bluegrass	17	22.5	Rush	41				
6.5       Kentucky bluegrass       14       23.5       Rush       15         7.0       Forb       11       24.0       Kentucky bluegrass       19         7.5       Forb       29       24.5       Kentucky bluegrass       17         8.0       Forb       31       25.0       Rush       45         8.5       Rush       49       Photo: T-5A         9.0       Forb       26       16       Photo: T-5A         9.0       Forb       26       Photo: T-5A         9.0       Forb       26       Photo: T-5A         10       Forb       26       Photo: T-5A         11.0       Forb       26       Photo: T-5A         11.5       Rush       40       Photo: T-5A         12.0       Rush       29       Photo: T-5A         12.5       Rush       41       Photo: T-5A         13.0       Rush       17       Photo: T-5A         14.0       Forb       26       Photo: T-5A         14.1       Rush       34       Photo: T-5A         15.0       Poaceae       25         16.0       Poaceae       23         16.5       <	6.0	Forb	24	23.0	Kentucky bluegrass	7				
7.0       Forb       11       24.0       Kentucky bluegrass       19         7.5       Forb       29       24.5       Kentucky bluegrass       17         8.0       Forb       31       25.0       Rush       45         8.5       Rush       49       Photo: T-5A         9.0       Foxtail       50         9.5       Sedge       49         10       Foxtail       69         10.5       Rush       25         11.0       Forb       26         11.5       Rush       40         12.0       Rush       29         12.5       Rush       41         13.0       Rush       17         13.5       Kentucky bluegrass       15         14.0       Forb       26         14.5       Rush       34         15.0       Rush       41         15.5       Poaceae       25         16.0       Poaceae       23         16.5       Poaceae       24         17.0       Bare ground       0         Notes:       State	6.5	Kentucky bluegrass	14	23.5	Rush	15				
7.5         Forb         29         24.5         Kentucky bluegrass         17           8.0         Forb         31         25.0         Rush         45           8.5         Rush         49         Photo: T-5A         9.0         Fortail         50           9.0         Fortail         69         10         Fortail         69         10         Forb         26           10         Forb         26         11.5         Rush         25         11.0         Forb         26           11.5         Rush         40         12.0         Rush         29         12.5         Rush         41           13.0         Rush         17         13.5         Kentucky bluegrass         15         14.0         Forb         26           14.5         Rush         34         15.0         Rush         34         15.5         Poaceae         25           16.0         Poaceae         23         16.5         Poaceae         24         17.0         Bare ground         0           Notes:         State         State         State         State         State         State         State	7.0	Forb	11	24.0	Kentucky bluegrass	19				
8.0         Forb         31         25.0         Rush         45           8.5         Rush         49         Photo: T-5A         9.0         Foxtail         50           9.5         Sedge         49         10         Foxtail         69         10.5         Rush         25           10.0         Fortail         69         10.5         Rush         25         11.0         Forb         26           11.5         Rush         40         12.0         Rush         29         12.5         Rush         41           13.0         Rush         17         13.5         Kentucky bluegrass         15         14.0         Forb         26           14.5         Rush         34         15.0         Rush         34         15.5           15.0         Rush         41         15.5         Poaceae         23         16.5         Poaceae         24         17.0         Bare ground         0         Notes:         Votes:	7.5	Forb	29	24.5	Kentucky bluegrass	17				
8.5       Rush       49       Photo: T-5A         9.0       Foxtail       50         9.5       Sedge       49         10       Foxtail       69         10.5       Rush       25         11.0       Forb       26         11.5       Rush       40         12.0       Rush       29         12.5       Rush       41         13.0       Rush       17         13.5       Kentucky bluegrass       15         14.0       Forb       26         14.5       Rush       34         15.0       Rush       41         15.5       Poaceae       25         16.0       Poaceae       23         16.5       Poaceae       24         17.0       Bare ground       0         Notes:       Vetes:       Vetes	8.0	Forb	31	25.0	Rush	45				
9.0         Foxtail         50           9.5         Sedge         49           10         Foxtail         69           10.5         Rush         25           11.0         Forb         26           11.5         Rush         40           12.0         Rush         29           12.5         Rush         41           13.0         Rush         17           13.5         Kentucky bluegrass         15           14.0         Forb         26           14.5         Rush         34           15.0         Rush         41           15.5         Poaceae         25           16.0         Poaceae         23           16.5         Poaceae         24           17.0         Bare ground         0	8.5	Rush	49	Photo: T-	-5A					
9.5Sedge4910Foxtail6910.5Rush2511.0Forb2611.5Rush4012.0Rush2912.5Rush4113.0Rush1713.5Kentucky bluegrass1514.0Forb2614.5Rush3415.0Rush4115.5Poaceae2516.0Poaceae2316.5Poaceae2417.0Bare ground0	9.0	Foxtail	50							
10       Foxtail       69         10.5       Rush       25         11.0       Forb       26         11.5       Rush       40         12.0       Rush       29         12.5       Rush       41         13.0       Rush       17         13.5       Kentucky bluegrass       15         14.0       Forb       26         14.5       Rush       34         15.0       Rush       41         15.5       Poaceae       25         16.0       Poaceae       23         16.5       Poaceae       24         17.0       Bare ground       0         Notes:       Vets:       Vets	9.5	Sedge	49		The second se	C. A. C.				
10.5       Rush       25         11.0       Forb       26         11.5       Rush       40         12.0       Rush       29         12.5       Rush       41         13.0       Rush       17         13.5       Kentucky bluegrass       15         14.0       Forb       26         14.5       Rush       41         15.5       Poaceae       25         16.0       Poaceae       23         16.5       Poaceae       24         17.0       Bare ground       0	10	Foxtail	69	nale set		AND				
11.0       Forb       26         11.5       Rush       40         12.0       Rush       29         12.5       Rush       41         13.0       Rush       17         13.5       Kentucky bluegrass       15         14.0       Forb       26         14.5       Rush       34         15.0       Rush       41         15.5       Poaceae       25         16.0       Poaceae       23         16.5       Poaceae       24         17.0       Bare ground       0         Notes:       Votes:       Votes:	10.5	Rush	25							
11.5     Rush     40       12.0     Rush     29       12.5     Rush     41       13.0     Rush     17       13.5     Kentucky bluegrass     15       14.0     Forb     26       14.5     Rush     34       15.0     Rush     41       15.5     Poaceae     25       16.5     Poaceae     23       16.5     Poaceae     24       17.0     Bare ground     0	11.0	Forb	26	Self sent to		A. A. A.				
12.0     Rush     29       12.5     Rush     41       13.0     Rush     17       13.5     Kentucky bluegrass     15       14.0     Forb     26       14.5     Rush     34       15.0     Rush     41       15.5     Poaceae     25       16.0     Poaceae     23       16.5     Poaceae     24       17.0     Bare ground     0	11.5	Rush	40		Carl Frank C					
12.5     Rush     25       12.5     Rush     41       13.0     Rush     17       13.5     Kentucky bluegrass     15       14.0     Forb     26       14.5     Rush     34       15.0     Rush     41       15.5     Poaceae     25       16.0     Poaceae     23       16.5     Poaceae     24       17.0     Bare ground     0	12.0	Rush	29			Alexander .				
12.0       Rush       11         13.0       Rush       17         13.5       Kentucky bluegrass       15         14.0       Forb       26         14.5       Rush       34         15.0       Rush       41         15.5       Poaceae       25         16.0       Poaceae       23         16.5       Poaceae       24         17.0       Bare ground       0	12.0	Rush	41	Contract Contract	Charles and the second second second second second	a will be a stream of the				
13.0     Rush     17       13.5     Kentucky bluegrass     15       14.0     Forb     26       14.5     Rush     34       15.0     Rush     41       15.5     Poaceae     25       16.0     Poaceae     23       16.5     Poaceae     24       17.0     Bare ground     0	13.0	Rush	17		<b>影出的"你们"的"新闻"的"</b> 你们"。"你们"	ALC: NOT STREET				
13.3     Kenucky bruegrass     13       14.0     Forb     26       14.5     Rush     34       15.0     Rush     41       15.5     Poaceae     25       16.0     Poaceae     23       16.5     Poaceae     24       17.0     Bare ground     0	12.5	Kush Vontuoku hluograas	17	- We and						
14.0     FORD     26       14.5     Rush     34       15.0     Rush     41       15.5     Poaceae     25       16.0     Poaceae     23       16.5     Poaceae     24       17.0     Bare ground     0	13.3		15	- 19 <u>12</u> (* 1917		State State				
14.5     Rush     34       15.0     Rush     41       15.5     Poaceae     25       16.0     Poaceae     23       16.5     Poaceae     24       17.0     Bare ground     0	14.0	Forb	26	乙酸基本的						
15.0         Rush         41           15.5         Poaceae         25           16.0         Poaceae         23           16.5         Poaceae         24           17.0         Bare ground         0	14.5	Kush	34	ALL PROPERTY	N					
15.5         Poaceae         25           16.0         Poaceae         23           16.5         Poaceae         24           17.0         Bare ground         0           Notes:         0         10	15.0	Rush	41		and the second states and share and	New Collinson &				
16.0         Poaceae         23           16.5         Poaceae         24           17.0         Bare ground         0	15.5	Poaceae	25	新日本国	学校の教育のないない。	ALL				
16.5Poaceae2417.0Bare ground0Notes:	16.0	Poaceae	23							
17.0Bare ground0Notes:	16.5	Poaceae	24							
Notes:	17.0	Bare ground	0							
	Notes:									
	. <u></u>									

		Transe	ect Data She	et			
Transect	Number: T-5	Da	te: Septembe	er 18, 2007			
Transect	Length: 25.5m	Ex	xaminer(s): D .Dorum				
Endpoint	t Stake UTM's (NAD 83)						
Linupoint	Stake 1: $1037/7 / 3814$	5475					
	$\frac{1}{2} = \frac{1}{2} = \frac{1}$	5405					
Delat	Stake 2: 4937287 381	0495	Dulut	l	TT - 1.4		
Point	Cover Type	Height	Point	Cover Type	Height		
(11)	Kantualuu hluaamaaa	(011)	(111)	Kantuala, hlug groop	(CIII)		
0.5	Kentucky bluegrass	2	17.5	Rentucky bluegrass	1		
1.0	Rentucky bluegrass	3	18.0	Bare ground	0		
1.5	Mullein	0	10.0	Kontucky bluograss	0		
2.0	Bara ground	0	19.0	Kentucky bluegrass	11		
2.3	Kontucky bluograss	0	20.0	Kentucky bluegrass	11		
3.0	Kentucky bluegrass	1	20.0	Kentucky bluegrass	1		
3.5	Wolfstail	2	20.5	Dandalion	1		
4.0	Kontucky bluograss	1	21.0	Clover	1		
4.5	Rentucky bluegrass	0	21.5	Kontucky bluograss	1		
5.0	Clover	1	22.0	Clover	5		
6.0	Kentucky bluegrass	2	22.5	Kentucky bluegrass	3		
6.5	Bare ground	0	23.0	Forh	2		
7.0	Kentucky bluegrass	1	23.5	Bare ground	0		
7.0	Forh	3	24.5	Dandelion	3		
8.0	Bare ground	0	25.0	Kentucky bluegrass	4		
8.5	Litter	0	Photo: T-	5Δ	· ·		
9.0	Bare ground	0		JA			
9.5	Kentucky bluegrass	4					
10	Dandelion	1		I FAIL AND	and the state		
10.5	Bare ground (gopher mound)	0					
11.0	Bare ground	0					
11.5	Dandelion	2					
12.0	Bare ground (gopher mound)	0			Leave		
12.5	Mullein	8		the second state of the second state of the	the second		
13.0	Dandelion	1	State State	and the second sec			
13.5	Kentucky bluegrass	6		and the second stands and			
14.0	Kentucky bluegrass	4	and the second second	A State of the second			
14.5	Dandelion	2		A CALLER AND A CALLER OF			
15.0	Kentucky bluegrass	2			A Carlos A		
15.5	Kentucky bluegrass	6	and the second	It is when the second of the	Meren Artes		
16.0	Litter	0		and the sum of the second	ALL STREET		
16.5	Bare ground	0			Contraction of the second		
17.0	Kentucky bluegrass	2					
Notes:							

# Fairchild Draw Riparian Restoration Project Grant No. 07-150WPF

# APPENDIX C: FAIRCHILD DRAW RIPARIAN RESTORATION PROJECT BEBB'S WILLOW MONITORING DATA SHEETS

# Arizona Water Protection Fund Fairchild Draw Riparian Restoration Project Grant No. 07-150WPF

Final Report

Submitted by the David Dorum Arizona Game and Fish Department

December 31, 2011

The Arizona Water Protection Fund Commission has funded all, or a portion, of this report or project. The views or findings represented in this deliverable are the Grantees and do not necessarily represent those of the Commission or the Arizona Department of Water Resources.

Date: September 15, 2011				Observer(s): D. Dorum				
Willow	Plant Status	Height	Willow	Plant Status	Height	Willow	Plant Status	Height
Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)
001	Alive	-	035	Alive	-	069	Alive	-
002	Alive	-	036	Alive	-	070	Alive	-
003	Alive	-	037	Alive	-	071	Alive	-
004	Alive	-	038	Alive	-	072	Alive	-
005	Alive	-	039	Alive	-	073	Alive	-
006	Alive	-	040	Alive	-	074	Alive	-
007	Alive	-	041	Alive	-	075	Alive	-
008	Alive	-	042	Alive	-	076	Alive	-
009	Alive	-	043	Alive	-	077	DEAD	-
010	Alive	-	044	Alive	-	078	Alive	-
011	Alive	-	045	DEAD	-	079	Alive	-
012	Alive	-	046	Alive	-	080	Alive	-
013	Alive	-	047	Alive	-	081	Alive	-
014	Alive	-	048	Alive	-	082	Alive	-
015	Alive	-	049	Alive	-	083	Alive	-
016	Alive	-	050	Alive	-	084	Alive	-
017	Alive	-	051	Alive	-	085	Alive	-
018	Alive	-	052	DEAD	-	086	Alive	-
019	Alive	-	053	Alive	-	087	Alive	-
020	Alive	-	054	DEAD	-	088	Alive	-
021	Alive	-	055	Alive	-	089	Alive	_
022	Alive	-	056	Alive	-	090	Alive	-
023	Alive	-	057	Alive	-	091	Alive	-
024	Alive	-	058	Alive	-	092	Alive	-
025	Alive	_	059	Alive	_	093	Alive	_
026	Alive	_	060	Alive	_	094	Alive	_
027	Alive	_	061	Alive	_	095	Alive	_
028	Alive	_	062	Alive	_	096	Alive	_
029	Alive	_	063	DEAD	_	097	Alive	_
030	Alive	_	064	Alive	_	098	Alive	_
031	Alive	_	065	Alive	_	099	Alive	_
032	Alive	_	066	Alive	_	100	Alive	_
033	DEAD	_	067	Alive	_		111170	
034	DEAD	_	068	Alive	_			
Notasi	DLIID		000	THIVE				
notes:								

Date: S	eptember 15, 2	011		Observer(s): D. Dorum and L. Dorum				
Willow	Plant Status	Height	Willow	Plant Status	Height	Willow	Plant Status	Height
Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)
101	Alive	-	144	Alive	-	178	Alive	-
102	Alive	-	145	Alive	-	179	Alive	-
103	Alive	-	146	Alive	-	180	Alive	-
104	Alive	-	147	Alive	-			-
105	Alive	-	148	Alive	-			-
106	Alive	-	149	Alive	-			-
107	Alive	-	150	Alive	-			-
108	Alive	-	151	Alive	-			-
109	Alive	-	152	Alive	-			-
110	Alive	-	153	Alive	-			-
111	Alive	-	154	Alive	-			-
112	Alive	-	155	Alive	-			-
113	Alive	-	156	Alive	-			-
114	Alive	-	157	Alive	-			-
115	Alive	-	158	Alive	-			-
116	Alive	-	159	Alive	-			-
117	Alive	-	160	Alive	-			-
118	Alive	-	161	Alive	-			-
119	Alive	-	162	Alive	-			-
120	Alive	-	163	Alive	-			-
121	Alive	-	164	Alive	-			-
122	Alive	-	165	Alive	-			-
123	Alive	-	166	Alive	-			-
124	Alive	-	167	Alive	-			-
125	Alive	-	168	Alive	-			-
126	Alive	-	169	Alive	-			-
127	Alive	-	170	Alive	-			-
128	Alive	-	171	Alive	-			-
129	Alive	-	172	Alive	-			-
130	Alive	-	173	Alive	-			-
140	Alive	-	174	Alive	-			-
141	Alive	-	175	Alive	-			-
142	Alive	-	176	Alive	-			
143	Alive	-	177	Alive	-			
Notes:								
1								

Date: September 10, 2010				Observer(s): D	Observer(s): D. Dorum and L. Dorum				
Willow	Plant Status	Height	Willow	Plant Status	Height	Willow	Plant Status	Height	
Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)	
001	Alive	-	035	Alive	-	069	Alive	-	
002	Alive	-	036	Alive	-	070	Alive	-	
003	Alive	-	037	Alive	-	071	Alive	-	
004	Alive	-	038	Alive	-	072	Alive	-	
005	Alive	-	039	Alive	-	073	Alive	-	
006	Alive	-	040	Alive	-	074	Alive	-	
007	Alive	-	041	Alive	-	075	Alive	-	
008	Alive	-	042	Alive	-	076	Alive	-	
009	Unable to locate	-	043	Alive	-	077	DEAD	-	
010	Alive	-	044	Alive	-	078	Alive	-	
011	Alive	-	045	Alive	-	079	Alive	_	
012	Alive	-	046	Alive	-	080	Alive	-	
013	Alive	-	047	Alive	-	081	Alive	_	
014	Alive	-	048	Alive	-	082	Alive	-	
015	Alive	-	049	Alive	-	083	Alive	-	
016	Alive	-	050	Alive	-	084	Alive	_	
017	Alive	-	051	Alive	-	085	Alive	-	
018	Alive	-	052	DEAD	-	086	Alive	-	
019	Alive	-	053	Alive	-	087	Alive	_	
020	Alive	-	054	Alive	-	088	Alive	_	
021	Alive	-	055	Alive	-	089	Alive	_	
022	Alive	-	056	Alive	-	090	Alive	_	
023	Alive	-	057	Alive	-	091	Alive	_	
024	Alive	_	058	Alive	_	092	Alive	_	
025	Alive	_	059	Alive	_	093	Alive	_	
026	Alive	-	060	Alive	-	094	Alive	_	
027	Alive	_	061	Alive	_	095	Alive	_	
028	Alive	-	062	Alive	-	096	Alive	_	
029	Alive	_	063	Unable to locate	-	097	Alive	-	
030	Alive	_	064	Alive	_	098	Alive	_	
031	Alive	_	065	Alive	_	099	Alive	_	
032	Alive	-	066	Alive	-	100	Alive	_	
033	Unable to locate	-	067	Alive	-				
034	Alive	-	068	Alive	-				
Notes:		•	· · · · · ·						

Date: S	eptember 10, 2	010		Observer(s): I	Observer(s): D. Dorum and L. Dorum				
Willow	Plant Status	Height	Willow	Plant Status	Height	Willow	Plant Status	Height	
Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)	
101	Alive	-			-			-	
102	Alive	-			-			-	
103	Alive	-			-			-	
104	Alive	-			-			-	
105	Alive	-			-			-	
106	Alive	-			-			-	
107	Alive	-			-			-	
108	Alive	-			-			-	
109	Alive	-			-			-	
110	Alive	-			-			-	
111	Alive	-			-			-	
112	Alive	-			-			-	
113	Alive	-			-			-	
114	Alive	-			-			-	
115	Alive	-			-			-	
116	Alive	-			-			-	
117	Alive	-			-			-	
118	Alive	-			-			-	
119	Alive	-			-			-	
120	Alive	-			-			-	
121	Alive	-			-			-	
122	Alive	-			-			-	
123	Alive	-			-			-	
124	Alive	-			-			-	
125	Alive	-			-			-	
126	Alive	-			-			-	
127	Alive	-			-			-	
128	Alive	-			-			-	
129	Alive	-			-			-	
130	Alive	-			-			-	
		-			-			-	
		-			-			-	
		-			-				
		-			-				
Notes:									
## Fairchild Draw Riparian Restoration Project Grant No. 07-150WPF Bebb's Willow Monitoring Data Sheet

	Date: Septem	ber 10, 200	9	Obse	erver(s):	D. Dorun	and L. Dorum	
Willow	Plant Status	Height	Willow	Plant Status	Height	Willow	Plant Status	Height
Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)
001	Alive	-	035	Alive	-	069	Alive	-
002	Alive	-	036	Alive	-	070	Alive	-
003	Alive	-	037	Alive	-	071	Alive	-
004	Alive	-	038	Alive	-	072	Alive	-
005	Alive	-	039	Alive	-	073	Alive	-
006	Alive	-	040	Alive	-	074	Alive	-
007	Alive	-	041	Alive	-	075	Alive	-
008	Alive	-	042	Alive	-	076	Alive	-
009	Alive	-	043	Alive	-	077	Alive	-
010	Alive	-	044	Alive	-	078	Alive	-
011	Alive	-	045	Alive	-	079	Alive	-
012	Alive	-	046	Alive	-	080	Alive	-
013	Alive	-	047	Alive	-	081	Alive	-
014	Alive	-	048	Alive	-	082	Alive	-
015	Alive	-	049	Alive	-	083	Alive	-
016	Alive	-	050	Alive	-	084	Alive	-
017	Alive	-	051	Alive	-	085	Alive	-
018	Alive	-	052	Alive	-	086	Alive	-
019	Alive	-	053	Alive	-	087	Alive	-
020	Alive	-	054	Alive	-	088	Alive	-
021	Alive	-	055	Alive	-	089	Alive	-
022	Alive	-	056	Alive	-	090	Alive	-
023	Alive	-	057	Alive	-	091	Alive	-
024	Alive	-	058	Alive	-	092	Alive	-
025	Alive	-	059	Alive	-	093	Alive	-
026	Alive	-	060	Alive	-	094	Alive	-
027	Alive	-	061	Alive	-	095	Alive	-
028	Alive	-	062	Alive	-	096	Alive	-
029	Alive	-	063	Undetermined *	-	097	Alive	-
030	Alive	-	064	Alive	-	098	Alive	-
031	Alive	-	065	Alive	-	099	Alive	-
032	Alive	-	066	Alive	-	100	Alive	-
033	Alive	_	067	Alive	-			
034	Alive	-	068	Alive	-			
Notes: *	All leaves were b	orown. Plant s	stem was st	ill flexible. It is yet u	ncertain w	hether plan	t will re-sprout in th	e spring.
				-				

### Fairchild Draw Riparian Restoration Project Grant No. 07-150WPF Bebb's Willow Monitoring Data Sheet

Date: September 18, 2008 Observer(s): D. Dorum and L. Dorum								
Willow	Plant Status	Height	Willow	Plant Status	Height	Willow	Plant Status	Height
Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)	Plant	(Alive/Dead)	(cm)
001	Alive	105	035	Alive	121	069		
002	Alive	107	036	Alive	154	070		
003	Alive	127	037	Alive	186	071		
004	Alive	133	038	Alive	122	072		
005	Alive	158	039	Alive	136	073		
006	Alive	140	040	Alive	179	074		
007	Alive	148	041	Alive	149	075		
008	Alive	128	042	Alive	141	076		
009	Alive	111	043	Alive	152	077		
010	Alive	120	044	Alive	183	078		
011	Alive	138	045	Alive	148	079		
012	Alive	152	046	Alive	148	080		
013	Alive	163	047	Alive	156	081		
014	Alive	128	048	Alive	159	082		
015	Alive	152	049	Alive	163	083		
016	Alive	140	050	Alive	181	084		
017	Alive	117	051			085		
018	Alive	148	052			086		
019	Alive	149	053			087		
020	Alive	144	054			088		
021	Alive	190	055			089		
022	Alive	193	056			090		
023	Alive	154	057			091		
024	Alive	122	058			092		
025	Alive	139	059			093		
026	Alive	142	060			094		
027	Alive	166	061			095		
028	Alive	146	062			096		
029	Alive	128	063			097		
030	Alive	148	064			098		
031	Alive	162	065			099		
032	Alive	145	066			100		
033	Alive	164	067					
034	Alive	126	068					
Notes:		·			·			

# APPENDIX D: FAIRCHILD DRAW RIPARIAN RESTORATION PROJECT PHOTO POINT MONITORING DATA SHEETS

Arizona Water Protection Fund Fairchild Draw Riparian Restoration Project Grant No. 07-150WPF

**Final Report** 

Submitted by David Dorum Arizona Game and Fish Department

December 31, 2011

The Arizona Water Protection Fund Commission has funded all, or a portion, of this report or project. The views or findings represented in this deliverable are the Grantees and do not necessarily represent those of the Commission or the Arizona Department of Water Resources.

<b></b>			intoring Data Sheet			
Date: Septemb	er 15, 2011	P	hotographer: D. Dorum			
Camera: Olym	pus Nikon D80					
Photo Point N	<b>o.</b> : T-1A	Time: 8:45am	Location UTM's (NAD 83): 493666 / 3814275			
Weather Conditio	ons: Cloudy with s	ooradic rain.				
View 1	Camera Height:	1 M	Compass Bearing: 290			
Photo Subject/Put	rpose: Vegetatio	n monitoring transect line.				
View 2	Camera Height:	1 M	Compass Bearing: 360			
Photo Subject/Pur	rpose: General r	neadow condition				
	1					
View 3	Camera Height:	1 M	Compass Bearing: 210			
Photo Subject/Put	rpose: General r	neadow condition	tour mag. 200			
View 4	Camera Height		Compass Bearing:			
Photo Subject/Dur	mose.		compass bourng.			
	17030.					
Notas						
Notes						
T-1A 290			T-1A 360			
T-1A 210						

	r noto r onit Monitoring Data Sneet				
Date: September 10, 2010			Photographer: D. Dorum		
Camera: Olym	Camera: Olympus Nikon D80				
Photo Point N	<b>o.</b> : T-1A	Time: 5:05pm	Location UTM's (NAD 83): 493666 / 3814275		
Weather Conditio	ns: Partly cloudy a	and calm.	·		
View 1	Camera Height:	1 M	Compass Bearing: 290		
Photo Subject/Pur	pose: Vegetatio	on monitoring transect line.			
View 2	Camera Height: 1 M		Compass Bearing: 360		
Photo Subject/Pur	pose: General r	neadow condition			
View 3	Camera Height: 1 M		Compass Bearing: 210		
Photo Subject/Purpose: General meadow condition					
View 4	Camera Height:		Compass Bearing:		
Photo Subject/Pur	pose:				

Notes:





T-1A 290

T-1A 360





Date: September 10, 2009			Photographer: D. Dorum		
Camera: Olym	pus Nikon D80	)			
Photo Point N	<b>o.</b> : T-1A	Time: 2:00pm	Location UTM's (NAD 83): 493666 / 3814275		
Weather Conditio	ns: Partly cloudy a	and calm.			
View 1	Camera Height:	1 M	Compass Bearing: 290		
Photo Subject/Pur	pose: Vegetatio	on monitoring transect line.			
View 2	Camera Height:	1 M	Compass Bearing: 360		
Photo Subject/Pur	pose: General r	neadow condition			
View 3	Camera Height: 1 M		Compass Bearing: 210		
Photo Subject/Pur	pose: General r	neadow condition			
View 4	Camera Height:		Compass Bearing:		
Photo Subject/Purpose:					
Notes:					



T-1A 290







T-1A 360

Date: September 18,2008			Photographer: D. Dorum		
Camera: Olym	pus Stylus 400				
Photo Point N	<b>o.</b> : T-1A	Time: 1:15 PM	Location UTM's (NAD 83): 493666 / 3814275		
Weather Conditio	ns: Partly cloudy a	and breezy			
View 1	Camera Height:	1 M	Compass Bearing: 290		
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line.			
View 2	Camera Height:	1 M	Compass Bearing: 360		
Photo Subject/Pur	pose: General n	neadow condition			
View 3	Camera Height:	1 M	Compass Bearing: 210		
Photo Subject/Pur	pose: General n	neadow condition			
View 4	Camera Height:		Compass Bearing:		
Photo Subject/Purpose:					
Notes:					



T-1A 290







T-1A 360

		1 11010 1 0111	t Monitoring Data Sheet			
Date: September 18,2007			Photographer: Dorum			
Camera: Olym	Camera: Olympus Stylus 400					
Photo Point N	<b>Io.</b> : T-1A	Time: 2:10 PM	Location UTM's (NAD 83): 493666 / 3814275			
Weather Conditions: Sunny and breezy						
View 1	Camera Height:	1 M	Compass Bearing: 290			
Photo Subject/Pu	rpose: Vegetatio	on monitoring transect li	ne.			
View 2	Camera Height:	1 M	Compass Bearing: 360			
Photo Subject/Pu	rpose: General i	neadow condition				
View 3	Camera Height:	1 M	Compass Bearing: 210			
Photo Subject/Pu	Photo Subject/Purpose: General meadow condition					
View 4	Camera Height:		Compass Bearing:			
Photo Subject/Purpose:						
Notes:						







T-1A 360

		FIIOLO FOIILLIN				
Date: Septemb	er 15, 2011		Photographer: D. Dorum			
Camera: Olym	Camera: Olympus Nikon D80					
Photo Point N	<b>o.</b> : T-1B	Time: 8:50a	Location UTM's (NAD 83): 493644 / 3814277			
Weather Conditio	ns: Cloudy with sp	ooradic rain.				
View 1	Camera Height:	1 M	Compass Bearing: 100			
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line.				
View 2	Camera Height:		Compass Bearing:			
Photo Subject/Pur	pose:					
View 3	Camera Height:		Compass Bearing:			
Photo Subject/Pur	pose:					
View 4	Camera Height:		Compass Bearing:			
Photo Subject/Purpose:						
Notes:						



Flioto Foliti Moliitoring Data Sheet						
Date: September 10, 2010 Photographer: D. Dorum						
Camera: Olym	Camera: Olympus Nikon D80					
Photo Point N	<b>o.</b> : T-1B	Time: 5:10 PM	Location UTM's (NAD 83): 493644 / 3814277			
Weather Conditio	ns: Partly cloudy a	and calm.				
View 1	Camera Height:	1 M	Compass Bearing: 100			
Photo Subject/Pur	pose: Vegetatio	on monitoring transect line.				
View 2	Camera Height:		Compass Bearing:			
Photo Subject/Pur	pose:					
View 3	ew 3 Camera Height:		Compass Bearing:			
Photo Subject/Pur	pose:					
View 4	ew 4 Camera Height:		Compass Bearing:			
Photo Subject/Purpose:						
Notes:						



Date: Septemb	Photographer: D. Dorum					
Camera: Olym	Camera: Olympus Nikon D80					
Photo Point N	<b>o.</b> : T-1B	Time: 1:55 PM	Location UTM's (NAD 83): 493644 / 3814277			
Weather Conditio	ns: Partly cloudy a	and calm.				
View 1	Camera Height:	1 M	Compass Bearing: 100			
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line.				
View 2	Camera Height:		Compass Bearing:			
Photo Subject/Pur	pose:					
View 3	Camera Height:		Compass Bearing:			
Photo Subject/Pur	pose:					
View 4	Camera Height:		Compass Bearing:			
Photo Subject/Purpose:						
Notes:						



		FIIOLO FOIIIL IV.				
Date: Septemb	er 18, 2008		Photographer: D. Dorum			
Camera: Olym	Camera: Olympus Stylus 400					
Photo Point N	<b>o.</b> : T-1B	Time: 1:12 PM	Location UTM's (NAD 83): 493644 / 3814277			
Weather Conditio	ns: Partly cloudy a	and breezy.				
View 1	Camera Height:	1 M	Compass Bearing: 100			
Photo Subject/Pur	rpose: Vegetatio	n monitoring transect line.				
View 2	Camera Height:		Compass Bearing:			
Photo Subject/Pur	rpose:					
View 3	Camera Height:		Compass Bearing:			
Photo Subject/Pur	rpose:					
View 4	Camera Height:		Compass Bearing:			
Photo Subject/Purpose:						
Notes:						





			Admitoring Data Sheet			
Date: Septemb	er 18, 2007		Photographer: D. Dorum			
Camera: Olym	Camera: Olympus Stylus 400					
Photo Point N	<b>o.</b> : T-1B	Time: 2:15 PM	Location UTM's (NAD 83): 493644 / 3814277			
Weather Conditio	ns: Sunny and bre	ezy.				
View 1	Camera Height:	1 M	Compass Bearing: 100			
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line.				
View 2	Camera Height:		Compass Bearing:			
Photo Subject/Pur	pose:					
View 3	Camera Height:		Compass Bearing:			
Photo Subject/Pur	pose:					
View 4	Camera Height:		Compass Bearing:			
Photo Subject/Purpose:						
Notes:						



Date: September 8, 2011	Photographer: Dorum
Camera: Olympus Nikon D80	
Photo Point No.: T-2A Time: 11:05am	Location UTM's (NAD 83): 493618 / 3814677
Weather Conditions: Partly cloudy and clam.	
View 1 Comore Height: 1 M	Compass Passing: 240
view 1 Camera Height. 1 M	Compass Bearing. 240
Photo Subject/Purpose: Vegetation monitoring transect line.	
View 2 Camera Height: 1 M	Compass Bearing: 320
Photo Subject/Purpose: General meadow condition.	
View 2 Comore Height: 1 M	Compass Passing: 160
view 3 Camera Height. 1 M	Compass Bearing. 100
Photo Subject/Purpose: General meadow condition.	
View 4 Camera Height:	Compass Bearing:
Photo Subject/Purpose:	
J 1	
Notoci	
A A A A A A A A A A A A A A A A A A A	
ALL THE PARTY OF T	
	An I WAR I BARAN
Martin a seal front of the	
T-2A 240	T-2A 320
100 M	
E A A A A A A A A A A A A A A A A A A A	
Τ2. Δ 160	1

			Tomoring Data Sheet
Date: September 10, 2010			Photographer: Dorum
Camera: Olym	pus Nikon D80	)	
Photo Point N	<b>Io.</b> : T-2A	Time: 11:40am	Location UTM's (NAD 83): 493618 / 3814677
Weather Conditio	ons:. Sunny and wa	irm.	· ·
View 1	Camera Height:	1 M	Compass Bearing: 240
Photo Subject/Pur	rpose: Vegetatio	on monitoring transect line.	
View 2	Camera Height:	1 M	Compass Bearing: 320
Photo Subject/Pur	rpose: General r	neadow condition.	
View 3	Camera Height:	1 M	Compass Bearing: 160
Photo Subject/Purpose: General meadow condition.			
View 4	Camera Height:		Compass Bearing:
Photo Subject/Purpose:			
Notes:			



T-2A 240



T-2A 320



T-2A 160

			Tolitoring Data Sheet
Date: September 10, 2009			Photographer: Dorum
Camera: Olym	pus Nikon D80		
Photo Point N	<b>o.</b> : T-2A	Time: 10:30am	Location UTM's (NAD 83): 493618 / 3814677
Weather Condition	ns:. Mostly sunny	and calm.	
View 1	Camera Height:	1 M	Compass Bearing: 240
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line.	
View 2	Camera Height:	1 M	Compass Bearing: 320
Photo Subject/Pur	pose: General n	neadow condition.	
View 3	<b>3</b> Camera Height: 1 M		Compass Bearing: 160
Photo Subject/Pur	pose: General n	neadow condition.	
View 4	Camera Height: Compass Bearing:		Compass Bearing:
Photo Subject/Purpose:			
Notes:			



T-2A 240







T-2A 320

			onitorn	
Date: Septemb	er 18, 2008		Photog	grapher: Dorum
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : T-2A	Time:	Loc	cation UTM's (NAD 83): 493618 / 3814677
Weather Condition	ns: Partly cloudy a	and breezy.		
View 1	Camera Height:	1 M	Cor	mpass Bearing: 240
Photo Subject/Pur	pose: Vegetatio	on monitoring transect line.		
View 2	Camera Height:	1 M	Cor	mpass Bearing: 320
Photo Subject/Pur	pose: General n	neadow condition.	<u>.</u>	
View 3	Camera Height: 1 M		Cor	mpass Bearing: 160
Photo Subject/Pur	pose: General n	neadow condition.		
View 4	Camera Height:		Cor	mpass Bearing:
Photo Subject/Purpose:				
Notes:				



T-2A 240



T-2A 160



T-2A 320

		I HOLO I OHH	WIOIIIIOIII	g Data Sheet	
Date: September 18, 2007			Photog	Photographer: Dorum	
Camera: Olym	pus Stylus 400				
Photo Point N	<b>o.</b> : T-2A	Time: 1:00 PM	Loc	ation UTM's (NAD 83): 493618 / 3814677	
Weather Condition	ns: Sunny and bre	ezy.			
View 1	Camera Height:	1 M	Con	npass Bearing: 240	
Photo Subject/Pur	rpose: Vegetatio	on monitoring transect lir	2.		
View 2	Camera Height:	1 M	Con	Compass Bearing: 320	
Photo Subject/Pur	rpose: General 1	meadow condition.			
View 3 Camera Height: 1 M		Con	pass Bearing: 160		
Photo Subject/Put	rpose: General 1	meadow condition.			
View 4	Camera Height:		Con	npass Bearing:	
Photo Subject/Purpose:					
Notes:					









T-2A 320

Date: September 8, 2011 Photographer: Dorum					
Camera: Olympus Nikon D80					
Photo Point No.: T-2B Time: 11:10am			Location UTM's (NAD 83): 493622 / 3814677		
Weather Condition	ons:. Partly cloudy a	nd clam.			
	1				
View 1	Camera Height: 1	М	Compass Bearing: 50		
Photo Subject/Pu	rpose: Vegetation	n monitoring transect line.			
	1				
View 2Camera Height:			Compass Bearing:		
Photo Subject/Pu	rpose:				
	1				
View 3	Camera Height:		Compass Bearing:		
Photo Subject/Pu	rpose:				
View 4	Camera Height:		Compass Bearing:		
Photo Subject/Pu	rpose:				
Notes:					
T2B 50					

		F HOLO F OHI	t Mom			
Date: Septemb	Date: September 10, 2010 Photographer: D. Dorum					
Camera: Olyn	Camera: Olympus Nikon D80					
<b>Photo Point N</b>	No.: T-2B	Time: 11:45am		Location UTM's (NAD 83): 493622 / 3814667		
Weather Condition	ons:. <u>Sunny</u> and wa	rm				
View 1	Camera Height:	1M		Compass Bearing: 50		
Photo Subject/Pu	urpose: Vegetatio	on monitoring transect lin	ne.			
View 2	Camera Height:			Compass Bearing:		
Photo Subject/Pu	arpose:					
View 3	Camera Height:			Compass Bearing:		
Photo Subject/Pu	arpose:					
View 4	Camera Height:			Compass Bearing:		
Photo Subject/Purpose:						
Notes:						





		Flioto Foli	III MOIII	toring Data Sheet
Date: September 10, 2009 Photographer: D. Dorum				otographer: D. Dorum
Camera: Olyr	npus Nikon D80	)		
Photo Point	No.: T-2B	Time: 10:30am		Location UTM's (NAD 83): 493622 / 3814667
Weather Conditi	ions:.	·		
View 1	Camera Height:	1M		Compass Bearing: 50
Photo Subject/P	urpose: Vegetatio	on monitoring transect l	line.	
View 2	Camera Height:			Compass Bearing:
Photo Subject/Pr	urpose:			
View 3	Camera Height:			Compass Bearing:
Photo Subject/Pr	urpose:			
View 4	Camera Height:			Compass Bearing:
Photo Subject/Purpose:				
Notes:				





		FIIOLO FOIIL	VIOII		
Date: September 18, 2008 Photograph				otographer: D. Dorum	
Camera: Olyn	npus Stylus 400				
<b>Photo Point N</b>	No.: T-2B	Time:		Location UTM's (NAD 83): 493622 / 3814667	
Weather Condition	ons: Partly cloudy a	and breezy.			
View 1	Camera Height:	1M		Compass Bearing: 50	
Photo Subject/Pu	rpose: Vegetatio	on monitoring transect line.			
View 2	Camera Height:			Compass Bearing:	
Photo Subject/Pu	irpose:				
View 3	Camera Height:			Compass Bearing:	
Photo Subject/Pu	irpose:				
View 4	Camera Height:			Compass Bearing:	
Photo Subject/Pu	Photo Subject/Purpose:				
Notes:					





		FIIOLO FOIIIL IV	Tolintoring Data Sheet	
Date: September 18, 2007			Photographer: Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	Io.: T-2B	Time:1300	Location UTM's (NAD 83): 493622 / 3814667	
Weather Condition	ons: Sunny and bre	ezy.		
View 1	Camera Height:	1M	Compass Bearing: 50	
Photo Subject/Pu	rpose: Vegetatio	on monitoring transect line.		
View 2	Camera Height:		Compass Bearing:	
Photo Subject/Pu:	rpose:			
View 3	3 Camera Height:		Compass Bearing:	
Photo Subject/Pu	rpose:			
View 4	w 4 Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
Notes:				







Page D-22

			iom	toring Data Sheet
Date: September 10, 2010			Ph	otographer: Dorum
Camera: Olym	pus Nikon D80			
Photo Point N	<b>o.</b> : T-3A	Time: 10:55am		Location UTM's (NAD 83): 493631 / 3814963
Weather Conditio	ns: Sunny with lig	ht wind.		
View 1	Camera Height:	1 <b>M</b>		Compass Bearing: 270
Photo Subject/Pur	pose: Vegetatio	on monitoring transect line.		
View 2	Camera Height:	1M		Compass Bearing: 360
Photo Subject/Pur	pose: General r	neadow condition		
View 3	Camera Height: 1M			Compass Bearing: 90
Photo Subject/Pur	pose: General r	neadow condition		
View 4	4 Camera Height: 1M			Compass Bearing: 180
Photo Subject/Purpose: General meadow condition				
Notes:				







T-3A 90







Page D-23

		1 Hoto 1 Ollit	Wollitoring Data Sheet
Date: September 10, 2009			Photographer: Dorum
Camera: Olym	pus Nikon D80		
Photo Point N	<b>o.</b> : T-3A	Time: 2:00pm	Location UTM's (NAD 83): 493631 / 3814963
Weather Condition	ns:.		
View 1	Camera Height:	1M	Compass Bearing: 270
Photo Subject/Pur	pose: Vegetatio	n monitoring transect lin	e.
View 2	Camera Height:	1M	Compass Bearing: 360
Photo Subject/Pur	pose: General n	neadow condition	
View 3	Camera Height: 1M		Compass Bearing: 90
Photo Subject/Pur	pose: General n	neadow condition	
View 4	Camera Height: 1M		Compass Bearing: 180
Photo Subject/Purpose: General meadow condition			
Notes:			



T-3A 270



T-3A 90





T-3A 180

			Monitoring Data Sheet	
Date: September 18, 2008			Photographer: Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : T-3A	Time: 11:58 am	Location UTM's (NAD 83): 493631 / 3814963	
Weather Condition	ns: Partly cloudy a	and breezy.		
View 1	Camera Height:	1 <b>M</b>	Compass Bearing: 270	
Photo Subject/Pur	rpose: Vegetatio	on monitoring transect line		
View 2	Camera Height:	1 <b>M</b>	Compass Bearing: 360	
Photo Subject/Put	rpose: General r	neadow condition		
View 3	Camera Height: 1M		Compass Bearing: 90	
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height: 1M		Compass Bearing: 180	
Photo Subject/Purpose: General meadow condition				
Notes:				



T-3A 270



T-3A 90









Page D-25

			Monitoring Data Bleet		
Date: September 18, 2007			Photographer: Dorum		
Camera: Olym	pus Stylus 400				
Photo Point N	<b>o.</b> : T-3A	Time: 1215	Location UTM's (NAD 83): 493631 / 3814963		
Weather Conditio	ns: Sunny and wir	idy.			
View 1	Camera Height:	1M	Compass Bearing: 270		
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line	e.		
View 2	Camera Height:	1M	Compass Bearing: 360		
Photo Subject/Pur	Photo Subject/Purpose: General meadow condition				
View 3	Camera Height: 1M		Compass Bearing: 90		
Photo Subject/Purpose: General meadow condition					
View 4	Camera Height:	1M	Compass Bearing: 180		
Photo Subject/Purpose: General meadow condition					
Notes:					



T-3A 270







T-3A 360





Page D-26

Date: September 8, 2011 Photographer: Dorum				
Camera: Olympus Nikon D80				
Photo Point No.: T-3B Time: 10:40am			Location UTM's (NAD 83): 493626 / 3814969	
Weather Conditions:. Partly cloudy and clam.				
View 1	Camera Height:	1 M	Compass Bearing: 90	
Photo Subject/Pur	rpose: Vegetatio	n monitoring transect line	· · · · · · · · · · · · · · · · · · ·	
View 2	Camera Height:	1 M	Compass Bearing:	
Photo Subject/Pur	rpose: General r	neadow condition.		
	-			
View 3	Camera Height:	1 M	Compass Bearing:	
Photo Subject/Pur	rpose: General r	neadow condition.		
View 4	Camera Height:		Compass Bearing:	
Photo Subject/Put	rpose:		contrast contrast.	
	<u> </u>			
Notes:				
110000				
T-3B 90				

		Flioto Follit N	1011	toring Data Sheet		
Date: September 10, 2010				otographer: D. Dorum		
Camera: Olym	pus Nikon D80					
Photo Point N	<b>Io.</b> : T-3B	Time: 11:00am		Location UTM's (NAD 83): 493626 / 3814969		
Weather Condition	ons: Sunny with li	ght wind.				
	1					
View 1	Camera Height:	1M		Compass Bearing: 90		
Photo Subject/Pu	rpose: Vegetatio	on monitoring transect line.				
View 2	Camera Height:			Compass Bearing:		
Photo Subject/Pu	rpose:					
View 3	Camera Height:			Compass Bearing:		
Photo Subject/Pu	Photo Subject/Purpose:					
View 4	Camera Height:			Compass Bearing:		
Photo Subject/Purpose:						
Notes:						



T-3B 90

		FIIOLO FOIL	it mom	
Date: September 10, 2009				otographer: D. Dorum
Camera: Olyn	npus Nikon D80	)		
<b>Photo Point N</b>	No.: T-3B	Time: 10:00am		Location UTM's (NAD 83): 493626 / 3814969
Weather Condition	ons: Mostly sunny	and calm.		
View 1	Camera Height:	1M		Compass Bearing: 90
Photo Subject/Pu	urpose: Vegetatio	on monitoring transect li	ine.	
View 2	Camera Height:			Compass Bearing:
Photo Subject/Pu	arpose:			
View 3	Camera Height:			Compass Bearing:
Photo Subject/Pu	arpose:			
View 4	Camera Height:			Compass Bearing:
Photo Subject/Purpose:				
Notes:				





		FIIOLO FOIIIL M	Tomoring Data Sheet	
Date: September 18, 2008			Photographer: D. Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	Io.: T-3B	Time: 1155	Location UTM's (NAD 83): 493626 / 3814969	
Weather Condition	ons: Partly cloudy a	and breezy		
View 1	Camera Height:	1 <b>M</b>	Compass Bearing: 90	
Photo Subject/Pu	rpose: Vegetatio	on monitoring transect line.		
View 2	Camera Height:		Compass Bearing:	
Photo Subject/Pu:	rpose:			
View 3	Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
View 4	Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
Notes:				



T-3B 90

		1 11010 1 01111	Wollitoring Data Sheet	
Date: September 18, 2007			Photographer: Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	Io.: T-3B	Time: 1217	Location UTM's (NAD 83): 493626 / 3814969	
Weather Condition	ons: Sunny and bre	ezy		
View 1	Camera Height:	1M	Compass Bearing: 90	
Photo Subject/Pu	rpose: Vegetatio	n monitoring transect lin	le.	
View 2	Camera Height:		Compass Bearing:	
Photo Subject/Pu:	rpose:		· · · ·	
View 3	Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
View 4	Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
Notes:				



T-3B 90



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			Tolintoring Data Sheet		
Date: September 10, 2010			Photographer: D. Dorum		
Camera: Olym	pus Nikon D80	)			
Photo Point N	<b>o.</b> : T-4A	Time: 10:20am	Location UTM's (NAD 83): 493684 / 3815279		
Weather Conditio	ns: Sunny and wi	ndy.	•		
View 1	Camera Height:	1 <b>M</b>	Compass Bearing: 270		
Photo Subject/Pur	pose: Vegetatio	on monitoring transect line.			
View 2	Camera Height:	1 <b>M</b>	Compass Bearing: 360		
Photo Subject/Pur	Photo Subject/Purpose: General meadow condition				
View 3	Camera Height: 1M		Compass Bearing: 90		
Photo Subject/Purpose: General meadow condition					
View 4	Camera Height: 1M		Compass Bearing: 180		
Photo Subject/Purpose: General meadow condition					
Notes:					



T-4A 270













Page D-33

			Tomoring Data Sheet	
Date: September 10, 2009			Photographer: D. Dorum	
Camera: Olym	pus Nikon D80			
Photo Point N	<b>o.</b> : T-4A	Time: 9:15am	Location UTM's (NAD 83): 493684 / 3815279	
Weather Conditio	ns: Sunny and cal	m.		
View 1	Camera Height:	1M	Compass Bearing: 270	
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line.		
View 2	Camera Height:	1M	Compass Bearing: 360	
Photo Subject/Purpose: General meadow condition				
View 3	Camera Height: 1M		Compass Bearing: 90	
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height:	1M	Compass Bearing: 180	
Photo Subject/Purpose: General meadow condition				
Notes:				



T-4A 270





T-4A 90

T-4A 360





Page D-34
			1011	toring Data Sheet
Date: September 18, 2008			Ph	otographer: D. Dorum
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : T-4A	Time: 11:15am		Location UTM's (NAD 83): 493684 / 3815279
Weather Conditio	ns: Partly cloudy a	and breezy		
View 1	Camera Height:	1M		Compass Bearing: 270
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line.		
View 2	Camera Height: 1M			Compass Bearing: 360
Photo Subject/Pur	pose: General n	neadow condition		
View 3	Camera Height: 1M			Compass Bearing: 90
Photo Subject/Pur	pose: General n	neadow condition		
View 4	Camera Height: 1M			Compass Bearing: 180
Photo Subject/Purpose: General meadow condition				
Notes:				



T-4A 270







T-4A 360





			Monitoring Data Sheet	
Date: September 18, 2007			Photographer: Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : T-4A	Time: 1130	Location UTM's (NAD 83): 493684 / 3815279	
Weather Conditio	ns: Sunny and bre	ezy		
View 1	Camera Height:	1M	Compass Bearing: 270	
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line		
View 2	Camera Height:	1M	Compass Bearing: 360	
Photo Subject/Pur	pose: General n	neadow condition		
View 3	Camera Height:	1M	Compass Bearing: 90	
Photo Subject/Pur	pose: General n	neadow condition		
View 4	Camera Height:	1M	Compass Bearing: 180	
Photo Subject/Purpose: General meadow condition				
Notes:				



T-4A 270







T-4A 360







Date: Septemb	er 8, 2011	P	notographer: Dorum
Camera: Olym	pus Nikon D80		
Photo Point N	<b>o.</b> : T-4B	Time	Location UTM's (NAD 83): 493664 / 3815276
Weather Condition	ns:. Sunny and cla	m.	
View 1	Camera Height:	1 M	Compass Bearing: 80
Photo Subject/Pu	rpose: Vegetatio	n monitoring transect line.	
View 2	Camera Height:	1 M	Compass Bearing:
Photo Subject/Pu	rpose:		
View 3	Camera Height:	1 M	Compass Bearing:
Photo Subject/Pu	rpose:		·
View 4	Camera Height:		Compass Bearing:
Photo Subject/Pu	rpose:		
	*		
Notes:			
T-4B 80			

-			onitoring Data Sheet	
Date: September 10, 2010			Photographer: D. Dorum	
Camera: Olym	pus Nikon D80			
Photo Point N	<b>o.</b> : T-4B	Time: 10:25am	Location UTM's (NAD 83): 493664 / 3815276	
Weather Conditio	ns: Sunny and wi	ndy.		
View 1	Camera Height:	1 <b>M</b>	Compass Bearing: 80	
Photo Subject/Pur	pose: Vegetatio	on monitoring transect line.		
View 2	Camera Height:		Compass Bearing:	
Photo Subject/Pur	pose:			
View 3	Camera Height:		Compass Bearing:	
Photo Subject/Pur	pose:			
View 4	Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
Notes:				



Date: September 10, 2009			Photographer: D. Dorum	
Camera: Olym	pus Nikon D80			
Photo Point N	<b>o.</b> : T-4B	Time: 9:15am	Location UTM's (NAD 83): 493664 / 3815276	
Weather Conditio	ns: Sunny and cal	lm.		
View 1	Camera Height:	1 <b>M</b>	Compass Bearing: 80	
Photo Subject/Pur	pose: Vegetatio	on monitoring transect line.		
View 2	Camera Height:		Compass Bearing:	
Photo Subject/Pur	pose:			
View 3	Camera Height:		Compass Bearing:	
Photo Subject/Pur	pose:			
View 4	Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
Notes:				



			ionitornig Data Sheet	
Date: September 18, 2008			Photographer: D. Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : T-4B	Time: 11:12am	Location UTM's (NAD 83): 493664 / 3815276	
Weather Conditio	ns: Partly cloudy a	and breezy		
View 1	Camera Height:	1M	Compass Bearing: 80	
Photo Subject/Pur	rpose: Vegetatio	on monitoring transect line.		
View 2	Camera Height:		Compass Bearing:	
Photo Subject/Put	rpose:			
View 3	Camera Height:		Compass Bearing:	
Photo Subject/Put	rpose:			
View 4	Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
Notes:				



		1 HOLO I OHIL		
Date: September 18, 2007			Photographer: Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	Io.: T-4B	Time: 1133	Location UTM's (NAD 83): 493664 / 3815276	
Weather Condition	ons: Sunny and wir	ıdy		
View 1	Camera Height:	1M	Compass Bearing: 80	
Photo Subject/Put	rpose: Vegetatio	n monitoring transect lir	ne.	
View 2	Camera Height:		Compass Bearing:	
Photo Subject/Pur	rpose:			
View 3	Camera Height:		Compass Bearing:	
Photo Subject/Pur	rpose:			
View 4	Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
Notes:				





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			Tomoring Data Sheet
Date: September 10, 2010			Photographer: D. Dorum
Camera: Olym	pus Nikon D80	)	
Photo Point N	<b>o.</b> : T-5A	Time: 9:40am	Location UTM's (NAD 83): 493747 / 3815475
Weather Conditio	ns: Sunny and wir	ndy	·
View 1	Camera Height:	1 <b>M</b>	Compass Bearing: 300
Photo Subject/Pur	pose: Vegetatio	on monitoring transect line.	
View 2	Camera Height:	1 <b>M</b>	Compass Bearing: 30
Photo Subject/Pur	pose: General r	neadow condition	
View 3	Camera Height: 1M		Compass Bearing: 120
Photo Subject/Pur	pose: General r	neadow condition	
View 4	Camera Height:	1M	Compass Bearing: 210
Photo Subject/Purpose: General meadow condition			
Notes:			



T-5A 300





T-5A 120

T-5A 30





			Nonitoring Data Sheet	
Date: September 10, 2009			Photographer: D. Dorum	
Camera: Olym	pus Nikon D80			
Photo Point N	<b>o.</b> : T-5A	Time:	Location UTM's (NAD 83): 493747 / 3815475	
Weather Conditio	ns:			
View 1	Camera Height:	1M	Compass Bearing: 300	
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line.		
View 2	Camera Height:	1M	Compass Bearing: 30	
Photo Subject/Pur	pose: General n	neadow condition		
View 3	Camera Height:	1M	Compass Bearing: 120	
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height:	1M	Compass Bearing: 210	
Photo Subject/Purpose: General meadow condition				
Notes:				



T-5A 300







T-5A 30





			IOIII	toring Data Sheet	
Date: September 18, 2008			Ph	otographer: D. Dorum	
Camera: Olym	pus Stylus 400				
Photo Point N	<b>o.</b> : T-5A	Time: 10:43am		Location UTM's (NAD 83): 493747 / 3815475	
Weather Conditio	ns: Partly cloudy a	and breezy			
View 1	Camera Height:	1 <b>M</b>		Compass Bearing: 300	
Photo Subject/Pur	pose: Vegetatio	on monitoring transect line.			
View 2	Camera Height: 1M			Compass Bearing: 30	
Photo Subject/Pur	pose: General r	neadow condition			
View 3	Camera Height: 1M			Compass Bearing: 120	
Photo Subject/Purpose: General meadow condition					
View 4	Camera Height: 1M			Compass Bearing: 210	
Photo Subject/Purpose: General meadow condition					
Notes:					



T-5A 300



T-5A 120



T-5A 30





			Monitoring Data Sheet	
Date: September 18, 2007			Photographer: Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : T-5A	Time: 1035	Location UTM's (NAD 83): 493747 / 3815475	
Weather Conditio	ns: Sunny and bre	ezy	· · · ·	
View 1	Camera Height:	1M	Compass Bearing: 300	
Photo Subject/Pur	pose: Vegetatio	n monitoring transect line		
View 2	Camera Height:	1M	Compass Bearing: 30	
Photo Subject/Pur	pose: General n	neadow condition		
View 3	Camera Height:	1M	Compass Bearing: 120	
Photo Subject/Pur	pose: General n	neadow condition		
View 4	Camera Height:	1M	Compass Bearing: 210	
Photo Subject/Purpose: General meadow condition				
Notes:				



T-5A 300



T-5A 120



T-5A 30







Date: Septemb	er 8, 2011		Photographer: Dorum
Camera: Olym	pus Nikon D80		
Photo Point N	<b>o.</b> : T-5B	Time: 9:10am	Location UTM's (NAD 83): 493728 / 3815495
Weather Conditio	ns:. Sunny and cla	m.	
View 1	Camera Height:	1 M	Compass Bearing: 120
Photo Subject/Pu	pose: Vegetatio	n monitoring transect line.	
	~		
View 2	Camera Height:	1 M	Compass Bearing:
Photo Subject/Pu	pose:		
X77 0			
View 3	Camera Height:	I M	Compass Bearing:
Photo Subject/Pu	pose:		
View 4	Camera Height:		Compass Bearing:
Photo Subject/Pu	pose:		
Notes:			
T-5B 120			

		Photo Point M	onitoring Data Sheet
Date: September 10, 2010			Photographer: D. Dorum
Camera: Olym	pus		
Photo Point N	<b>o.</b> : T-5B	Time: 9:45am	Location UTM's (NAD 83): 493728 / 3815495
Weather Conditio	ns:		
View 1	Camera Height:	1M	Compass Bearing: 120
Photo Subject/Pur	rpose: Vegetatio	n monitoring transect line.	
View 2	Camera Height:		Compass Bearing:
Photo Subject/Pur	rpose:		
View 3	Camera Height:		Compass Bearing:
Photo Subject/Put	rpose:		
View 4	Camera Height:		Compass Bearing:
Photo Subject/Purpose:			
Notes:			



T-5B 120

		F HOLO F OHIL IV	Tomtoring Data Sheet
Date: September 10, 2009			Photographer: D. Dorum
Camera: Olyn	npus		
Photo Point N	No.: T-5B	Time:	Location UTM's (NAD 83): 493728 / 3815495
Weather Condition	ons:		·
View 1	Camera Height:	1 <b>M</b>	Compass Bearing: 120
Photo Subject/Pu	rpose: Vegetatio	on monitoring transect line.	
View 2	Camera Height:		Compass Bearing:
Photo Subject/Pu	irpose:		· ·
View 3	Camera Height:		Compass Bearing:
Photo Subject/Pu	irpose:		·
View 4	Camera Height:		Compass Bearing:
Photo Subject/Purpose:			
Notes: Photo	o missing.		
	<u> </u>		

		1 11010 1 01111	Monitoring Data Sheet		
Date: September 18, 2008			Photographer: D. Dorum		
Camera: Olym	Camera: Olympus Stylus 400				
Photo Point N	Io.: T-5B	Time: 10:44am	Location UTM's (NAD 83): 493728 / 3815495		
Weather Conditio	ons: Mostly sunny	and breezy	· · ·		
View 1	Camera Height:	1 <b>M</b>	Compass Bearing: 120		
Photo Subject/Pur	rpose: Vegetatio	on monitoring transect lin	e.		
View 2	Camera Height:		Compass Bearing:		
Photo Subject/Pur	rpose:				
View 3	Camera Height:		Compass Bearing:		
Photo Subject/Pur	rpose:				
View 4	Camera Height:		Compass Bearing:		
Photo Subject/Purpose:					
Notes:					



T-5B 120

Date: September 18, 2007			Photographer: Dorum
Camera: Olym	pus Stylus 400		
Photo Point N	lo.: T-5B	Time: 1040	Location UTM's (NAD 83): 493728 / 3815495
Weather Conditio	ons:		
View 1	Camera Height:	1M	Compass Bearing: 120
Photo Subject/Pu	rpose: Vegetatio	on monitoring transect line	, ,
View 2	Camera Height:		Compass Bearing:
Photo Subject/Pur	rpose:		· · · ·
View 3	Camera Height:		Compass Bearing:
Photo Subject/Pur	rpose:		
View 4	Camera Height:		Compass Bearing:
Photo Subject/Purpose:			
Notes:			



T-5B 120

	1 11010 1 01111	. Wollitoring Data Sheet			
Date: September 15, 2011 Photographer: Dorum					
Camera: Olympus Nikon D80					
Photo Point No.: 1931 Time: 8:24am Location UTM's (NAD 83): 493736 / 3814528					
Weather Condition	Weather Conditions:. Cloudy and occasional rain.				
View 1	Camera Height: 1 M	Compass Bearing:			
Photo Subject/Pu	rpose: General meadow condition.				
View 2	Camera Height: 1 M	Compass Bearing:			
Photo Subject/Pu	rpose:				
·	<u>^</u>				
View 3	Camera Height: 1 M	Compass Bearing:			
Photo Subject/Pu	rpose:	1 0			
j	1				
View 4	Camera Height:	Compass Bearing			
Photo Subject/Pu	rnose.	compuss bouring.			
Thoto Subject Tu	10000				
Notes:					
Notes.					

Thoto Tohit Monitoring Data Sheet				
Date: September 10, 2010			Photographer: D. Dorum	
Camera: Olym	pus Nikon D80			
Photo Point N	<b>o.</b> : 1931	Time: 4:50pm	Location UTM's (NAD 83): 493736 / 3814528	
Weather Conditio	ns:			
View 1	Camera Height:	1M	Compass Bearing: 200	
Photo Subject/Pur	rpose: General r	neadow condition		
View 2	Camera Height:		Compass Bearing:	
Photo Subject/Pur	rpose:			
View 3	Camera Height:		Compass Bearing:	
Photo Subject/Pur	rpose:			
View 4	4 Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
Notes: Marke	er stake not four	nd.		



Those Tome Monitoring Data Sheet					
Date: September 10, 2009			Photographer: D. Dorum		
Camera: Olym	Camera: Olympus Nikon D80				
Photo Point N	<b>o.</b> : 1931	Time:	Location UTM's (NAD 83): 493736 / 3814528		
Weather Conditio	ons:				
View 1	Camera Height:	1 <b>M</b>	Compass Bearing: 200		
Photo Subject/Pur	rpose: General r	neadow condition			
View 2	Camera Height:		Compass Bearing:		
Photo Subject/Pur	rpose:				
View 3	Camera Height:		Compass Bearing:		
Photo Subject/Put	rpose:				
View 4	<b>Tiew 4</b> Camera Height:		Compass Bearing:		
Photo Subject/Purpose:					
Notes: Marke	er stake not four	nd.			



		I noto I onit I			
Date: September 18, 2008 Photographer: D. Dorum					
Camera: Olympus Stylus 400					
Photo Point N	<b>o.</b> : 1931	Time: 1:24pm	Location UTM's (NAD 83): 493736 / 3814528		
Weather Conditio	ns: Partly cloudy a	and breezy			
*** 4					
View 1	Camera Height:	1M	Compass Bearing: 200		
Photo Subject/Pur	pose: General r	neadow condition			
×7. 0					
View 2	Camera Height:		Compass Bearing:		
Photo Subject/Pur	pose:				
Vien 2	Comoro Hoight		Commerce Descriptor		
VIEW 3	Camera Height:		Compass Bearing:		
Photo Subject/Pur	pose:				
Viow A	Camera Height		Compass Bearing.		
Photo Subject/Pur	pose:		Compass Dearing.		
Thoto Buojeet/Ta	pose.				
Notes: Marke	er stake not four	nd.			

		FIIOLO FC	Sint Monitoring Data Sheet		
Date: September 18, 2007			Photographer: Dorum		
Camera: Olympus Stylus 400					
<b>Photo Point</b>	<b>No.</b> : 1931	Time: 1350	Location UTM's (NAD 83): 493736 / 3814528		
Weather Condi	tions: Sunny and wir	ndy	·		
View 1	Camera Height:	1 <b>M</b>	Compass Bearing: 200		
Photo Subject/I	Purpose: General r	neadow condition			
View 2	Camera Height:		Compass Bearing:		
Photo Subject/I	Purpose:		•		
View 3	Camera Height:		Compass Bearing:		
Photo Subject/I	Purpose:		·		
View 4	Camera Height:		Compass Bearing:		
Photo Subject/Purpose:					
Notes:					



Photo Point Monitoring Data Sheet			
Date: September 15, 2011 Ph			hotographer: Dorum
Camera: Olympus Nikon D80			
Photo Point No.: B-1 Time: 8:32am			Location UTM's (NAD 83): 493689 / 3814439
Weather Conditio	ns:. Cloudy, with	light drizzle.	
View 1	Camera Height:	1 M	Compass Bearing: 160
Photo Subject/Pur	rpose: Vegetatio	n monitoring transect line.	
· ·	·		
View 2	Camera Height:	1 M	Compass Bearing: 105
Photo Subject/Pur	rpose:		
	1		
View 3	Camera Height	1 M	Compass Bearing: 40
Photo Subject/Pu	mose.	1 1/1	Compass Doaring. To
Thoto Subject Tu	19030.		
View 4	Comoro Hoight		Compass Passing
VIEW 4 Dhoto Subject/Dur			Compass Bearing.
Photo Subject/Ful	ipose.		
notes:			
B-1 160			<image/>
B-1 40			

		Flioto Follit I	Monitoring Data Sheet	
Date: September 10, 2010			Photographer: Dorum	
Camera: Olym	pus Nikon D80			
Photo Point N	I <b>o.</b> : B-1	Time: 5:00pm	Location UTM's (NAD 83): 493689 / 3814439	
Weather Condition	ons: Sunny.		·	
View 1	Camera Height:	1 M	Compass Bearing: 160	
Photo Subject/Pur	rpose: Bank con	dition monitoring		
View 2	Camera Height:	1 M	Compass Bearing: 105	
Photo Subject/Put	rpose: General r	neadow condition		
View 3	Camera Height:	1 M	Compass Bearing: 40	
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				
_				

# Notes: Large Ponderosa pine tree had fallen directly onto marker stake prior to fence construction. Stake could not be located and appears to be underneath large immovable log.



B-1 160





Thoto Tohit Wolntornig Data Sheet				
Date: September 10, 2009			Photographer: Dorum	
Camera: Olym	pus Nikon D80	1		
Photo Point N	<b>o.</b> : B-1	Time: 1:45pm	Location UTM's (NAD 83): 493689 / 3814439	
Weather Conditio	ns: Mostly cloudy	and calm.		
View 1	Camera Height:	1 M	Compass Bearing: 160	
Photo Subject/Put	rpose: Bank con	dition monitoring		
View 2	Camera Height:	1 M	Compass Bearing: 105	
Photo Subject/Pur	rpose: General r	neadow condition		
View 3	Camera Height: 1 M		Compass Bearing: 40	
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height:		Compass Bearing:	
Photo Subject/Purpose:				

# Notes: Large Ponderosa pine tree had fallen directly onto marker stake prior to fence construction. Stake could not be located and appears to be underneath large immovable log.





B-1 160





			Tomtornig Data Sheet		
Date: September 18, 2008			Photographer: Dorum		
Camera: Olym	pus Stylus 400				
Photo Point N	o.: B-1	Time: 2:05pm	Location UTM's (NAD 83): 493689 / 3814439		
Weather Conditio	ns: Partly cloudy a	and breezy	·		
View 1	Camera Height:	1 M	Compass Bearing: 160		
Photo Subject/Pur	pose: Bank con	dition monitoring			
View 2	Camera Height: 1 M Compass Bearing: 105				
Photo Subject/Pur	pose: General r	neadow condition			
View 3	Camera Height: 1 M		Compass Bearing: 40		
Photo Subject/Purpose: General meadow condition					
View 4	Camera Height: Compass Bearing:		Compass Bearing:		
Photo Subject/Purpose:					

## Notes: Large Ponderosa pine tree had fallen directly onto marker stake prior to fence construction. Stake could not be located and appears to be underneath large immovable log.









		1 11010 1 0		oning Data Sheet	
Date: September 18, 2007			Pho	otographer: Dorum	
Camera: Olympus St	ylus 400				
Photo Point No.: B-	1	Time: 1405		Location UTM's (NAD 83): 493689 / 3814439	
Weather Conditions: Sun	ny and bre	ezy			
View 1 Came	ra Height:	1 M		Compass Bearing: 160	
Photo Subject/Purpose:	Bank trea	tment baseline			
View 2 Came	ra Height:	1 M		Compass Bearing: 105	
Photo Subject/Purpose:	General n	neadow condition			
View 3 Came	Camera Height: 1 M			Compass Bearing: 40	
Photo Subject/Purpose: General meadow condition					
View 4 Came	Camera Height:			Compass Bearing:	
Photo Subject/Purpose:					
Notes:					









B-1 105

		I HOLO F UIII					
Date: Septem	Date: September 8, 2011Photographer: Dorum						
Camera: Olyr	npus Nikon D8(	)					
<b>Photo Point</b>	No.: B-2	Time: 11:37am	Location UTM's (NAD 83): 493650 / 3814562				
Weather Condition	Weather Conditions:. Partly cloudy and clam.						
View 1	Camera Height:	1 M	Compass Bearing:140				
Photo Subject/P	urpose: Vegetatio	on monitoring transect lin	ne.				
View 2	Camera Height:	1 M	Compass Bearing: 230				
Photo Subject/P	urpose:						
View 3	Camera Height:	1 M	Compass Bearing: 320				
Photo Subject/P	urpose:						
View 4	Camera Height:		Compass Bearing: 50				
Photo Subject/P	urpose:						
	1						
Notes:							
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B-2 140			B-2 230				
<b>D-2</b> 140		× *					
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		2 V					
B-2 320			B-2 50				

		F HOLO F OH	Monitoring	, Data Sheet	
Date: September 10, 2010			Photogr	apher: D. Dorum	
Camera: Olym	pus Nikon D80	)			
Photo Point N	<b>o.</b> : B-2	Time: 4:40pm	Loca	ion UTM's (NAD 83): 493650 / 3814562	
Weather Conditio	ns: Sunny.				
View 1	Camera Height:	1 M	Com	bass Bearing: 140	
Photo Subject/Pur	rpose: Bank con	dition monitoring.			
View 2	Camera Height:	1 M	Com	bass Bearing: 230	
Photo Subject/Pur	rpose: General r	neadow condition			
View 3	Camera Height: 1 M		Com	bass Bearing: 320	
Photo Subject/Pur	Photo Subject/Purpose: General meadow condition				
View 4	Camera Height: 1 M Compass Bearing: 50				
Photo Subject/Purpose: General meadow condition					
Notes:					



B-2 140





B-2 230



B-2 50

		1 11010 1 011		Intoring Data Sheet	
Date: September 10, 2009			Р	hotographer: D. Dorum	
Camera: Olym	pus Nikon D80				
Photo Point N	<b>o.</b> : B-2	Time: 11:00am		Location UTM's (NAD 83): 493650 / 3814562	
Weather Conditio	ns: Mostly sunny	and calm.			
	•				
View 1	Camera Height:	1 M		Compass Bearing: 140	
Photo Subject/Pur	rpose: Bank con	dition monitoring			
View 2	Camera Height: 1 M Compass J		Compass Bearing: 230		
Photo Subject/Pur	rpose: General r	neadow condition			
View 3	Camera Height: 1 M			Compass Bearing: 320	
Photo Subject/Purpose: General meadow condition					
View 4	Camera Height: 1 M			Compass Bearing: 50	
Photo Subject/Purpose: General meadow condition					
Notes:					





B-2 140







Page D-64

B-2 320

Photographer: D. Dorum					
Dem Location UTM's (NAD 83): 493650 / 3814562					
Compass Bearing: 140					
ring					
Compass Bearing: 230					
tion					
Compass Bearing: 320					
Photo Subject/Purpose: General meadow condition					
Compass Bearing: 50					
Photo Subject/Purpose: General meadow condition					
Notes:					



B-2 140







B-2 230





		I HOLO I OHH	, Montoring Data Sheet	
Date: September 18, 2007			Photographer: Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : B-2	Time: 1340	Location UTM's (NAD 83): 493650 / 3814562	
Weather Conditio	ns: Sunny and bre	eezy		
View 1	Camera Height:	1 M	Compass Bearing: 140	
Photo Subject/Pur	pose: Baseline	for bank treatment		
View 2	Camera Height:	1 M	Compass Bearing: 230	
Photo Subject/Pur	pose: General 1	meadow condition		
View 3	Camera Height: 1 M		Compass Bearing: 320	
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height: 1 M		Compass Bearing: 50	
Photo Subject/Purpose: General meadow condition				
Notes:				



B-2 140







B-2 230







		1 11010 1 011		
Date: September 10, 2010			Photographer: Dorum	
Camera: Olym	pus Nikon D80	1		
Photo Point N	<b>o.</b> : B-3	Time: 4:35pm	Location UTM's (NAD 83): 493630 / 3814578	
Weather Conditio	ns: Sunny.		· · ·	
View 1	Camera Height:	1 M	Compass Bearing: 160	
Photo Subject/Pur	rpose: Bank con	dition monitoring		
View 2	Camera Height:	1 M	Compass Bearing: 250	
Photo Subject/Pur	rpose: General r	neadow condition		
View 3	Camera Height: 1 M		Compass Bearing: 340	
Photo Subject/Pur	rpose: General r	neadow condition		
View 4	Camera Height: 1 M Compass Bearing: 70			
Photo Subject/Purpose: General meadow condition				
Notes:				



B-3 160





B-3 250





B-3 70 Page D-68

		1 11010 1 0111	t Montoring Data Sheet	
Date: September 10, 2009			Photographer: Dorum	
Camera: Olym	pus Nikon D80	)		
Photo Point N	Io.: B-3	Time: 10:55am	Location UTM's (NAD 83): 493630 / 3814578	
Weather Condition	ons: Mostly sunny	and calm.		
View 1	Camera Height:	1 M	Compass Bearing: 160	
Photo Subject/Put	rpose: Bank con	dition monitoring		
View 2	Camera Height:	1 M	Compass Bearing: 250	
Photo Subject/Put	rpose: General r	neadow condition		
View 3	Camera Height: 1 M		Compass Bearing: 340	
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height: 1 M Compass Bearing: 70			
Photo Subject/Purpose: General meadow condition				
Notes:				









B-3 340

B-3 250



B-3 70

		1 11010 1 011	In MION	Horing Data Sheet
Date: September 18, 2008			Pł	notographer: Dorum
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : B-3	Time: 1:10pm		Location UTM's (NAD 83): 493630 / 3814578
Weather Conditio	ns: Partly cloudy a	and breezy		
View 1	Camera Height:	1 M		Compass Bearing: 160
Photo Subject/Pur	pose: Bank con	dition monitoring		
View 2	Camera Height:	1 M		Compass Bearing: 250
Photo Subject/Pur	pose: General r	neadow condition		
View 3	Camera Height: 1 M			Compass Bearing: 340
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height: 1 M			Compass Bearing: 70
Photo Subject/Purpose: General meadow condition				
Notes:				



B-3 160



B-3 340






		1 11010 1	Unit Womforing Data Sheet	
Date: September 18, 2007			Photographer: Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : B-3	Time: 1330	Location UTM's (NAD 83): 493630 / 3814578	
Weather Conditio	ns: Sunny and bre	ezy		
View 1	Camera Height:	1 M	Compass Bearing: 160	
Photo Subject/Pur	pose: Baseline	for bank treatment		
View 2	Camera Height:	1 M	Compass Bearing: 250	
Photo Subject/Pur	pose: General r	neadow condition		
View 3	Camera Height:	1 M	Compass Bearing: 340	
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height:	1 M	Compass Bearing: 70	
Photo Subject/Purpose: General meadow condition				
Notes:				



B-3 160







B-3 250







			Intoring Data Sheet			
Date: September 8, 2011 Photographer: Dorum						
Camera: Olym	Camera: Olympus Nikon D80					
Photo Point N	<b>Io.</b> : B-4	Time: 11:20am	Location UTM's (NAD 83): 493609 / 3814710			
Weather Condition	ons:. Partly cloudy	and clam.				
	-					
View 1	Camera Height:	1 M	Compass Bearing:130			
Photo Subject/Pu	rpose: Vegetatio	n monitoring transect line.				
View 2	Camera Height:	1 M	Compass Bearing: 220			
Photo Subject/Pu	rpose:					
View 3	Camera Height:	1 M	Compass Bearing: 360			
Photo Subject/Pu	rpose:					
View 4	Camera Height:		Compass Bearing: 60			
Photo Subject/Pu	rpose:					
Notes:	*					
B-4 130			B-4 220			
B-4 360			B-4 60			

		1 HOLO I OHIL	Monitoring Data Sheet		
Date: September 10, 2010			Photographer: D. Dorum		
Camera: Olym	pus Nikon D80				
Photo Point N	<b>o.</b> : B-4	Time: 11:30am	Location UTM's (NAD 83): 493609 / 3814710		
Weather Conditio	ns: Sunny and cal	lm.			
View 1	Camera Height:	1 M	Compass Bearing: 130		
Photo Subject/Pur	rpose: Bank con	dition monitoring			
View 2	Camera Height:	1 M	Compass Bearing: 220		
Photo Subject/Pur	rpose: General r	neadow condition			
View 3	Camera Height: 1 M		Compass Bearing: 360		
Photo Subject/Pur	Photo Subject/Purpose: General meadow condition				
View 4	Camera Height:	1 M	Compass Bearing: 60		
Photo Subject/Purpose: General meadow condition					
Notes:	Notes:				















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		1 HOLO I OHHL	WIOI	Itomg Data Sheet	
Date: September 10, 2009			P	hotographer: D. Dorum	
Camera: Olym	pus Nikon D80	)			
Photo Point N	<b>o.</b> : B-4	Time: 10:30am		Location UTM's (NAD 83): 493609 / 3814710	
Weather Conditio	ns: Mostly sunny	and calm.			
View 1	Camera Height:	1 M		Compass Bearing: 130	
Photo Subject/Pur	pose: Bank con	dition monitoring			
View 2	Camera Height:	1 M		Compass Bearing: 220	
Photo Subject/Pur	pose: General r	neadow condition			
View 3	Camera Height: 1 M			Compass Bearing: 360	
Photo Subject/Pur	Photo Subject/Purpose: General meadow condition				
View 4	Camera Height: 1 M			Compass Bearing: 60	
Photo Subject/Purpose: General meadow condition					
Notes:					





B-4 130





B-4 220





		1 11010 1 0111		normg Data Sheet
Date: September 18, 2008			Pł	otographer: D. Dorum
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : B-4	Time: 12:20pm		Location UTM's (NAD 83): 493609 / 3814710
Weather Conditio	ns: Partly cloudy a	and breezy		
View 1	Camera Height:	1 M		Compass Bearing: 130
Photo Subject/Pur	pose: Bank con	dition monitoring		
View 2	Camera Height:	1 M		Compass Bearing: 220
Photo Subject/Pur	pose: General r	neadow condition		
View 3	Camera Height: 1 M			Compass Bearing: 360
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height: 1 M			Compass Bearing: 60
Photo Subject/Purpose: General meadow condition				
Notes:				



B-4 130



B-4 360



B-4 220





		I HOLO I OHH	WIOII	Toring Data Sheet
Date: September 18, 2007			Ph	otographer: Dorum
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : B-4	Time: 1250		Location UTM's (NAD 83): 493609 / 3814710
Weather Conditio	ns: Sunny and bre	ezy		
View 1	Camera Height:	1 M		Compass Bearing: 130
Photo Subject/Pur	pose: Baseline	for bank treatment		
View 2	Camera Height:	1 M		Compass Bearing: 220
Photo Subject/Pur	pose: General r	neadow condition		
View 3	Camera Height: 1 M			Compass Bearing: 360
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height: 1 M			Compass Bearing: 60
Photo Subject/Purpose: General meadow condition				
Notes:				



B-4 130







B-4 220





		1 11010 1 01111	i Wollitoring Duta Sheet			
Date: September 8, 2011Photographer: Dorum						
Camera: Olyn	Camera: Olympus Nikon D80					
Photo Point N	No.: B-5	Time: 10:29am	Location UTM's (NAD 83): 493615 / 3815022			
Weather Condition	ons:. Partly cloudy	and clam.				
View 1	Camera Height:	1 M	Compass Bearing:190			
Photo Subject/Pu	rpose: Vegetatio	on monitoring transect lir	1e.			
View 2	Camera Height:	1 M	Compass Bearing: 280			
Photo Subject/Pu	rpose:					
View 3	Camera Height:	1 M	Compass Bearing: 10			
Photo Subject/Pu	irpose:					
5	1					
View 4	Camera Height:		Compass Bearing: 100			
Photo Subject/Pu	rpose:					
Notes:	I					
B-5 190			B-5 280			
B-5 10			$ = \frac{1}{100} $			

Page D-77

		I HOLO I OHHL			
Date: September 10, 2010			Photographer: D. Dorum		
Camera: Olym	pus Nikon D80	)			
Photo Point N	Io.: B-5	Time:	Location UTM's (NAD 83): 493615 / 3815022		
Weather Conditio	ons: Sunny and cal	m.			
View 1	Camera Height:	1 M	Compass Bearing: 190		
Photo Subject/Pur	rpose: Bank con	dition monitoring			
View 2	Camera Height:	1 M	Compass Bearing: 280		
Photo Subject/Pur	rpose: General r	neadow condition			
View 3	Camera Height: 1 M		Compass Bearing: 10		
Photo Subject/Pur	Photo Subject/Purpose: General meadow condition				
View 4	Camera Height:	1 M	Compass Bearing: 100		
Photo Subject/Purpose: General meadow condition					
Notes:					



B-5 190



B-5 280







B-5 100

		1 11010 1 01	nt Monitoring Data Sheet
Date: September 10, 2009			Photographer: D. Dorum
Camera: Olym	pus Nikon D80		
Photo Point N	<b>o.</b> : B-5	Time: 9:55am	Location UTM's (NAD 83): 493615 / 3815022
Weather Conditio	ons: Sunny and cal	lm.	
View 1	Camera Height:	1 M	Compass Bearing: 190
Photo Subject/Pur	rpose: Bank con	dition monitoring	
View 2	Camera Height:	1 M	Compass Bearing: 280
Photo Subject/Pur	rpose: General r	neadow condition	
View 3	Camera Height:	1 M	Compass Bearing: 10
Photo Subject/Pur	rpose: General r	neadow condition	
View 4	Camera Height:	1 M	Compass Bearing: 100
Photo Subject/Purpose: General meadow condition			
Notes:			





B-5 190







			Monitoring Data Sheet	
Date: September 18, 2008			Photographer: D. Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	o.: B-5	Time: 11:40am	Location UTM's (NAD 83): 493615 / 3815022	
Weather Conditio	ns: Partly cloudy a	and breezy		
View 1	Camera Height:	1 M	Compass Bearing: 190	
Photo Subject/Pur	pose: Bank con	dition monitoring		
View 2	Camera Height:	1 M	Compass Bearing: 280	
Photo Subject/Pur	pose: General n	neadow condition		
View 3	Camera Height:	1 M	Compass Bearing: 10	
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height:	1 M	Compass Bearing: 100	
Photo Subject/Purpose: General meadow condition				
Notes:				



B-5 190













		1 11010 1	Shit Wohltoring Data Sheet	
Date: September 18, 2007			Photographer: Dorum	
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : B-5	Time: 1200	Location UTM's (NAD 83): 493615 / 3815022	
Weather Conditio	ns: Sunny and wir	ndy		
View 1	Camera Height:	1 M	Compass Bearing: 190	
Photo Subject/Pur	rpose: Baseline	for bank treatment		
View 2	Camera Height:	1 M	Compass Bearing: 280	
Photo Subject/Pur	rpose: General r	neadow condition		
View 3	Camera Height:	1 M	Compass Bearing: 10	
Photo Subject/Purpose: General meadow condition				
View 4	Camera Height:	1 M	Compass Bearing: 100	
Photo Subject/Purpose: General meadow condition				
Notes:				



B-5 190







B-5 280







			Intoring Data Sheet		
Date: September 8, 2011 Photographer: Dorum					
Camera: Olympus Nikon D80					
Photo Point N	I <b>o.</b> : B-6	Time: 9:00am	Location UTM's (NAD 83): 493776 / 3815540		
Weather Condition	ons:. Sunny and cla	.m.			
View 1	Camera Height:	1 M	Compass Bearing: 180		
Photo Subject/Pu	rpose: Vegetatio	n monitoring transect line.			
View 2	Camera Height:	1 M	Compass Bearing: 270		
Photo Subject/Pu	rpose:				
View 3	Camera Height:	1 M	Compass Bearing: 360		
Photo Subject/Pu	rpose:		-		
View 4	Camera Height:	1M	Compass Bearing: 90		
Photo Subject/Pu	rpose:				
Notes:					
B-6 180			B-6 270		
B-6 360			B-6 90		

			Jointoning Data Sheet
Date: Septemb	er 10, 2010		Photographer: D. Dorum
Camera: Olym	pus Nikon D80		
Photo Point N	<b>o.</b> : B-6	Time:	Location UTM's (NAD 83): 493776 / 3815540
Weather Conditio	ns: Sunny and cal	m.	
View 1	Camera Height:	1 M	Compass Bearing: 180
Photo Subject/Pur	rpose: Bank con	dition monitoring	
View 2	Camera Height:	1 M	Compass Bearing: 270
Photo Subject/Pur	rpose: General n	neadow condition	
View 3	Camera Height:	1 M	Compass Bearing: 360
Photo Subject/Pur	rpose: General n	neadow condition	
View 4	Camera Height:	1 M	Compass Bearing: 90
Photo Subject/Pur	rpose: General n	neadow condition	
Notes:			



B-6 180





B-6 270





B-6 90

		1 11010 1 011	In Monitoring Data Sheet
Date: Septemb	er 10, 2009		Photographer: D. Dorum
Camera: Olym	pus Nikon D80		
Photo Point N	<b>o.</b> : B-6	Time: 8:40am	Location UTM's (NAD 83): 493776 / 3815540
Weather Conditio	ns: Sunny and cal	m.	
View 1	Camera Height:	1 M	Compass Bearing: 180
Photo Subject/Pur	pose: Bank con	dition monitoring	
View 2	Camera Height:	1 M	Compass Bearing: 270
Photo Subject/Pur	pose: General r	neadow condition	
View 3	Camera Height:	1 M	Compass Bearing: 360
Photo Subject/Pur	pose: General r	neadow condition	
View 4	Camera Height:	1 M	Compass Bearing: 90
Photo Subject/Pur	pose: General r	neadow condition	
Notes:			





B-6 180







B-6 90

		I HOLO I OHH	WION	ntoring Data Sheet
Date: Septemb	er 18, 2008		P	notographer: D. Dorum
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : B-6	Time: 10:35am		Location UTM's (NAD 83): 493776 / 3815540
Weather Conditio	ns: Partly cloudy a	and breezy		·
View 1	Camera Height:	1 M		Compass Bearing: 180
Photo Subject/Pur	rpose: Bank con	dition monitoring		
View 2	Camera Height:	1 M		Compass Bearing: 270
Photo Subject/Pur	rpose: General r	neadow condition		
View 3	Camera Height:	1 M		Compass Bearing: 360
Photo Subject/Pur	rpose: General r	neadow condition		
View 4	Camera Height:	1 M		Compass Bearing: 90
Photo Subject/Pur	rpose: General r	neadow condition		
Notes:				



B-6 180



B-6 360



B-6 270



B-6 90

		I HOLO I OHH		
Date: Septemb	er 18, 2007		Pł	notographer: Dorum
Camera: Olym	pus Stylus 400			
Photo Point N	<b>o.</b> : B-6	Time: 1030		Location UTM's (NAD 83): 493776 / 3815540
Weather Conditio	ns: Breezy and wi	ndy		
View 1	Camera Height:	1 M		Compass Bearing: 180
Photo Subject/Pur	rpose: Baseline	for bank treatment		
View 2	Camera Height:	1 M		Compass Bearing: 270
Photo Subject/Pur	rpose: General r	neadow condition		
View 3	Camera Height:	1 M		Compass Bearing: 360
Photo Subject/Pur	rpose: General r	neadow condition		
View 4	Camera Height:	1 M		Compass Bearing: 90
Photo Subject/Pur	rpose: General r	neadow condition		
Notes:				



B-6 180







B-6 270





		1 11010 1 01110 1010	
Date: Septemb	ber 8, 2011	P	hotographer: Dorum
Camera: Olyn	pus Nikon D80		
Photo Point N	<b>Io.</b> : B-7	Time: 8:55am	Location UTM's (NAD 83): 493802 / 3815597
Weather Condition	ons:.		
View 1	Camera Height:	1 M	Compass Bearing: 210
Photo Subject/Pu	rpose: Vegetatio	n monitoring transect line.	
View 2	Camera Height:	1 M	Compass Bearing: 300
Photo Subject/Pu	rpose:		
	1		
View 3	Camera Height:	1 M	Compass Bearing: 30
Photo Subject/Pu	rpose:		
View 4	Camera Height:		Compass Bearing: 120
Photo Subject/Pu	rpose:		
Notes:			
B-7 210			B-7 300
B-7 30			<image/>

		1 11010 1 0111	
Date: Septemb	er 10, 2010		Photographer: Dorum
Camera: Olym	pus Nikon D80	)	
Photo Point N	I <b>o.</b> : B-7	Time: 9:25am	Location UTM's (NAD 83): 493802 / 3815597
Weather Condition	ons:		
View 1	Camera Height:	1 M	Compass Bearing: 210
Photo Subject/Put	rpose: Bank con	dition monitoring	
View 2	Camera Height:	1 M	Compass Bearing: 300
Photo Subject/Put	rpose: General r	neadow condition	
View 3	Camera Height:	1 M	Compass Bearing: 30
Photo Subject/Put	rpose: General r	neadow condition	
View 4	Camera Height:	1 M	Compass Bearing: 120
Photo Subject/Put	rpose: General r	neadow condition	
Notes:			



B-7 210

B-7 300







B-7 120

		F HOLO F OIH	a Monitoring Data Sheet
Date: Septemb	er 10, 2009		Photographer: Dorum
Camera: Olym	pus Nikon D80		
Photo Point N	<b>o.</b> : B-7	Time:	Location UTM's (NAD 83): 493802 / 3815597
Weather Condition	ons:		· · · ·
View 1	Camera Height:	1 M	Compass Bearing: 210
Photo Subject/Pur	rpose: Bank con	dition monitoring	
View 2	Camera Height:	1 M	Compass Bearing: 300
Photo Subject/Pur	rpose: General r	neadow condition	
View 3	Camera Height:	1 M	Compass Bearing: 30
Photo Subject/Put	rpose: General r	neadow condition	
View 4	Camera Height:	1 M	Compass Bearing: 120
Photo Subject/Pur	rpose: General r	neadow condition	
Notes:			







B-7 210

B-7 300









-		I HOLO I OHIL I	Jointoring Data Sheet
Date: Septemb	er 18, 2008		Photographer: Dorum
Camera: Olym	pus Stylus 400		
Photo Point N	<b>o.</b> : B-7	Time: 10:30am	Location UTM's (NAD 83): 493802 / 3815597
Weather Conditio	ns: Partly cloudy a	and breezy	
View 1	Camera Height:	1 M	Compass Bearing: 210
Photo Subject/Pur	pose: Bank con	dition monitoring	
View 2	Camera Height:	1 M	Compass Bearing: 300
Photo Subject/Pur	pose: General r	neadow condition	
View 3	Camera Height:	1 M	Compass Bearing: 30
Photo Subject/Pur	pose: General r	neadow condition	
View 4	Camera Height:	1 M	Compass Bearing: 120
Photo Subject/Pur	pose: General r	neadow condition	
Notes:			



B-7 210



B-7 30



B-7 300





		1 11010 1	Unit Womtoring Data Sheet
Date: Septemb	er 18, 2007		Photographer: Dorum
Camera: Olym	pus Stylus 400		
Photo Point N	<b>o.</b> : B-7	Time: 1015	Location UTM's (NAD 83): 493802 / 3815597
Weather Conditio	ns: Sunny and bre	ezy	
View 1	Camera Height:	1 M	Compass Bearing: 210
Photo Subject/Pur	rpose: Baseline	for bank treatment	
View 2	Camera Height:	1 M	Compass Bearing: 300
Photo Subject/Pur	rpose: General r	neadow condition	
View 3	Camera Height:	1 M	Compass Bearing: 30
Photo Subject/Pur	rpose: General r	neadow condition	
View 4	Camera Height:	1 M	Compass Bearing: 120
Photo Subject/Pur	rpose: General r	neadow condition	
Notes:			



B-7 210







B-7 300







## APPENDIX E: FAIRCHILD DRAW RIPARIAN RESTORATION PROJECT INVOICES

## Arizona Water Protection Fund Fairchild Draw Riparian Restoration Project Grant No. 07-150WPF

Final Report

Submitted by David Dorum Arizona Game and Fish Department

December 31, 2011

The Arizona Water Protection Fund Commission has funded all, or a portion, of this report or project. The views or findings represented in this deliverable are the Grantees and do not necessarily represent those of the Commission or the Arizona Department of Water Resources.

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	DESCI	RIPTION	0	זז	RATE		AMOUNT
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Z 1/2" X	S BLACK PIPE FO	DR WALK TEROUGHS		8'		11.25	90.00
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112 GAR	HOG RING 25LB F	SOX.	ļ	Ē		45.00	135.00
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112' X 8'	SWING GATE, US	/\$" BLACK 21PE FRAME		2	:	120,00	540.00
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# Hopkins Fence Co P.O. Box 3195

909 F. Wickenburg Way, Suite D Wickenburg, AZ 85358 (928)684-2648 ROC210461 ROC107849 ROC167838

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Az, Game & Fish

2878 E. White Mountain Blvd. Piactop, AZ, 85935

Oavid Ooram

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INVOICE DATE

AVO(CE# (78/2008 3453

SHIP TO Fairchild Elk Exclosure Pinetop, AZ.

	P.Ó. NÓ.	TERMS	DUE DATE	RLY	SHIP WA	PROJECT
	E0069499		1/8/2008	GAG	† †	DavidDooim
[	DESCRIP	TICN	- <u> </u>	TY	RAT-	ANOUNT
LABOR HAUL E SET-UP	- 11-9-07 TO 11-11- QUIPMENT & MAT - 13 HRS PER DAY	07 - 1 MAN, 3 DAY FERIALS TO JOBS @ \$45.00 PER MA	S ITE &	39	45.00	1.755.DGT
HOUR LABOR DISTRIE CONSTR	- 1)-19-07 TO 11-21 RUTE MATERIALS RUCTION - 60 MAN	-07 - 2 MEN, 3 DA1 IN PREPARATION I HOURS @ \$45.00	rs Por Per	60	-15 QC	2,700.00 F
MAN HO LABOR BRACES	)UR + 11-26-67 TO 12-0. 5 - 246 MAN HOUR	-07 - 4 MEN SET 5 @ \$45.00 PER M/	AN	240	55.00	10, <b>800</b> ,00T
LABOR BRACES	- 12-03-07 TO 1 <b>2-04</b> 8 - 60 MAN HOURS	-07 - 3 MEN SET @ \$45.00 PER MAI	N	61)	45.00	3,700.0171
LABOR SETTING	- J2-05-07 7O 12-07 3 BRACES, START 4 HOLDS © 545 00	-07 - 4 MEN PINISE DRIVING T-POST PER MAN HOUSE	<b>a</b> 5 -	120	45.00	÷,400.0011
DANDY HOLES, BEB HO	DRIGER FENCE M MIX CEMENT, DR	IACHINE · DIG PO: IVE T-POSTS @ \$7	ST 5.00	-40	75.06	3,600.061
SALES T	TAX				0.00%	0,00
THANK	YOU FOR YOUR B	USINESS.	İ		Total	\$26,355.00

All past due balances are subject to a service.

charge of 2.00% per month

Received obey & per Der Ober ablanc

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H	opkins Fe	ence Co	<u></u>			INVO
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Davi 2878 Pine	d Doran F. White Mountail top. A.Z. 85935	i Blvd.		Pinotop, AZ		
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LADOR DRAW® SALES 7	EUGOVA99 (HECKI - 70% COMPLETIC RTARIAN RESTOR	PTION ON ON FAIRCHILL RATION PROJECT	D C C C C C C C C C C C C C	Tr I	0.903	3 75.

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#### Hopkins Fence Co P.O. Box 3195 Wickenburg, AZ 85358 (728)684-2648



INVOICE NV0.CE# DATE

1 7/18/2006

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983 FO Az. Genes & Fish. David Donen 2878 F. White Mountain Blvd. Pinetop, AZ. 85935 SHIP TO Fairchild Elk Exclosure Pinetop, AZ

	P.Q. NO,	TERMS	DU	EDATE	REP	SHIP VIA	PROJECT
	E0069499		7/1	8/2008	ELH	††	DavidDonum
DESCRIPTION				ůty I		RATE	AMOUNT
DALANCE DUE ON ELK EXCLOSURE FOR PATRCHILD DRAW RIPARIAN RESTORATION PROJECT					د ا	33,862.61	33,362.61
SALES	TAX				1	0,00%	n.ù0
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TIANK 1	OU FOR YOUR B	USIN'ESS.		<u> </u>	i	Total	\$33.862.61
ll past de	e balances are subje	net to a service			— <del>-</del>	<u> </u>	

charge of 2.00% per month



#### **Agricultural Science Center**

New Mexico State University 1036 Miller St., SW Los Lunas, NM 87031. Phone: (505) 865-4684 Fax: (505) 865-5163

August 6, 2008

#### INVOICE

SOLD TO:

David Dorum Arizona Game & Fish Department 2878 E. White Mountain Blvd. Pinetop, AZ 85935 SHIP TO: David Dorum Arizona Game & Fish Department 2878 E. White Mountain Blvd. Pinetop, AZ 85935

ITEM NUMBER	DESCRIPTION	QTY. ORDERED	UNIT PRICE	AMOUNT
01	Salix bebbiana (SABE2) 1 gal. treepot	50	\$ 10.00	\$ 500.00
			+	+
	Total Due			\$ 500.00

Please Make Check Payable and Remit To:

NMSU Ag. Science Center 1036 Miller St., SW Los Lunas, NM 87031

Natural Reso	ources Conservation Service	DISTRIBU	ΓΙΟΝ	AND	DEL	IVER	Y RE	CORD	NRC3-	(8/0
		Los Lunas Pla	nt Ma	ateria	ls Cei	nter, I	los Li	ınas, NI	M	
D&D To:	David Dorum ARIZONA GAME AND FISI 2878 E. White Mountain Blvo Pinetop, AZ 85935 Phone: (928) 367-4284; Fax: (	H DEPARTMENT I. (928) 367-1258	Ship T	o: Davi ARI 2878 Pine Phor	d Doru ZONA E. Wh top, AZ ne: (928	m GAME / ite Mour 85935 ) 367-42	AND FI Itain Bl 81; Fax	SH DEPAR vd. : (928) 367	RTMENT -1258	
Orde	r Date: 8/1/2008	Ship Date: 8/6/2008		Numbe	er of Pack	ages:			-	
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Dd	&D Number: <u>NMPMC-08</u> Scientific Name (Symbol) /	<u>8-059</u>	Cert	Ago	Test	Durity	Total Viab	Bulk	PLS	TI/A
9066537	Salix bebbiana (SABE2) / Bebb willo	w VCO-08-1GALTP	CO	Age	Date	0	V lab	50	0	ea
Remarks: Or	der picked up at the Los Lunas PMC by	David Dorum.		·						
PLEASES	SIGN AND RETURN ONE CO	PY TO:				For	PMC Use	1		
Lo	s Lunas Plant Materials Cente	r					D &1	D By: Kathlee	en Valadez	
103 103	36 Miller St., S.W.					F	ield Plant	ing #:		
LU	Phone: (505) 865-4684						Stu	ıdy #:		
	Fax: (505) 865-5163						Ordere	d By: NMPM	IC .	
						On	lered Fille	d By: David	Dreesen	
Receive	ed By: Da		A	pproved	By:	Da	ud	RA	lese	2
Name	Title: Douid Dorum / H	ab. tat Program Money	~	Name/T	itle:	David	Drees	sen/Agro	nomist	

Page 1 of 1



Invoice Number:	2009-073
Date:	7-31-2009
Order Number:	NMPMC-09-073
Terms:	Net 30
Company:	Arizona Game & Fish Department
Address:	2878 E. White Mountain Blvd.
State/Province:	Pinetop, AZ
Zip/Postal code:	85935
Phone:	
Fax:	
Contact Name:	David Dorum



NMSU Ag. Science Center 1036 Miller St., SW Los Lunas, NM

87031 Phone: 505-865-4684 Fax: 505-865-5163

ltem	Description	Quantity	Unit Price	Amount
1	Bebb willow (SABE2) 1 gallon treepot	50	\$10.00	\$500.00
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	NMSU Ag. Science Center 1036 Miller St., SW Los Lunas, NM 87031			
			Grand Total	\$500.00
lhank You.		:	Internal Use On	ly
We appreciat	e your business.		Amount Paid:	

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Date:

Natural Reso	Surces Conservation Service	DISTRIBU Los Lunas Pla	TION ant Ma	AND ateria	DEL ls Cei	IVER nter, I	Y RE .os Li	CORD 1nas, NI	м	(8/0
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Orde	r Date: 7/15/2009	Ship Date: 7/22/2009		Numbe	er of Pack	ages:				
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D& Accession	D Number: <u>NMPMC-</u> Scientific Name (Symbol) Common Name	<u>09-073</u> / Lot Number	Cert Class	Age	Test Date	Purity	Total Viab	Bulk Shipped	PLS Shipped	U/N
9066704	Salix bebbiana (SABE2) / Bebb wi	illow VCO-09-1GALTP	СО	8-		0		50	0	ea
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				\$						



College of Agricultural, Consumer & Environmental Sciences Agricultural Science Center at Los Lunas 1036 Miller St., SW Los Lunas, NM 87031 Phone: (505) 865-4684 Fax: (505) 865-5163

August 26, 2010

#### INVOICE

Invoice Number: 2010-060

SOLD TO: David Dorum Arizona Game & Fish Department 2878 E. White Mountain Blvd. Pinetop, AZ 85935 SHIP TO: David Dorum Arizona Game & Fish Department 2878 E. White Mountain Blvd. Pinetop, AZ 85935

ITEM NUMBER	DESCRIPTION	QTY. ORDERED	UNIT PRICE	AMOUNT
01	Bebb willow (SABE2) 1 gal. treepot	30	\$ 10.00	\$ 300.00
				-
×	Total Due			\$ 300.00

Please Make Check Payable and Remit To:

NMSU Ag. Science Center 1036 Miller St., SW Los Lunas, NM 87031

U.S. Departn Natural Resc	nent of Agriculture Surces Conservation Service	DISTRIBUT Los Lunas Pla	FION A nt Mate	ND D erials	ELI Cen	VER ter, I	Y RE .os Li	CORD 1nas, NI	NRCS-E	CS-59 (8/0
D&D To:	David Dorum ARIZONA GAME AND FISI 2878 E. White Mountain Blvc Pinetop, AZ 85935 Phone: (928) 367-4281; Fax: (	H DEPARTMENT I. 928) 367-1258	Ship To:	David I ARIZO 2878 E. Pinetop Phone:	Dorun DNA G Whit D, AZ (928)	n FAME A te Mour 85935 367-42	AND FI atain Bl 81; Fax	SH DEPAI vd. : (928) 367	RTMENT -1258	
Orde	r Date: 8/15/2011	Ship Date: 8/22/2011		Number of	f Packa	ges:				
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Accession	Scientific Name (Symbol) / Common Name Salix bebbiana (SABE2) / Bebb willo	Lot Number w VCO-10-1GALTP	Cert Class CO	T Age I	fest Date	Purity 0	Total Viab	Bulk Shipped 50	PLS Shipped	U/I ca
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Page 1 of 1



College of Agricultural, Consumer & Environmental Sciences Agricultural Science Center at Los Lunas 1036 Miller St., SW Los Lunas, NM 87031 Phone: (505) 865-4684 Fax: (505) 865-5163

September 1, 2011

#### INVOICE

Invoice Number: 2011-040

SOLD TO: David Dorum

Arizona Game & Fish Department 2878 E. White Mountain Blvd. Pinetop, AZ 85935 SHIP TO: David Dorum Arizona Game & Fish Department 2878 E. White Mountain Blvd. Pinetop, AZ 85935

ITEM NUMBER	DESCRIPTION	QTY. ORDERED	UNIT PRICE	AMOUNT
01	Bebb willow (SABE2) 1 gallon treepot	50	\$ 10.00	\$ 500.00
			1	
	Total Due			\$ 500.00

Please Make Check Payable and Remit To:

NMSU Ag. Science Center 1036 Miller St., SW Los Lunas, NM 87031