

**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 enclosure 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

The Department would like to thank the Arizona Water Protection Fund, whose funding made this project possible. We would also like to thank the Black Mesa Ranger District for their contribution to the implementation of the Project, including the planning and permitting. Special thanks to Linda Dorum and Brendan Witt for their invaluable help with the willow planting, monitoring and fence maintenance.

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 reseedling of the treated areas.

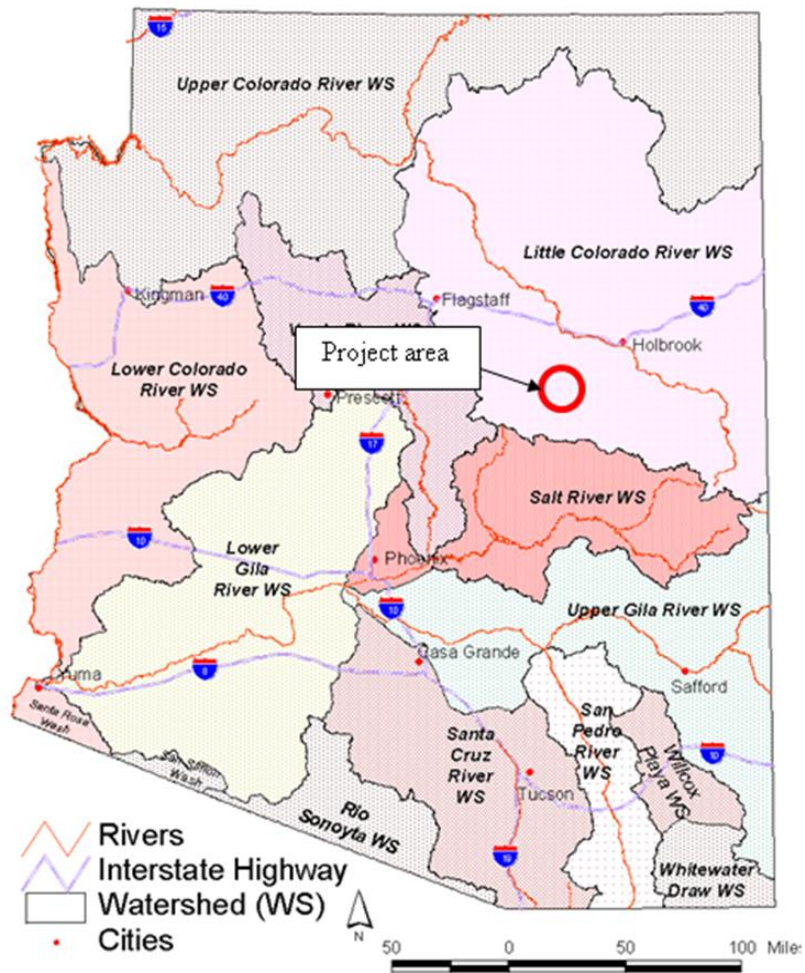


Figure 1. Fairchild Draw Riparian Restoration Project area.

Site Background and History

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 enclosure 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 enclosure 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 enclosure. 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 enclosure fence showed significant recovery, the remainder of the meadow and stream channel downstream of the enclosure 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.

Statement of the Problem

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 angles, 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-

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 3. Example vehicular access gate construction



Figure 4. Example of height from ground to bottom wire



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).

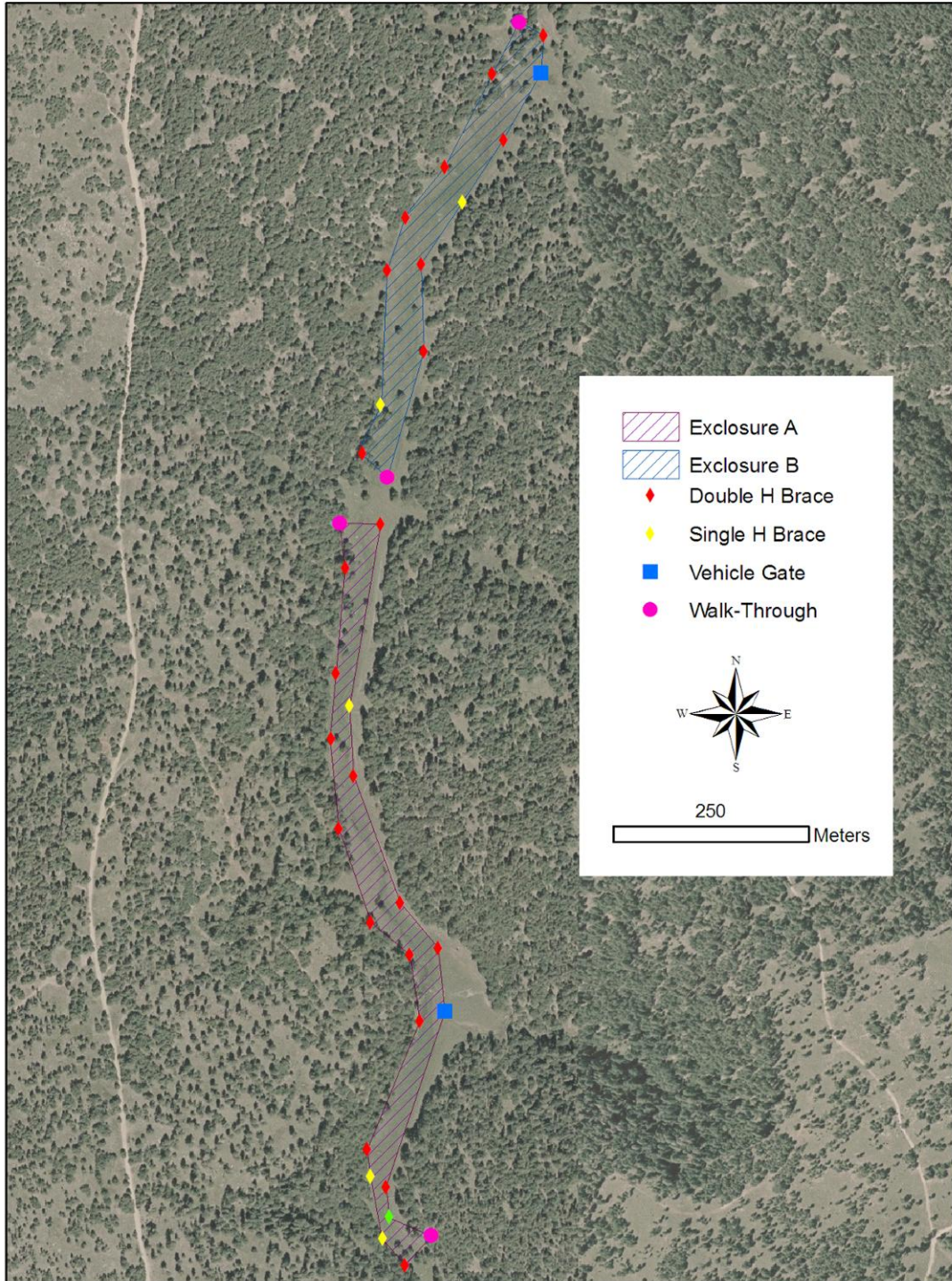


Figure 6. Completed Exclosure Fence Map



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 enclosure 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 1/2" Scd 40 Black Pipe (corner uprights)
 - 10' 2 1/2" 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

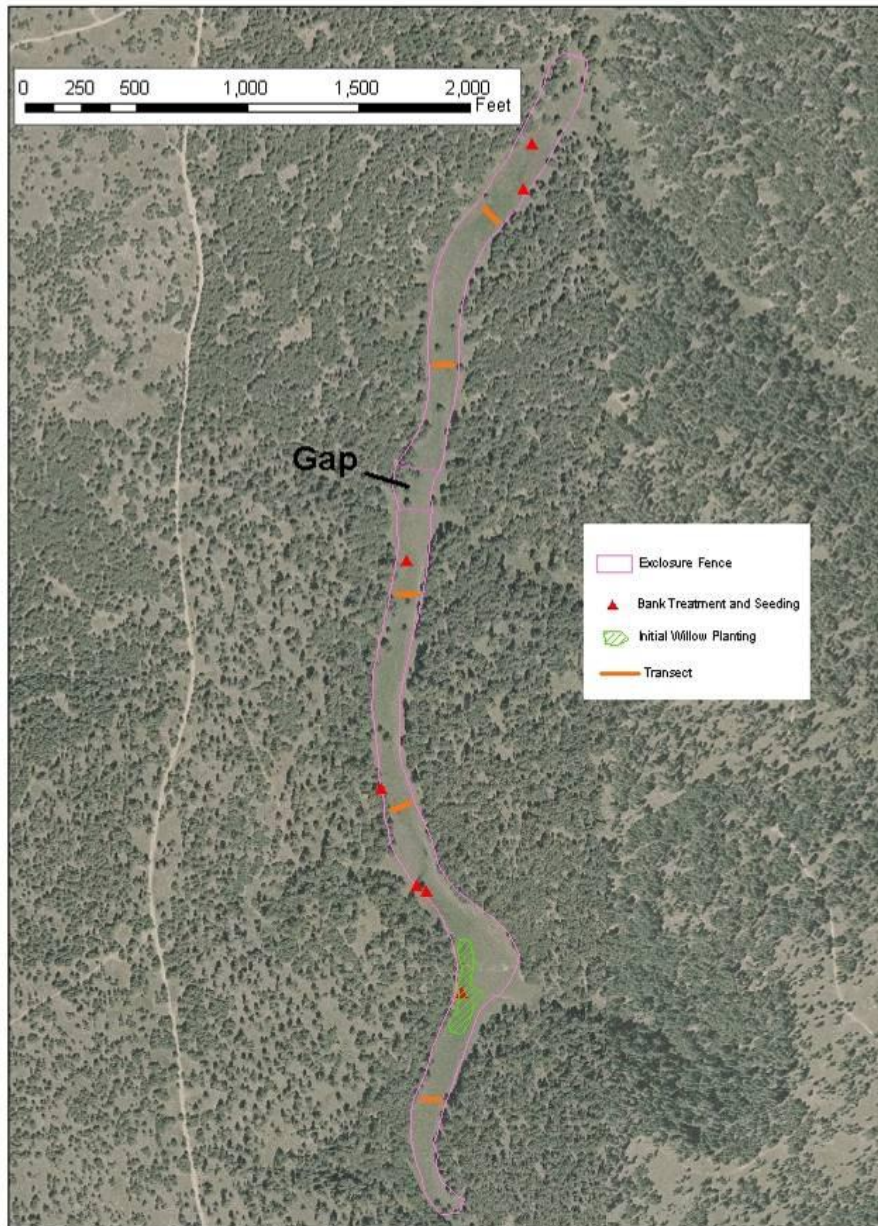


Figure 11. Bank Treatment Site Location Map

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 occurred the fall following completion of the elk enclosure fence, fortuitous delays associated with coordination with the Army Corps of Engineers allowed the potential for natural recovery of the cutslopes to become 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 25th, 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 through 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 28th 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 6th 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 7th 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 8th, 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 28th and 29th. 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 21st. 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.

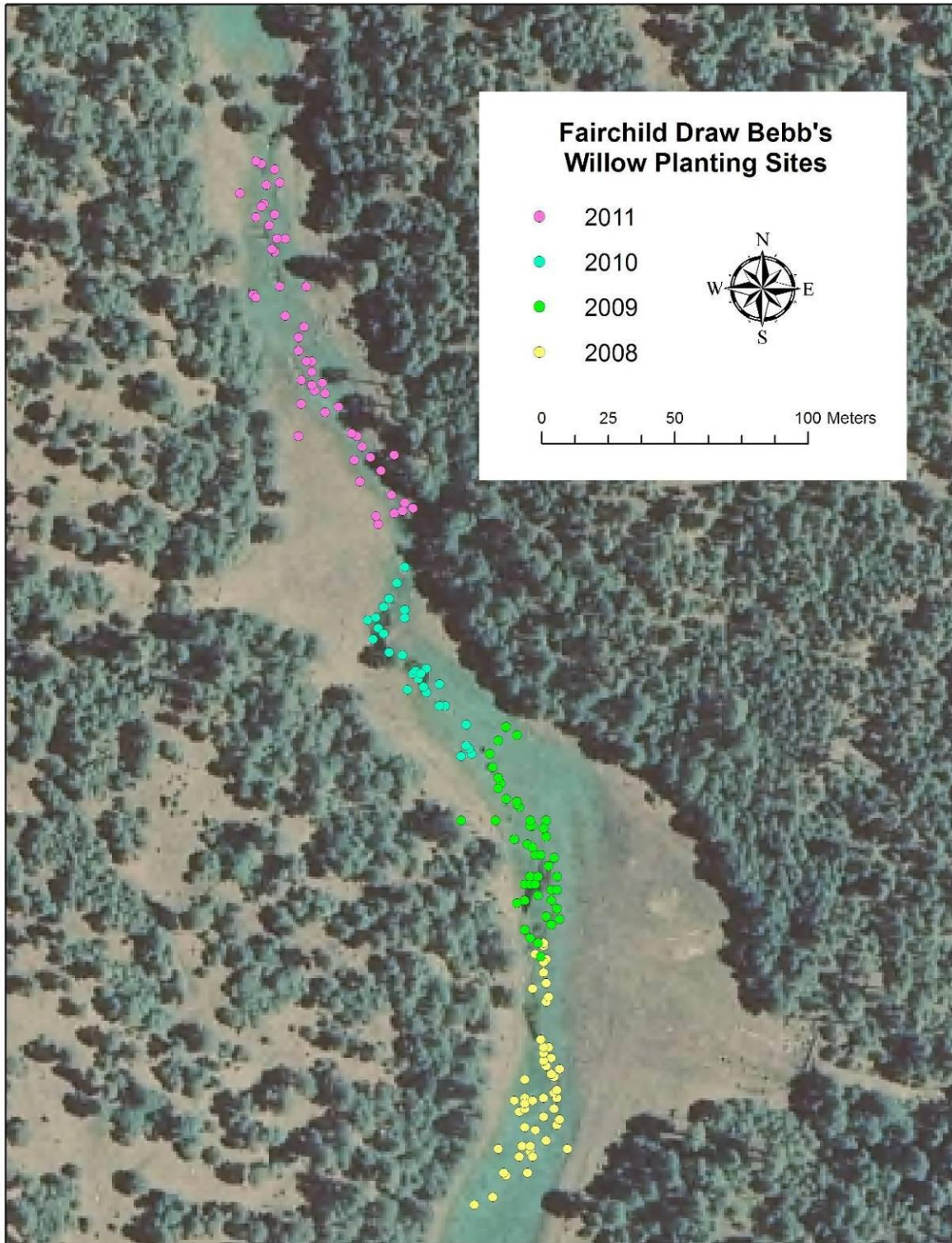


Figure 25. Bebb's willow 2008 – 2011 planting locations

The 2011 plantings occurred on August 23rd. Fifty Bebb's willow plants in 4"x4"x14" one gallon tree pots purchased on August 22nd 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 Bebb's 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 enclosure 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 enclosure 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 enclosure fence, that was noted as well. Damage was repaired as soon as it was feasible to do so.

In 2008 enclosure 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 enclosure (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.

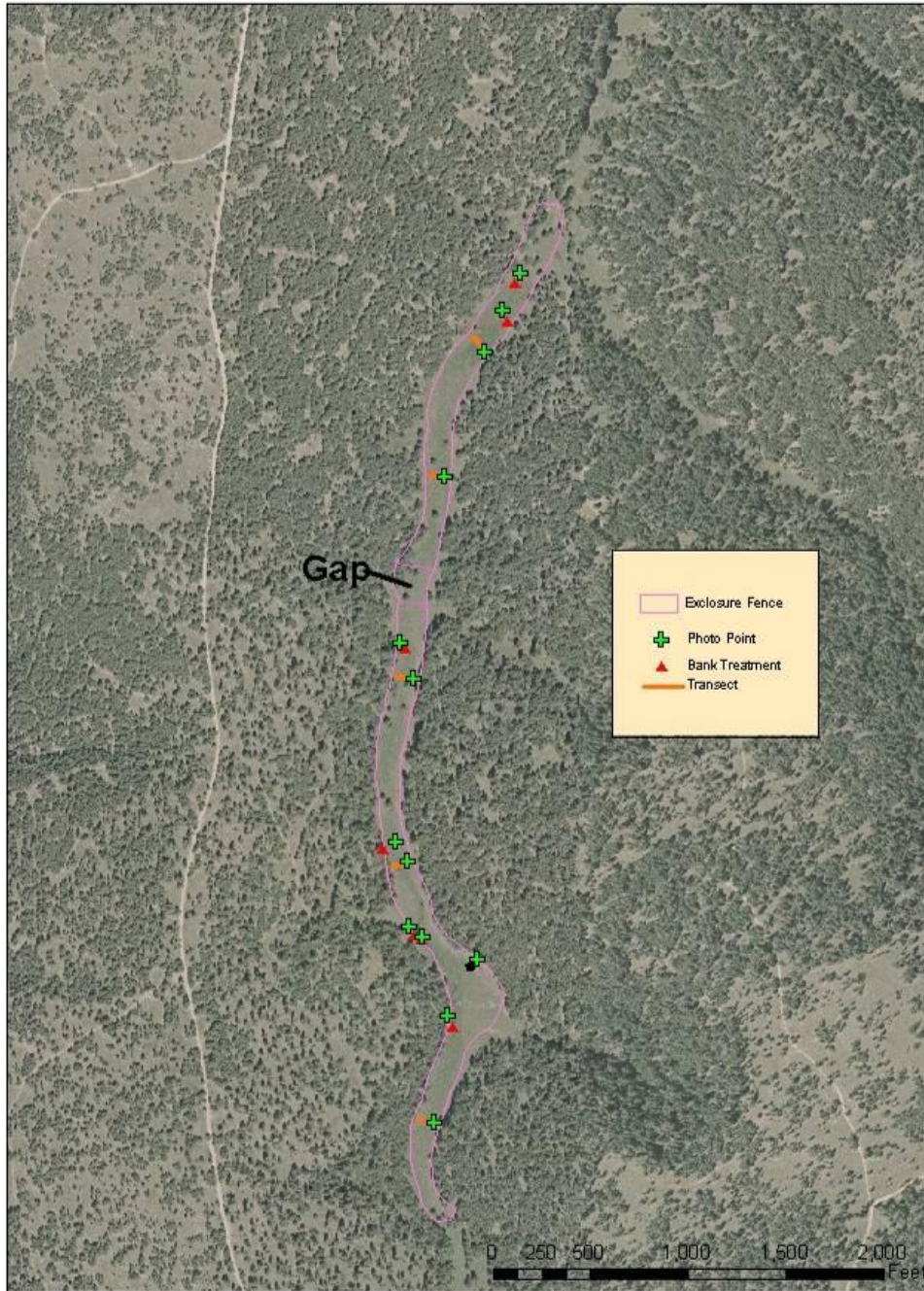


Figure 28. Exclosure fence perimeter and monitoring locations



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

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

In 2010, enclosure 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 enclosure 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 enclosure 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 of the fence.



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

In 2011, enclosure 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 16th, 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, enclosure fence effectiveness monitoring was conducted on May 3 and September 10. During the May 3 monitoring, one yearling elk was observed within the upstream enclosure. Upon being detected, it quickly moved further downstream, exiting the enclosure by crawling under the fence at the point where the enclosure 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 enclosure. Upon further inspection it was determined that a small elk, likely a yearling was accessing the enclosure through the northeast corner walk-through gate. To counter this, the access gate was wired closed.

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

In 2011, enclosure 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 enclosure. 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 enclosure 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 1/2 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 through 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.

Table 1. 2007 - 2011 Average Plant Height

Transect		Average Plant Height (cm)				
		Kentucky Bluegrass	Sedge/ Rush	Other Grass Species	Other Plant Species	All Plants
T-1	2007	5.0	N/A	12.0	2.3	5.4
	2008	12.3	N/A	27.2	14.4	18.3
	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
T-2	2007	6.9	N/A	16.3	1.8	8.3
	2008	10.0	N/A	35.2	10.2	21.0
	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
T-3	2007	4.0	5.0	10.0	1.8	4.5
	2008	11.5	N/A	23.2	14.2	17.6
	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
T-4	2007	4.4	N/A	9.7	1.8	4.5
	2008	11.6	N/A	55.5	8.4	11.3
	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
T-5	2007	3.0	N/A	3.0	2.9	3.0
	2008	15.4	34.7	35.1	19.4	27.9
	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
Average	2007	5.3	5.0	6.2	2.3	5.1
	2008	12.7	34.7	30.3	12.4	19.3
	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
Change form Baseline	2008	+7.4	+29.7	+24.1	+10.1	+14.2
	2009	+13.8	+43.2	+44.4	+12.3	+24.8
	2010	+30.9	+46.6	+50.7	+19.8	+37.0
	2011	+19.1	+54.7	+49.1	+16.5	+42.3

Table 2. 2007 - 2011 Percent ground cover by transect

Transect		Percent Ground Cover Type						
		Bare Ground	Kentucky bluegrass	Sedge/Rush	Other Grass Species	Other Plant Species	Litter	Water
T-1	2007	32	48	0	8	12	0	0
	2008	20	18	0	26	32	4	0
	2009	10	14	0	30	36	10	0
	2010	4	4	2	50	28	12	0
	2011	8	4	0	68	14	6	0
T-2	2007	30	36	0	16	12	6	0
	2008	14	14	0	32	28	0	12
	2009	16	2	12	16	46	8	0
	2010	4	4	10	48	26	8	0
	2011	10	2	4	58	20	6	0
T-3	2007	28	42	2	10	12	6	0
	2008	8	12	0	38	40	2	0
	2009	0	6	12	46	36	0	0
	2010	4	0	12	58	26	0	0
	2011	0	4	22	64	10	0	0
T-4	2007	24	60	0	6	10	0	0
	2008	2	32	0	4	62	0	0
	2009	0	4	4	20	72	0	0
	2010	0	8	0	34	52	6	0
	2011	4	12	0	34	42	8	0
T-5	2007	26	42	0	2	26	4	0
	2008	2	16	38	20	24	0	0
	2009	0	0	32	20	48	0	0
	2010	0	0	22	24	54	0	0
	2011	0	2	48	48	2	0	0

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

Transect	Percent Ground Cover Type							
	Bare Ground	Kentucky bluegrass	Sedge/Rush	Other Grass Species	Other Plant Species	Litter	Water	
Average '07	28.0	45.6	0.4	8.4	14.4	3.2	0	
Average '08	9.2	18.4	7.6	24.0	37.2	1.2	2.4	
Average '09	5.2	5.2	12.0	26.4	47.6	3.6	0	
Average '10	2.4	3.2	9.2	42.8	37.2	5.2	0	
Average '11	4.4	4.8	14.8	54.4	4.0	0		
Change from Baseline	2008	-18.8	-27.2	+7.2	+15.6	+22.8	-2.0	+2.4
	2009	-22.8	-40.4	+11.6	+18.0	+33.2	+0.4	0
	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



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.

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

Year (Number) Planted	Sept. 2008		Sept. 2009		Sept. 2010		Sept. 2011	
	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

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.

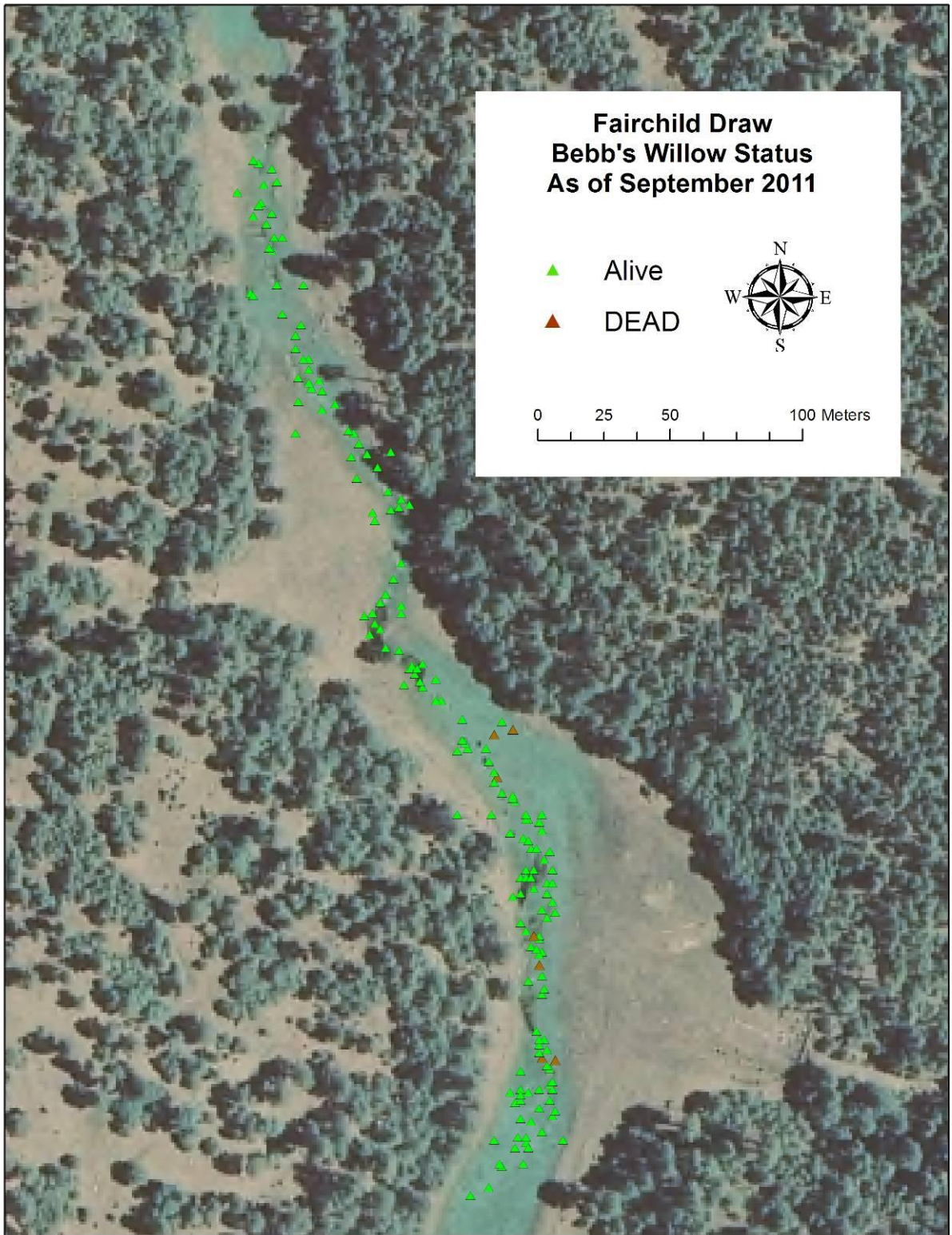


Figure 40. Bebb's Willow Status – As of September 2011

As was expected, successful aspen recruitment occurred following completion of the enclosure fence. Aspen shoots were recorded during the 2008 monitoring, which was within two months following completion of the enclosure fence. A similar response of aspen was not noted outside of the enclosure 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 enclosure 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 enclosure 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 enclosure 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 enclosure fence will ultimately determine the long-term success of this project. It is likely that this enclosure 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 enclosure fence. The Projects are in close proximity to one another and are within the same meadow (Figure 42).

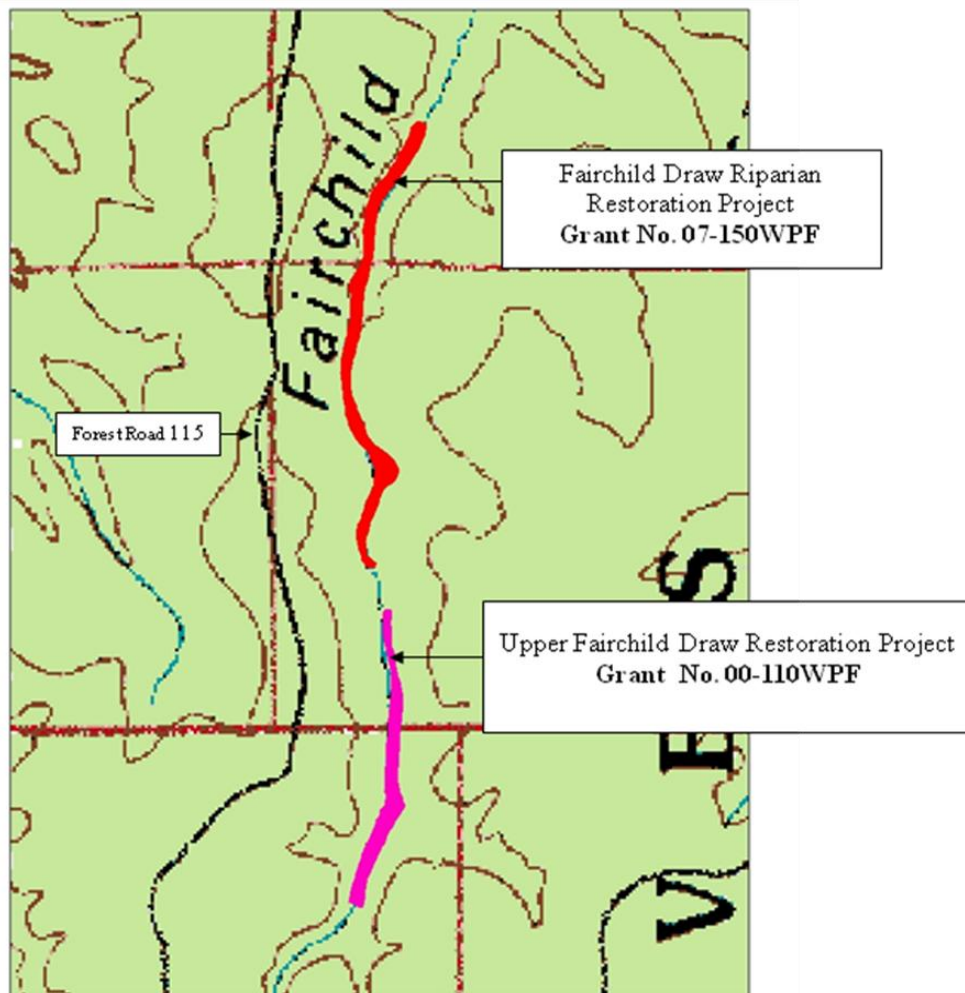


Figure 42. General locations of the two Fairchild Draw projects.

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 enclosure.



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

The impacts of elk and cattle on the meadow within the Upper Fairchild Draw enclosure were dramatic, and highlight the need for continued long-term maintenance of these enclosure 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

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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.

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)
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

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

Plant Number	Total Depth of Hole (meter)	Depth to Water (meter)	Water Depth (meter)	UTM (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 Hole (meter)	Depth to Water (meter)	Water Depth (meter)	UTM (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

Plant Number	Total Depth of Hole (meter)	Depth to Water (meter)	Water Depth (meter)	UTM (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

Plant Number	Total Depth of Hole (meter)	Depth to Water (meter)	Water Depth (meter)	UTM (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


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-1			Date: September 15, 2011		
Transect Length: 25.5m			Examiner(s): D. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493666 / 3814275					
Stake 2: 493644 / 3814277					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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-1A 		
9.0	Redtop	38			
9.5	Kentucky bluegrass	13			
10	Redtop	46			
10.5	Redtop	29			
11.0	Dandelion	8			
11.5	Redtop	27			
12.0	Dirt (gopher mound)	-			
12.5	Dirt (gopher mound)	-			
13.0	Dandelion	6			
13.5	Redtop	40			
14.0	Redtop	47			
14.5	Redtop	46			
15.0	Redtop	55			
15.5	Foxtail	83			
16.0	Litter	-			
16.5	Foxtail	93			
17.0	Foxtail	86			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-1			Date: September 10, 2010		
Transect Length: 25.5m			Examiner(s): D. Dorum and L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493666 / 3814275					
Stake 2: 493644 / 3814277					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Western yarrow	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-1A 		
9.0	Poaceae	16			
9.5	Poaceae	40			
10	Redtop	51			
10.5	Forb	113			
11.0	Redtop	65			
11.5	Poaceae	32			
12.0	Clover	10			
12.5	Redtop	61			
13.0	Redtop	68			
13.5	Litter	-			
14.0	Forb	3			
14.5	Redtop	74			
15.0	Western yarrow	17			
15.5	Bare ground	0			
16.0	Forb	6			
16.5	Litter	-			
17.0	Redtop	81			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-1			Date: September 10, 2009		
Transect Length: 25.5m			Examiner(s): D. Dorum and L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493666 / 3814275					
Stake 2: 493644 / 3814277					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Kentucky bluegrass	17	17.5	Forb	6
1.0	Kentucky bluegrass	26	18.0	Litter	-
1.5	Log	-	18.5	Poaceae	31
2.0	Kentucky bluegrass	21	19.0	Bare ground	0
2.5	Forb	3	19.5	Western yarrow	11
3.0	Wood	-	20.0	Clover	13
3.5	Litter	-	20.5	Redtop	58
4.0	Forb	4	21.0	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	Redtop	64
6.5	Redtop	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	Redtop	67	25.0	Forb	54
8.5	Poaceae	34	Photo: T-1A 		
9.0	Redtop	71			
9.5	Clover	12			
10	Redtop	86			
10.5	Redtop	82			
11.0	Clover	11			
11.5	Poaceae	13			
12.0	Clover	8			
12.5	Redtop	69			
13.0	Redtop	70			
13.5	Redtop	63			
14.0	Bluegrass	12			
14.5	Litter	-			
15.0	Bare ground	0			
15.5	Western yarrow	11			
16.0	Gopher mound	0			
16.5	Forb	11			
17.0	Poaceae	23			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-1			Date: September 18, 2008		
Transect Length: 25.5m			Examiner(s): D. Dorum and L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493666 / 3814275					
Stake 2: 493644 / 3814277					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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	7	22.5	Bare ground	0
6.0	Forb	7	23.0	Forb (peavine?)	33
6.5	Forb	9	23.5	Bare ground	0
7.0	Redtop	33	24.0	Pine dropseed	62
7.5	Kentucky bluegrass	13	24.5	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			
10	Poaceae	8			
10.5	Poaceae	15			
11.0	Forb	9			
11.5	Forb	19			
12.0	Redtop	12			
12.5	Clover	11			
13.0	Redtop	9			
13.5	Forb	7			
14.0	Kentucky bluegrass	7			
14.5	Wood	0			
15.0	Redtop	17			
15.5	Western yarrow	12			
16.0	Clover	13			
16.5	Forb	8			
17.0	Redtop	42			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-1			Date: September 18, 2007		
Transect Length: 25.5m			Examiner(s): D. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493666 / 3814275					
Stake 2: 493644 / 3814277					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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	Bare ground	0
6.0	Kentucky bluegrass	2	23.0	Western yarrow	6
6.5	Kentucky bluegrass	2	23.5	Bare ground	0
7.0	Kentucky bluegrass	6	24.0	Poaceae	29
7.5	Kentucky bluegrass	3	24.5	Pine dropseed	11
8.0	Kentucky bluegrass	4	25.0	Bare ground	0
8.5	Kentucky bluegrass	3	Photo: T-1A 		
9.0	Kentucky bluegrass	2			
9.5	Kentucky bluegrass	2			
10	Kentucky bluegrass	2			
10.5	Kentucky bluegrass	4			
11.0	Kentucky bluegrass	5			
11.5	Bare ground	0			
12.0	Kentucky bluegrass	6			
12.5	Kentucky bluegrass	8			
13.0	Kentucky bluegrass	3			
13.5	Bare Ground	0			
14.0	Bare ground (gopher mound)	0			
14.5	Bare ground (gopher mound)	0			
15.0	Bare ground	0			
15.5	Poaceae	2			
16.0	Dandelion	2			
16.5	Bare ground	0			
17.0	Clover	1			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-2			Date: September 8, 2011		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1:		493618 / 3814677			
Stake 2:		493622 / 3814667			
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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			
10.5	Forb	29			
11.0	Sedge	45			
11.5	Redtop	77			
12.0	Redtop	72			
12.5	Dirt (gopher mound)	-			
13.0	Redtop	78			
13.5	Dirt				
14.0	Redtop	59			
14.5	Redtop	79			
15.0	Litter	-			
15.5	Forb	27			
16.0	Rush	36			
16.5	Poacea	31			
17.0	Poacea	12			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-2			Date: September 10, 2010		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493618 / 3814677					
Stake 2: 493622 / 3814667					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Poacea	17	17.5	Forb	3
1.0	Awn???	57	18.0	Rush	29
1.5	AWN???	58	18.5	Forb	19
2.0	AWN???	87	19.0	Redtop	55
2.5	Redtop	69	19.5	Poaceae	24
3.0	Clover	22	20.0	Litter	-
3.5	Kentucky bluegrass	45	20.5	Clover	9
4.0	Redtop	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			
9.5	Redtop	81			
10	Forb	15			
10.5	Redtop	78			
11.0	Pine dropseed	59			
11.5	Redtop	86			
12.0	Redtop	87			
12.5	Redtop	87			
13.0	Forb	55			
13.5	Redtop	80			
14.0	Redtop	83			
14.5	Rush	45			
15.0	Rush	57			
15.5	Rush	67			
16.0	Rush	55			
16.5	Forb	21			
17.0	Poaceae	12			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-2			Date: September 10, 2009		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1:		493618 / 3814677			
Stake 2:		493622 / 3814667			
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Poaceae	39	17.5	Bare ground	0
1.0	Litter	-	18.0	Sedge	42
1.5	Clover	17	18.5	Clover	13
2.0	Clover	24	19.0	Clover	10
2.5	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			
9.5	Clover	6			
10	Forb	21			
10.5	Rush	49			
11.0	Clover	18			
11.5	Gopher mound	0			
12.0	Poaceae	18			
12.5	Rush	36			
13.0	Poaceae	39			
13.5	Clover	13			
14.0	Forb	15			
14.5	Rush	51			
15.0	Rush	39			
15.5	Rush	83			
16.0	Bare ground	0			
16.5	Bare ground	0			
17.0	Bare ground	0			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-2			Date: September 18, 2008		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493618 / 3814677					
Stake 2: 493622 / 3814667					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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	Clover	7	21.0	Redtop	57
4.5	Kentucky bluegrass	10	21.5	Redtop	17
5.0	Forb	12	22.0	Pine dropseed	63
5.5	Western yarrow	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			
10	Redtop	12			
10.5	Forb	10			
11.0	Bare ground	0			
11.5	Bare ground	0			
12.0	Kentucky bluegrass	8			
12.5	Poaceae	11			
13.0	Forb	27			
13.5	Clover	5			
14.0	Kentucky bluegrass	11			
14.5	Clover	6			
15.0	Water	0			
15.5	Water	0			
16.0	Water	0			
16.5	Water	0			
17.0	Water	0			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-2			Date: September 18, 2007		
Transect Length: 25.5m			Examiner(s): D. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493618 / 3814677					
Stake 2: 493622 / 3814667					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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	Kentucky bluegrass	2	22.0	Litter	0
5.5	Bare ground	0	22.5	Pine dropseed	10
6.0	Kentucky bluegrass	3	23.0	Pine dropseed	12
6.5	Litter	0	23.5	Bare ground	0
7.0	Kentucky bluegrass	5	24.0	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			
9.5	Bare ground (gopher mound)	0			
10	Dandelion	1			
10.5	Kentucky bluegrass	2			
11.0	Poaceae	4			
11.5	Kentucky bluegrass	4			
12.0	Bare ground	0			
12.5	Kentucky bluegrass	7			
13.0	Kentucky bluegrass	24			
13.5	Kentucky bluegrass	5			
14.0	Clover	1			
14.5	Kentucky bluegrass	3			
15.0	Bare ground	0			
15.5	Bare ground	0			
16.0	Bare ground	0			
16.5	Bare ground	0			
17.0	Bare ground	0			
Notes:					


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 Transect Data Sheet

Transect Number: T-3			Date: September 8, 2011		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1:		493618 / 3814677			
Stake 2:		493622 / 3814667			
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Redtop	64	17.5	Redtop	71
1.0	Pine dropseed	48	18.0	Redtop	83
1.5	poaceae	29	18.5	Sedge	22
2.0	Redtop	59	19.0	Redtop	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			
10	Sedge	33			
10.5	Sedge	27			
11.0	Sedge	27			
11.5	Redtop	63			
12.0	Sedge	49			
12.5	Forb	18			
13.0	Redtop	83			
13.5	Redtop	86			
14.0	Redtop	96			
14.5	Redtop	84			
15.0	Redtop	61			
15.5	Sedge	46			
16.0	Sedge	57			
16.5	Sedge	49			
17.0	Sedge	42			
Notes:					


Fairchild Draw Riparian Restoration Project
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 Transect Data Sheet

Transect Number: T-3			Date: September 10, 2010		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1:		493618 / 3814677			
Stake 2:		493622 / 3814667			
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Redtop	54	17.5	Redtop	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			
10	Redtop	81			
10.5	Redtop	72			
11.0	Rush	50			
11.5	Rush	31			
12.0	Clover	16			
12.5	Dandelion	14			
13.0	Clover	19			
13.5	Foxtail	87			
14.0	Bare ground (gopher mound)	0			
14.5	Poaceae	25			
15.0	Rush	46			
15.5	Mint	46			
16.0	Rush	49			
16.5	Clover	10			
17.0	Rush	51			
Notes:					


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Transect Number: T-3			Date: September 10, 2009		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493631 / 3814963					
Stake 2: 493626 / 3814969					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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			
10	Poaceae	28			
10.5	Redtop	80			
11.0	Rush	41			
11.5	Redtop	40			
12.0	Forb	9			
12.5	Forb	8			
13.0	Poaceae	23			
13.5	Poaceae	23			
14.0	Redtop	73			
14.5	Forb	8			
15.0	Rush	35			
15.5	Rush	50			
16.0	Rush	39			
16.5	Kentucky bluegrass	14			
17.0	Clover	14			
Notes:					


Fairchild Draw Riparian Restoration Project
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Transect Number: T-3			Date: September 18, 2008		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493631 / 3814963					
Stake 2: 493626 / 3814969					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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	6	21.0	Redtop	10
4.5	Kentucky bluegrass	17	21.5	Bare ground (gopher mound)	0
5.0	Redtop	33	22.0	Bare ground (gopher mound)	0
5.5	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			
10	Redtop	13			
10.5	Redtop	9			
11.0	Forb	15			
11.5	Poaceae	28			
12.0	Kentucky bluegrass	8			
12.5	Forb	14			
13.0	Redtop	15			
13.5	Redtop	31			
14.0	Redtop	28			
14.5	Clover	12			
15.0	Poaceae	12			
15.5	Forb	6			
16.0	Forb	13			
16.5	Forb	9			
17.0	Forb	18			
Notes:					


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Transect Number: T-3			Date: September 18, 2007		
Transect Length: 25.5m			Examiner(s): D. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493631 / 3814963					
Stake 2: 493626 / 3814969					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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	Kentucky bluegrass	4	21.0	Bare ground	0
4.5	Bare ground	0	21.5	Bare ground	0
5.0	Poaceae	4	22.0	Sedge	5
5.5	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			
9.5	Kentucky bluegrass	10			
10	Kentucky bluegrass	3			
10.5	Kentucky bluegrass	3			
11.0	Dandelion	2			
11.5	Kentucky bluegrass	3			
12.0	Clover	1			
12.5	Kentucky bluegrass	4			
13.0	Bare ground	0			
13.5	Bare ground (gopher mound)	0			
14.0	Kentucky bluegrass	2			
14.5	Kentucky bluegrass	1			
15.0	Forb	2			
15.5	Kentucky bluegrass	2			
16.0	Dandelion	1			
16.5	Bare ground	0			
17.0	Kentucky bluegrass	3			
Notes:					


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Transect Number: T-4			Date: September 8, 2011		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1:		493618 / 3814677			
Stake 2:		493622 / 3814667			
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Redtop	6	17.5	Forb	11
1.0	Clover	17	18.0	Dandelion	22
1.5	Redtop	66	18.5	Dandelion	6
2.0	Redtop	66	19.0	Dandelion	4
2.5	Forb	10	19.5	Kentucky bluegrass	14
3.0	Redtop	50	20.0	Litter	-
3.5	Redtop	57	20.5	Dandelion	13
4.0	Foxtail	60	21.0	Dandelion	17
4.5	Western yarrow	19	21.5	Dirt (gopher mound)	-
5.0	Kentucky bluegrass	16	22.0	Forb	12
5.5	Redtop	46	22.5	Kentucky bluegrass	21
6.0	Poaceae	22	23.0	Poaceae	24
6.5	Western yarrow	16	23.5	Dandelion	16
7.0	Poaceae	29	24.0	Clover	4
7.5	Poaceae	36	24.5	Poaceae	16
8.0	Western yarrow	12	25.0	Forb	20
8.5	Dirt	-	Photo: T-4A 		
9.0	Litter	-			
9.5	Forb	9			
10	Redtop	23			
10.5	Kentucky bluegrass	20			
11.0	Forb	7			
11.5	Redtop	49			
12.0	Litter	-			
12.5	Redtop	44			
13.0	Poaceae	32			
13.5	Clover	11			
14.0	Poaceae	24			
14.5	Dandelion	17			
15.0	Kentucky bluegrass	23			
15.5	Litter	-			
16.0	Forb	29			
16.5	Kentucky bluegrass	27			
17.0	Forb	79			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
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Transect Number: T-4			Date: September 10, 2010		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493618 / 3814677					
Stake 2: 493622 / 3814667					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Poaceae	48	17.5	Western yarrow	18
1.0	Clover	20	18.0	Redtop	63
1.5	Kentucky bluegrass	45	18.5	Dandelion	16
2.0	Redtop	81	19.0	Dandelion	9
2.5	Clover	19	19.5	Western yarrow	16
3.0	Redtop	88	20.0	Poaceae	20
3.5	Redtop	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 yarrow	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 		
9.0	Dandelion	19			
9.5	Clover	10			
10	Western yarrow	59			
10.5	Poaceae	25			
11.0	Poaceae	52			
11.5	Poaceae	30			
12.0	Poaceae	52			
12.5	Forb	14			
13.0	Poaceae	64			
13.5	Clover	16			
14.0	Poaceae	58			
14.5	Poaceae	48			
15.0	Kentucky bluegrass	29			
15.5	Redtop	49			
16.0	Dandelion	20			
16.5	Poaceae	16			
17.0	Western yarrow	21			
Notes:					


Fairchild Draw Riparian Restoration Project
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 Transect Data Sheet

Transect Number: T-4			Date: September 10, 2009		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1:		493684 / 3815279			
Stake 2:		493664 / 3815276			
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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	16	20.0	Redtop	40
3.5	Clover	16	20.5	Kentucky bluegrass	14
4.0	Poaceae	41	21.0	Western yarrow	13
4.5	Redtop	60	21.5	Kentucky bluegrass	19
5.0	Forb	14	22.0	Western yarrow	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			
9.5	Clover	14			
10	Clover	12			
10.5	Western yarrow	9			
11.0	Mint	20			
11.5	Redtop	58			
12.0	Poaceae	31			
12.5	Poaceae	34			
13.0	Rush	44			
13.5	Clover	8			
14.0	Rush	46			
14.5	Clover	13			
15.0	Forb	12			
15.5	Clover	7			
16.0	Clover	19			
16.5	Clover	10			
17.0	Clover	11			
Notes:					


Fairchild Draw Riparian Restoration Project
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Transect Number: T-4			Date: September 18, 2008		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493684 / 3815279					
Stake 2: 493664 / 3815276					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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	Clover	10	21.5	Western yarrow	9
5.0	Kentucky bluegrass	16	22.0	Forb	5
5.5	Kentucky bluegrass	12	22.5	Clover	7
6.0	Clover	9	23.0	Kentucky bluegrass	5
6.5	Kentucky bluegrass	6	23.5	Western yarrow	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			
10	Clover	7			
10.5	Forb	6			
11.0	Kentucky bluegrass	8			
11.5	Redtop	61			
12.0	Forb	6			
12.5	Mint	20			
13.0	Clover	10			
13.5	Clover	10			
14.0	Forb	12			
14.5	Kentucky bluegrass	17			
15.0	Bare ground	0			
15.5	Kentucky bluegrass	12			
16.0	Kentucky bluegrass	17			
16.5	Clover	4			
17.0	Clover	3			
Notes:					


Fairchild Draw Riparian Restoration Project
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 Transect Data Sheet

Transect Number: T-4			Date: September 18, 2007		
Transect Length: 25.5m			Examiner(s): D. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493684 / 3815279					
Stake 2: 493664 / 3815276					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
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	Dandelion	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			
10.5	Bare ground	0			
11.0	Kentucky bluegrass	8			
11.5	Wolfstail	5			
12.0	Kentucky bluegrass	4			
12.5	Kentucky bluegrass	3			
13.0	Kentucky bluegrass	7			
13.5	Clover	2			
14.0	Bare ground	0			
14.5	Bare ground	0			
15.0	Bare ground	0			
15.5	Kentucky bluegrass	4			
16.0	Kentucky bluegrass	3			
16.5	Kentucky bluegrass	5			
17.0	Kentucky bluegrass	4			
Notes:					


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 Transect Data Sheet

Transect Number: T-5			Date: September 8, 2011		
Transect Length: 25.5m			Examiner(s): D. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1:		493618 / 3814677			
Stake 2:		493622 / 3814667			
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Sedge	48	17.5	Rush	66
1.0	Redtop	51	18.0	Rush	60
1.5	Kentucky bluegrass	48	18.5	Poaceae	71
2.0	Rush	57	19.0	Poaceae	46
2.5	Forb	39	19.5	Redtop	85
3.0	Foxtail	41	20.0	Poaceae	71
3.5	Foxtail	75	20.5	Foxtail	65
4.0	Rush	68	21.0	Rush	60
4.5	Rush	78	21.5	Sedge	86
5.0	Poaceae	74	22.0	Rush	81
5.5	Poaceae	76	22.5	Sedge	78
6.0	Poaceae	71	23.0	Rush	89
6.5	Sedge	88	23.5	Poaceae	32
7.0	Poaceae	68	24.0	Poaceae	37
7.5	Redtop	72	24.5	Poaceae	34
8.0	Sedge	66	25.0	Redtop	58
8.5	Poaceae	96	Photo: T-5A 		
9.0	Sedge	83			
9.5	Sedge	85			
10	Sedge	76			
10.5	Foxtail	74			
11.0	Redtop	73			
11.5	Poaceae	69			
12.0	Redtop	77			
12.5	Sedge	78			
13.0	Foxtail	109			
13.5	Rush	80			
14.0	Rush	63			
14.5	Rush	67			
15.0	Rush	64			
15.5	Rush	55			
16.0	Rush	46			
16.5	Rush	61			
17.0	Poaceae	51			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-5			Date: September 10, 2010		
Transect Length: 25.5m			Examiner(s): D. Dorum, L. Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493618 / 3814677					
Stake 2: 493622 / 3814667					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (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			
10	Clover	20			
10.5	Clover	23			
11.0	Clover	18			
11.5	Rush	44			
12.0	Clover	19			
12.5	Clover	20			
13.0	Clover	21			
13.5	Poaceae	21			
14.0	Sedge	63			
14.5	Rush	52			
15.0	Rush	72			
15.5	Clover	18			
16.0	Sedge	47			
16.5	Poaceae	41			
17.0	Redtop	46			
Notes:					


Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-5			Date: September 10, 2009		
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 (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Redtop	62	17.5	Forb	15
1.0	Sedge	52	18.0	Poaceae	65
1.5	Foxtail	84	18.5	Forb	17
2.0	Forb	24	19.0	Forb	10
2.5	Rush	50	19.5	Poaceae	60
3.0	Redtop	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			
9.5	Sedge	53			
10	Rush	64			
10.5	Forb	17			
11.0	Forb	18			
11.5	Rush	70			
12.0	Forb	12			
12.5	Forb	16			
13.0	Poaceae	31			
13.5	Forb	15			
14.0	Poaceae	66			
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:					

Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-5			Date: September 18, 2008		
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 (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	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	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:					

Fairchild Draw Riparian Restoration Project
 Grant No. 07-150WPF
 Transect Data Sheet

Transect Number: T-5			Date: September 18, 2007		
Transect Length: 25.5m			Examiner(s): D .Dorum		
Endpoint Stake UTM's (NAD 83)					
Stake 1: 493747 / 3815475					
Stake 2: 493728 / 3815495					
Point (m)	Cover Type	Height (cm)	Point (m)	Cover Type	Height (cm)
0.5	Kentucky bluegrass	2	17.5	Kentucky bluegrass	1
1.0	Kentucky bluegrass	3	18.0	Bare ground	0
1.5	Bare ground	0	18.5	Bare ground	0
2.0	Mullein	8	19.0	Kentucky bluegrass	3
2.5	Bare ground	0	19.5	Kentucky bluegrass	11
3.0	Kentucky bluegrass	1	20.0	Kentucky bluegrass	1
3.5	Kentucky bluegrass	1	20.5	Kentucky bluegrass	3
4.0	Wolfstail	3	21.0	Dandelion	1
4.5	Kentucky bluegrass	1	21.5	Clover	1
5.0	Bare ground	0	22.0	Kentucky bluegrass	2
5.5	Clover	1	22.5	Clover	5
6.0	Kentucky bluegrass	2	23.0	Kentucky bluegrass	3
6.5	Bare ground	0	23.5	Forb	2
7.0	Kentucky bluegrass	1	24.0	Bare ground	0
7.5	Forb	3	24.5	Dandelion	3
8.0	Bare ground	0	25.0	Kentucky bluegrass	4
8.5	Litter	0	Photo: T-5A 		
9.0	Bare ground	0			
9.5	Kentucky bluegrass	4			
10	Dandelion	1			
10.5	Bare ground (gopher mound)	0			
11.0	Bare ground	0			
11.5	Dandelion	2			
12.0	Bare ground (gopher mound)	0			
12.5	Mullein	8			
13.0	Dandelion	1			
13.5	Kentucky bluegrass	6			
14.0	Kentucky bluegrass	4			
14.5	Dandelion	2			
15.0	Kentucky bluegrass	2			
15.5	Kentucky bluegrass	6			
16.0	Litter	0			
16.5	Bare ground	0			
17.0	Kentucky bluegrass	2			
Notes:					

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.

Fairchild Draw Riparian Restoration Project

Grant No. 07-150WPF

Bebb's Willow Monitoring Data Sheet

Date: September 15, 2011			Observer(s): D. Dorum					
Willow Plant	Plant Status (Alive/Dead)	Height (cm)	Willow Plant	Plant Status (Alive/Dead)	Height (cm)	Willow Plant	Plant Status (Alive/Dead)	Height (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	-			
034	DEAD	-	068	Alive	-			
Notes:								

Fairchild Draw Riparian Restoration Project

Grant No. 07-150WPF

Bebb's Willow Monitoring Data Sheet

Date: September 15, 2011			Observer(s): D. Dorum and L. Dorum					
Willow Plant	Plant Status (Alive/Dead)	Height (cm)	Willow Plant	Plant Status (Alive/Dead)	Height (cm)	Willow Plant	Plant Status (Alive/Dead)	Height (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:								

Fairchild Draw Riparian Restoration Project

Grant No. 07-150WPF

Bebb's Willow Monitoring Data Sheet

Date: September 10, 2010			Observer(s): D. Dorum and L. Dorum					
Willow Plant	Plant Status (Alive/Dead)	Height (cm)	Willow Plant	Plant Status (Alive/Dead)	Height (cm)	Willow Plant	Plant Status (Alive/Dead)	Height (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:								

Fairchild Draw Riparian Restoration Project

Grant No. 07-150WPF

Bebb's Willow Monitoring Data Sheet

Date: September 10, 2009			Observer(s): D. Dorum and L. Dorum					
Willow Plant	Plant Status (Alive/Dead)	Height (cm)	Willow Plant	Plant Status (Alive/Dead)	Height (cm)	Willow Plant	Plant Status (Alive/Dead)	Height (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 brown. Plant stem was still flexible. It is yet uncertain whether plant will re-sprout in the 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	Plant Status (Alive/Dead)	Height (cm)	Willow Plant	Plant Status (Alive/Dead)	Height (cm)	Willow Plant	Plant Status (Alive/Dead)	Height (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.

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 15, 2011		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-1A	Time: 8:45am	Location UTM's (NAD 83): 493666 / 3814275	
Weather Conditions: Cloudy with sporadic rain.			

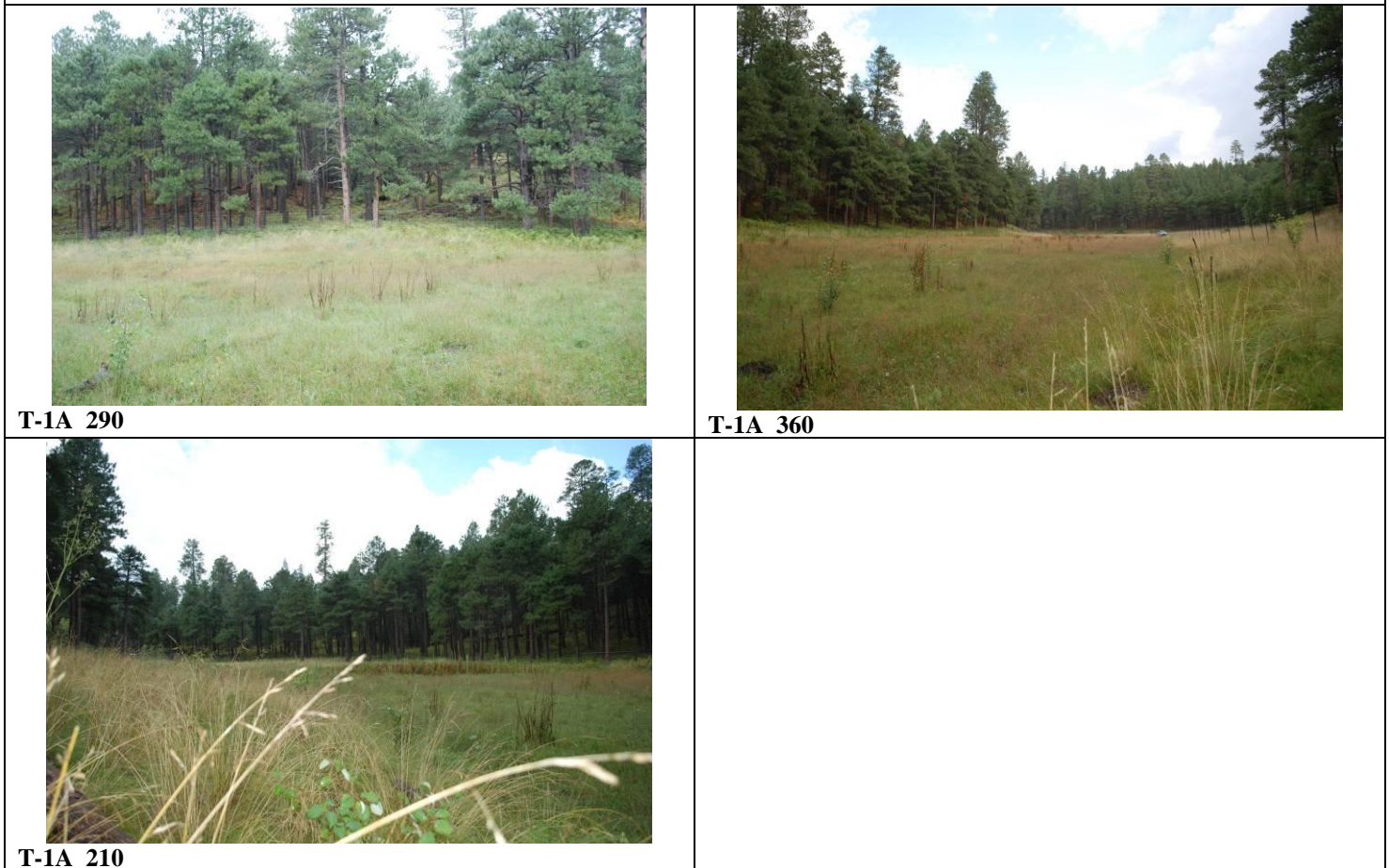
View 1	Camera Height: 1 M	Compass Bearing: 290
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>		

View 2	Camera Height: 1 M	Compass Bearing: 360
Photo Subject/Purpose: General meadow condition		

View 3	Camera Height: 1 M	Compass Bearing: 210
Photo Subject/Purpose: General meadow condition		

View 4	Camera Height:	Compass Bearing:
Photo Subject/Purpose:		

Notes: _____



Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-1A		Time: 5:05pm	Location UTM's (NAD 83): 493666 / 3814275
Weather Conditions: Partly cloudy and calm.			
View 1	Camera Height: 1 M	Compass Bearing: 290	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose: General meadow condition			
View 3	Camera Height: 1 M	Compass Bearing: 210	
Photo Subject/Purpose: General meadow condition			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			

Notes:



T-1A 290



T-1A 360



T-1A 210

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-1A		Time: 2:00pm	Location UTM's (NAD 83): 493666 / 3814275
Weather Conditions: Partly cloudy and calm.			
View 1	Camera Height: 1 M	Compass Bearing: 290	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose: General meadow condition			
View 3	Camera Height: 1 M	Compass Bearing: 210	
Photo Subject/Purpose: General meadow condition			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-1A 290



T-1A 360



T-1A 210

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-1A	Time: 1:15 PM	Location UTM's (NAD 83): 493666 / 3814275	
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 290	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose: General meadow condition			
View 3	Camera Height: 1 M	Compass Bearing: 210	
Photo Subject/Purpose: General meadow condition			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-1A 290



T-1A 360



T-1A 210

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: 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/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose: General meadow condition			
View 3	Camera Height: 1 M	Compass Bearing: 210	
Photo Subject/Purpose: General meadow condition			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-1A 290



T-1A 360



T-1A 210

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 15, 2011		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-1B		Time: 8:50a	Location UTM's (NAD 83): 493644 / 3814277
Weather Conditions: <u>Cloudy with sporadic rain.</u>			
View 1	Camera Height: 1 M	Compass Bearing: 100	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-1B 100

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-1B		Time: 5:10 PM	Location UTM's (NAD 83): 493644 / 3814277
Weather Conditions: Partly cloudy and calm.			
View 1	Camera Height: 1 M	Compass Bearing: 100	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-1B 100

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-1B		Time: 1:55 PM	Location UTM's (NAD 83): 493644 / 3814277
Weather Conditions: Partly cloudy and calm.			
View 1	Camera Height: 1 M	Compass Bearing: 100	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-1B 100

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-1B	Time: 1:12 PM	Location UTM's (NAD 83): 493644 / 3814277	
Weather Conditions: Partly cloudy and breezy.			
View 1	Camera Height: 1 M	Compass Bearing: 100	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-1B 100

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-1B	Time: 2:15 PM	Location UTM's (NAD 83): 493644 / 3814277	
Weather Conditions: Sunny and breezy.			
View 1	Camera Height: 1 M	Compass Bearing: 100	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-1B 100

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

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	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 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



T2-A 160

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-2A	Time: 11:40am	Location UTM's (NAD 83): 493618 / 3814677	
Weather Conditions: Sunny and warm.			
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 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

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-2A	Time: 10:30am	Location UTM's (NAD 83): 493618 / 3814677	
Weather Conditions: Mostly sunny and calm.			
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 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

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-2A		Time:	Location UTM's (NAD 83): 493618 / 3814677
Weather Conditions: Partly cloudy and breezy.			
View 1	Camera Height: 1 M	Compass Bearing: 240	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height: 1 M	Compass Bearing: 320	
Photo Subject/Purpose: General meadow 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

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-2A		Time: 1:00 PM	Location UTM's (NAD 83): 493618 / 3814677
Weather Conditions: Sunny and breezy.			
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 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

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

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 Conditions: Partly cloudy and clam.			
View 1	Camera Height: 1 M	Compass Bearing: 50	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			
			
T2B 50			

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-2B	Time: 11:45am	Location UTM's (NAD 83): 493622 / 3814667	
Weather Conditions: Sunny and warm			
View 1	Camera Height: 1M	Compass Bearing: 50	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-2B 50

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-2B	Time: 10:30am	Location UTM's (NAD 83): 493622 / 3814667	
Weather Conditions: _____			
View 1	Camera Height: 1M	Compass Bearing: 50	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-2B 50

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-2B		Time:	Location UTM's (NAD 83): 493622 / 3814667
Weather Conditions: Partly cloudy and breezy.			
View 1	Camera Height: 1M	Compass Bearing: 50	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-2B 50

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-2B		Time: 1300	Location UTM's (NAD 83): 493622 / 3814667
Weather Conditions: Sunny and breezy.			
View 1	Camera Height: 1M	Compass Bearing: 50	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-2B 50

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-3A	Time: 10:38am	Location UTM's (NAD 83): 493631 / 3814936	
Weather Conditions: Partly cloudy and clam.			

View 1	Camera Height: 1 M	Compass Bearing: 270
Photo Subject/Purpose: Vegetation monitoring transect line.		

View 2	Camera Height: 1 M	Compass Bearing: 360
Photo Subject/Purpose: General meadow condition.		

View 3	Camera Height: 1 M	Compass Bearing: 90
Photo Subject/Purpose: General meadow condition.		

View 4	Camera Height: 1M	Compass Bearing: 180
Photo Subject/Purpose:		

Notes:



T-3A 270



T-3A 360



T-3A 90



T-3A 180

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-3A		Time: 10:55am	Location UTM's (NAD 83): 493631 / 3814963
Weather Conditions: Sunny with light wind.			
View 1	Camera Height: 1M	Compass Bearing: 270	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
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-3A 270



T-3A 360



T-3A 90



T-3A 180

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-3A		Time: 2:00pm	Location UTM's (NAD 83): 493631 / 3814963
Weather Conditions: _____			
View 1	Camera Height: 1M	Compass Bearing: 270	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
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-3A 270



T-3A 360



T-3A 90



T-3A 180

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: Dorum
Camera: Olympus Stylus 400		
Photo Point No.: T-3A	Time: 11:58 am	Location UTM's (NAD 83): 493631 / 3814963
Weather Conditions: Partly cloudy and breezy.		
View 1	Camera Height: 1M	Compass Bearing: 270
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>		
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-3A 270



T-3A 360



T-3A 90



T-3A 180

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-3A		Time: 1215	Location UTM's (NAD 83): 493631 / 3814963
Weather Conditions: Sunny and windy.			
View 1	Camera Height: 1M	Compass Bearing: 270	
Photo Subject/Purpose: Vegetation 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-3A 270



T-3A 360



T-3A 90



T-3A 180

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

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/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing:	
Photo Subject/Purpose: General meadow condition.			
View 3	Camera Height: 1 M	Compass Bearing:	
Photo Subject/Purpose: General meadow condition.			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			
			
T-3B 90			

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-3B	Time: 11:00am	Location UTM's (NAD 83): 493626 / 3814969	
Weather Conditions: <u>Sunny with light wind.</u>			
View 1	Camera Height: 1M	Compass Bearing: 90	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-3B 90

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-3B		Time: 10:00am	Location UTM's (NAD 83): 493626 / 3814969
Weather Conditions: <u>Mostly sunny and calm.</u>			
View 1	Camera Height: 1M	Compass Bearing: 90	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-3B 90

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-3B		Time: 1155	Location UTM's (NAD 83): 493626 / 3814969
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1M	Compass Bearing: 90	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: _____			



T-3B 90

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-3B		Time: 1217	Location UTM's (NAD 83): 493626 / 3814969
Weather Conditions: Sunny and breezy			
View 1	Camera Height: 1M	Compass Bearing: 90	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-3B 90

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-4A		Time	Location UTM's (NAD 83): 493684 / 3815279
Weather Conditions: Sunny and clam.			
View 1	Camera Height: 1 M	Compass Bearing: 270	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose: General meadow condition.			
View 3	Camera Height: 1 M	Compass Bearing: 90	
Photo Subject/Purpose: General meadow condition.			
View 4	Camera Height:	Compass Bearing: 180	
Photo Subject/Purpose:			
Notes:			



T-4A 270



T-4A 360



T-4A 90



T-4A 180

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-4A		Time: 10:20am	Location UTM's (NAD 83): 493684 / 3815279
Weather Conditions: Sunny and windy.			
View 1	Camera Height: 1M	Compass Bearing: 270	
Photo Subject/Purpose: Vegetation 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 360



T-4A 90



T-4A 180

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

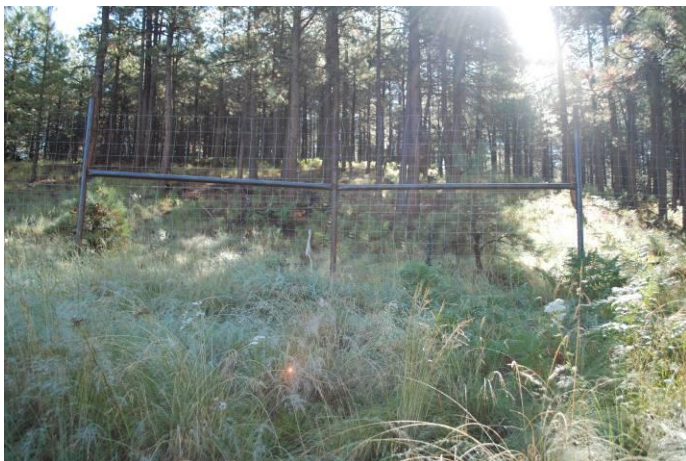
Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-4A		Time: 9:15am	Location UTM's (NAD 83): 493684 / 3815279
Weather Conditions: <u>Sunny and calm.</u>			
View 1	Camera Height: 1M	Compass Bearing: 270	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
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 360



T-4A 90



T-4A 180

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-4A	Time: 11:15am	Location UTM's (NAD 83): 493684 / 3815279	
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1M	Compass Bearing: 270	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
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 360



T-4A 90



T-4A 180

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-4A		Time: 1130	Location UTM's (NAD 83): 493684 / 3815279
Weather Conditions: Sunny and breezy			
View 1	Camera Height: 1M	Compass Bearing: 270	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
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 360




T-4A 90



T-4A 180

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-4B		Time	Location UTM's (NAD 83): 493664 / 3815276
Weather Conditions: Sunny and clam.			
View 1	Camera Height: 1 M	Compass Bearing: 80	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height: 1 M	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			
			
T-4B 80			

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-4B	Time: 10:25am	Location UTM's (NAD 83): 493664 / 3815276	
Weather Conditions: <u>Sunny and windy.</u>			
View 1	Camera Height: 1M	Compass Bearing: 80	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-4B 80

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-4B		Time: 9:15am	Location UTM's (NAD 83): 493664 / 3815276
Weather Conditions: <u>Sunny and calm.</u>			
View 1	Camera Height: 1M	Compass Bearing: 80	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-4B 80

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-4B	Time: 11:12am	Location UTM's (NAD 83): 493664 / 3815276	
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1M	Compass Bearing: 80	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-4B 80

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-4B		Time: 1133	Location UTM's (NAD 83): 493664 / 3815276
Weather Conditions: Sunny and windy			
View 1	Camera Height: 1M	Compass Bearing: 80	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-4B 80

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-5A		Time: 9:08am	Location UTM's (NAD 83): 493747 / 3815475
Weather Conditions: Sunny and clam.			
View 1	Camera Height: 1 M	Compass Bearing: 300	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing: 30	
Photo Subject/Purpose:			
View 3	Camera Height: 1 M	Compass Bearing: 120	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing: 210	
Photo Subject/Purpose:			
Notes:			



T-5A 300



T-5A 30



T-5A 120



T5-A 210

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-5A		Time: 9:40am	Location UTM's (NAD 83): 493747 / 3815475
Weather Conditions: Sunny and windy			
View 1	Camera Height: 1M	Compass Bearing: 300	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height: 1M	Compass Bearing: 30	
Photo Subject/Purpose: General meadow 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



T-5A 120



T-5A 210

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-5A		Time:	Location UTM's (NAD 83): 493747 / 3815475
Weather Conditions: _____			
View 1	Camera Height: 1M	Compass Bearing: 300	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height: 1M	Compass Bearing: 30	
Photo Subject/Purpose: General meadow 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



T-5A 120



T-5A 210

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-5A	Time: 10:43am	Location UTM's (NAD 83): 493747 / 3815475	
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1M	Compass Bearing: 300	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height: 1M	Compass Bearing: 30	
Photo Subject/Purpose: General meadow 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



T-5A 120



T-5A 210

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-5A		Time: 1035	Location UTM's (NAD 83): 493747 / 3815475
Weather Conditions: Sunny and breezy			
View 1	Camera Height: 1M	Compass Bearing: 300	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1M	Compass Bearing: 30	
Photo Subject/Purpose: General meadow 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




T-5A 120



T-5A 210

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: T-5B		Time: 9:10am	Location UTM's (NAD 83): 493728 / 3815495
Weather Conditions: Sunny and clam.			
View 1	Camera Height: 1 M	Compass Bearing: 120	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height: 1 M	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			
			
T-5B 120			

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus			
Photo Point No.: T-5B		Time: 9:45am	Location UTM's (NAD 83): 493728 / 3815495
Weather Conditions: _____			
View 1	Camera Height: 1M	Compass Bearing: 120	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-5B 120

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus			
Photo Point No.: T-5B		Time:	Location UTM's (NAD 83): 493728 / 3815495
Weather Conditions: _____			
View 1	Camera Height: 1M	Compass Bearing: 120	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: <u>Photo missing.</u>			

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-5B		Time: 10:44am	Location UTM's (NAD 83): 493728 / 3815495
Weather Conditions: <u>Mostly sunny and breezy</u>			
View 1	Camera Height: 1M	Compass Bearing: 120	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-5B 120

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: T-5B		Time: 1040	Location UTM's (NAD 83): 493728 / 3815495
Weather Conditions: _____			
View 1	Camera Height: 1M	Compass Bearing: 120	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



T-5B 120

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring 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 Conditions: Cloudy and occasional rain.			
View 1	Camera Height: 1 M	Compass Bearing:	
Photo Subject/Purpose: General meadow condition.			
View 2	Camera Height: 1 M	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height: 1 M	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: 1931	Time: 4:50pm	Location UTM's (NAD 83): 493736 / 3814528	
Weather Conditions: _____			
View 1	Camera Height: 1M	Compass Bearing: 200	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: Marker stake not found.			



Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: 1931		Time:	Location UTM's (NAD 83): 493736 / 3814528
Weather Conditions: _____			
View 1	Camera Height: 1M	Compass Bearing: 200	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes: Marker stake not found.			



Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: 1931		Time: 1:24pm	Location UTM's (NAD 83): 493736 / 3814528
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1M		Compass Bearing: 200
Photo Subject/Purpose: General meadow condition			
View 2	Camera Height:		Compass Bearing:
Photo Subject/Purpose:			
View 3	Camera Height:		Compass Bearing:
Photo Subject/Purpose:			
View 4	Camera Height:		Compass Bearing:
Photo Subject/Purpose:			
Notes: Marker stake not found.			



Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: 1931		Time: 1350	Location UTM's (NAD 83): 493736 / 3814528
Weather Conditions: Sunny and windy			
View 1	Camera Height: 1M	Compass Bearing: 200	
Photo Subject/Purpose: General meadow condition			
View 2	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 3	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 15, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-1		Time: 8:32am	Location UTM's (NAD 83): 493689 / 3814439
Weather Conditions: Cloudy, with light drizzle.			
View 1	Camera Height: 1 M	Compass Bearing: 160	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing: 105	
Photo Subject/Purpose:			
View 3	Camera Height: 1 M	Compass Bearing: 40	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing:	
Photo Subject/Purpose:			
Notes:			



B-1 160



B-1 105



B-1 40

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-1		Time: 5:00pm	Location UTM's (NAD 83): 493689 / 3814439
Weather Conditions: Sunny.			
View 1	Camera Height: 1 M	Compass Bearing: 160	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 105	
Photo Subject/Purpose: General meadow 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



B-1 105



B-1 40

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-1		Time: 1:45pm	Location UTM's (NAD 83): 493689 / 3814439
Weather Conditions: Mostly cloudy and calm.			
View 1	Camera Height: 1 M	Compass Bearing: 160	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 105	
Photo Subject/Purpose: General meadow 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



B-1 105



B-1 40

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-1		Time: 2:05pm	Location UTM's (NAD 83): 493689 / 3814439
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 160	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 105	
Photo Subject/Purpose: General meadow 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



B-1 105



B-1 40

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-1		Time: 1405	Location UTM's (NAD 83): 493689 / 3814439
Weather Conditions: Sunny and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 160	
Photo Subject/Purpose: Bank treatment baseline			
View 2	Camera Height: 1 M	Compass Bearing: 105	
Photo Subject/Purpose: General meadow 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: _____			



B-1 160



B-1 105



B-1 40

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011	Photographer: Dorum	
Camera: Olympus Nikon D80		
Photo Point No.: B-2	Time: 11:37am	Location UTM's (NAD 83): 493650 / 3814562
Weather Conditions: Partly cloudy and clam.		

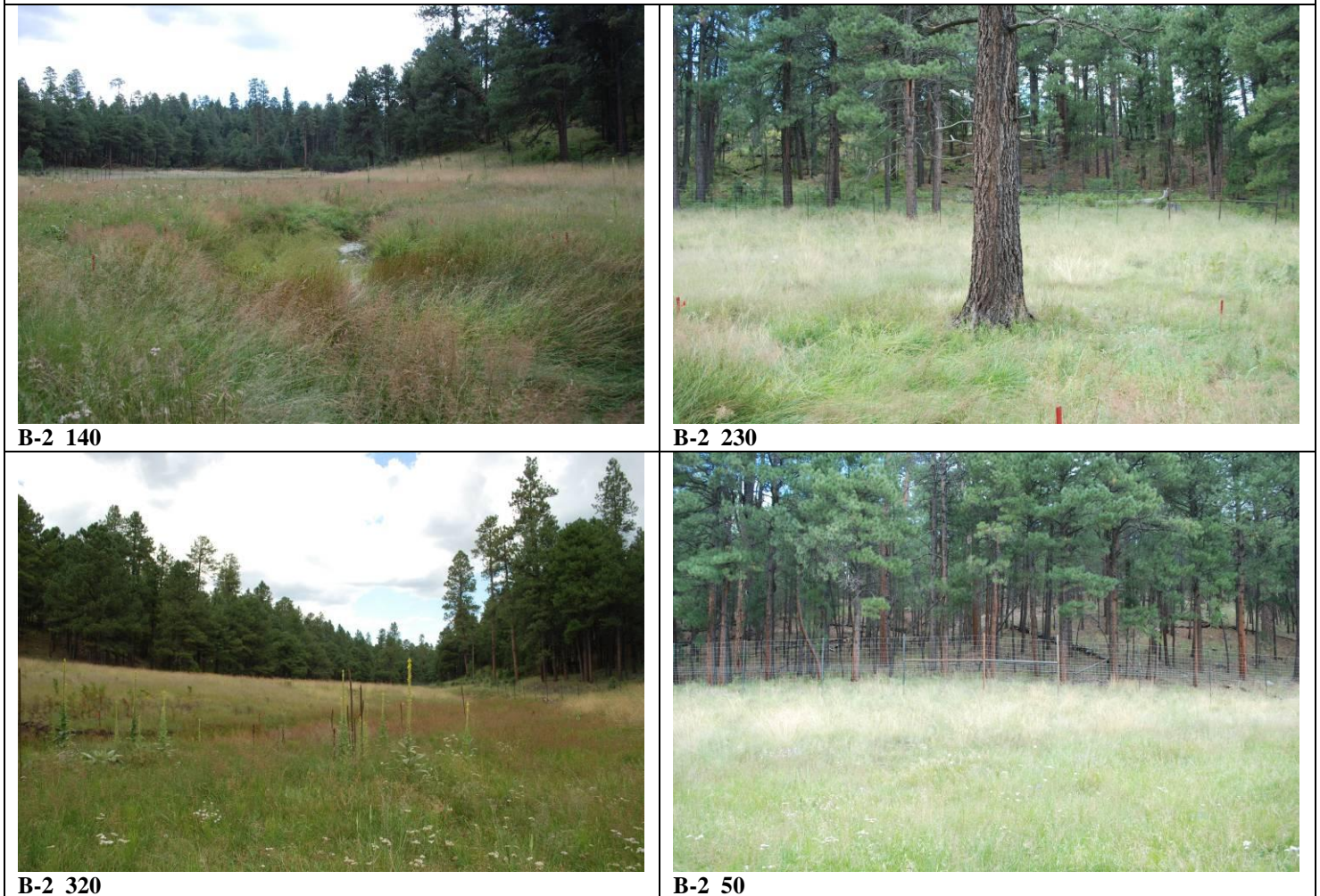
View 1	Camera Height: 1 M	Compass Bearing: 140
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>		

View 2	Camera Height: 1 M	Compass Bearing: 230
Photo Subject/Purpose:		

View 3	Camera Height: 1 M	Compass Bearing: 320
Photo Subject/Purpose:		

View 4	Camera Height:	Compass Bearing: 50
Photo Subject/Purpose:		

Notes:



Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-2		Time: 4:40pm	Location UTM's (NAD 83): 493650 / 3814562
Weather Conditions: <u>Sunny.</u>			
View 1	Camera Height: 1 M	Compass Bearing: 140	
Photo Subject/Purpose: <u>Bank condition monitoring.</u>			
View 2	Camera Height: 1 M	Compass Bearing: 230	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 3	Camera Height: 1 M	Compass Bearing: 320	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 4	Camera Height: 1 M	Compass Bearing: 50	
Photo Subject/Purpose: <u>General meadow condition</u>			
Notes:			



B-2 140



B-2 230



B-2 320



B-2 50

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-2		Time: 11:00am	Location UTM's (NAD 83): 493650 / 3814562
Weather Conditions: Mostly sunny and calm.			
View 1	Camera Height: 1 M	Compass Bearing: 140	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 230	
Photo Subject/Purpose: General 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



B-2 320



B-2 50

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-2		Time: 1:15pm	Location UTM's (NAD 83): 493650 / 3814562
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 140	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 230	
Photo Subject/Purpose: General 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



B-2 320



B-2 50

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-2		Time: 1340	Location UTM's (NAD 83): 493650 / 3814562
Weather Conditions: Sunny and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 140	
Photo Subject/Purpose: Baseline for bank treatment			
View 2	Camera Height: 1 M	Compass Bearing: 230	
Photo Subject/Purpose: General 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



B-2 320



B-2 50

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-3		Time: 11:32am	Location UTM's (NAD 83): 493630 / 3814578
Weather Conditions: Partly cloudy and clam.			
View 1	Camera Height: 1 M	Compass Bearing: 160	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing: 250	
Photo Subject/Purpose:			
View 3	Camera Height: 1 M	Compass Bearing: 340	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing: 70	
Photo Subject/Purpose:			
Notes:			



B-3 160



B-3 250



B-3 340



B-3 70

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-3		Time: 4:35pm	Location UTM's (NAD 83): 493630 / 3814578
Weather Conditions: <u>Sunny</u> .			
View 1	Camera Height: 1 M	Compass Bearing: 160	
Photo Subject/Purpose: <u>Bank condition monitoring</u>			
View 2	Camera Height: 1 M	Compass Bearing: 250	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 3	Camera Height: 1 M	Compass Bearing: 340	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 4	Camera Height: 1 M	Compass Bearing: 70	
Photo Subject/Purpose: <u>General meadow condition</u>			
Notes:			



B-3 160



B-3 250



B-3 340



B-3 70

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-3		Time: 10:55am	Location UTM's (NAD 83): 493630 / 3814578
Weather Conditions: Mostly sunny and calm.			
View 1	Camera Height: 1 M	Compass Bearing: 160	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 250	
Photo Subject/Purpose: General meadow 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



B-3 340



B-3 70

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: Dorum
Camera: Olympus Stylus 400		
Photo Point No.: B-3	Time: 1:10pm	Location UTM's (NAD 83): 493630 / 3814578
Weather Conditions: Partly cloudy and breezy		
View 1	Camera Height: 1 M	Compass Bearing: 160
Photo Subject/Purpose: Bank condition monitoring		
View 2	Camera Height: 1 M	Compass Bearing: 250
Photo Subject/Purpose: General meadow 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



B-3 340



B-3 70

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-3		Time: 1330	Location UTM's (NAD 83): 493630 / 3814578
Weather Conditions: Sunny and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 160	
Photo Subject/Purpose: Baseline for bank treatment			
View 2	Camera Height: 1 M	Compass Bearing: 250	
Photo Subject/Purpose: General meadow 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



B-3 340



B-3 70

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-4		Time: 11:20am	Location UTM's (NAD 83): 493609 / 3814710
Weather Conditions: Partly cloudy and clam.			
View 1	Camera Height: 1 M	Compass Bearing: 130	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing: 220	
Photo Subject/Purpose:			
View 3	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing: 60	
Photo Subject/Purpose:			
Notes:			



B-4 130



B-4 220



B-4 360



B-4 60

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-4		Time: 11:30am	Location UTM's (NAD 83): 493609 / 3814710
Weather Conditions: Sunny and calm.			
View 1	Camera Height: 1 M	Compass Bearing: 130	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 220	
Photo Subject/Purpose: General meadow 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



B-4 360



B-4 60

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-4		Time: 10:30am	Location UTM's (NAD 83): 493609 / 3814710
Weather Conditions: Mostly sunny and calm.			
View 1	Camera Height: 1 M	Compass Bearing: 130	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 220	
Photo Subject/Purpose: General meadow 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



B-4 360



B-4 60

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-4		Time: 12:20pm	Location UTM's (NAD 83): 493609 / 3814710
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 130	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 220	
Photo Subject/Purpose: General meadow 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



B-4 360



B-4 60

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-4		Time: 1250	Location UTM's (NAD 83): 493609 / 3814710
Weather Conditions: Sunny and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 130	
Photo Subject/Purpose: Baseline for bank treatment			
View 2	Camera Height: 1 M	Compass Bearing: 220	
Photo Subject/Purpose: General meadow 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



B-4 360



B-4 60

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-5		Time: 10:29am	Location UTM's (NAD 83): 493615 / 3815022
Weather Conditions: Partly cloudy and clam.			
View 1	Camera Height: 1 M	Compass Bearing: 190	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing: 280	
Photo Subject/Purpose:			
View 3	Camera Height: 1 M	Compass Bearing: 10	
Photo Subject/Purpose:			
View 4	Camera Height:	Compass Bearing: 100	
Photo Subject/Purpose:			
Notes:			



B-5 190



B-5 280



B-5 10



B-5 100

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-5		Time:	Location UTM's (NAD 83): 493615 / 3815022
Weather Conditions: <u>Sunny and calm.</u>			
View 1	Camera Height: 1 M	Compass Bearing: 190	
Photo Subject/Purpose: <u>Bank condition monitoring</u>			
View 2	Camera Height: 1 M	Compass Bearing: 280	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 3	Camera Height: 1 M	Compass Bearing: 10	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 4	Camera Height: 1 M	Compass Bearing: 100	
Photo Subject/Purpose: <u>General meadow condition</u>			
Notes:			



B-5 190



B-5 280



B-5 10



B-5 100

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-5		Time: 9:55am	Location UTM's (NAD 83): 493615 / 3815022
Weather Conditions: <u>Sunny and calm.</u>			
View 1	Camera Height: 1 M	Compass Bearing: 190	
Photo Subject/Purpose: <u>Bank condition monitoring</u>			
View 2	Camera Height: 1 M	Compass Bearing: 280	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 3	Camera Height: 1 M	Compass Bearing: 10	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 4	Camera Height: 1 M	Compass Bearing: 100	
Photo Subject/Purpose: <u>General meadow condition</u>			
Notes:			



B-5 190



B-5 280



B-5 10



B-5 100

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-5		Time: 11:40am	Location UTM's (NAD 83): 493615 / 3815022
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 190	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 280	
Photo Subject/Purpose: General meadow 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



B-5 10



B-5 100

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-5		Time: 1200	Location UTM's (NAD 83): 493615 / 3815022
Weather Conditions: Sunny and windy			
View 1	Camera Height: 1 M	Compass Bearing: 190	
Photo Subject/Purpose: Baseline for bank treatment			
View 2	Camera Height: 1 M	Compass Bearing: 280	
Photo Subject/Purpose: General meadow 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



B-5 10



B-5 100

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-6		Time: 9:00am	Location UTM's (NAD 83): 493776 / 3815540
Weather Conditions: Sunny and clam.			
View 1	Camera Height: 1 M	Compass Bearing: 180	
Photo Subject/Purpose: Vegetation monitoring transect line.			
View 2	Camera Height: 1 M	Compass Bearing: 270	
Photo Subject/Purpose:			
View 3	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose:			
View 4	Camera Height: 1M	Compass Bearing: 90	
Photo Subject/Purpose:			
Notes:			



B-6 180



B-6 270



B-6 360



B-6 90

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-6		Time:	Location UTM's (NAD 83): 493776 / 3815540
Weather Conditions: <u>Sunny and calm.</u>			
View 1	Camera Height: 1 M	Compass Bearing: 180	
Photo Subject/Purpose: <u>Bank condition monitoring</u>			
View 2	Camera Height: 1 M	Compass Bearing: 270	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 3	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 4	Camera Height: 1 M	Compass Bearing: 90	
Photo Subject/Purpose: <u>General meadow condition</u>			
Notes:			



B-6 180



B-6 270



B-6 360



B-6 90

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: D. Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-6		Time: 8:40am	Location UTM's (NAD 83): 493776 / 3815540
Weather Conditions: <u>Sunny and calm.</u>			
View 1	Camera Height: 1 M	Compass Bearing: 180	
Photo Subject/Purpose: <u>Bank condition monitoring</u>			
View 2	Camera Height: 1 M	Compass Bearing: 270	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 3	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose: <u>General meadow condition</u>			
View 4	Camera Height: 1 M	Compass Bearing: 90	
Photo Subject/Purpose: <u>General meadow condition</u>			
Notes:			



B-6 180



B-6 270



B-6 360



B-6 90

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: D. Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-6		Time: 10:35am	Location UTM's (NAD 83): 493776 / 3815540
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 180	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 270	
Photo Subject/Purpose: General meadow condition			
View 3	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose: General meadow condition			
View 4	Camera Height: 1 M	Compass Bearing: 90	
Photo Subject/Purpose: General meadow condition			
Notes:			



B-6 180



B-6 270



B-6 360



B-6 90

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-6		Time: 1030	Location UTM's (NAD 83): 493776 / 3815540
Weather Conditions: Breezy and windy			
View 1	Camera Height: 1 M	Compass Bearing: 180	
Photo Subject/Purpose: Baseline for bank treatment			
View 2	Camera Height: 1 M	Compass Bearing: 270	
Photo Subject/Purpose: General meadow condition			
View 3	Camera Height: 1 M	Compass Bearing: 360	
Photo Subject/Purpose: General meadow condition			
View 4	Camera Height: 1 M	Compass Bearing: 90	
Photo Subject/Purpose: General meadow condition			
Notes:			



B-6 180



B-6 270



B-6 360



B-6 90

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 8, 2011		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-7	Time: 8:55am	Location UTM's (NAD 83): 493802 / 3815597	
Weather Conditions: _____			
View 1	Camera Height: 1 M	Compass Bearing: 210	
Photo Subject/Purpose: <u>Vegetation monitoring transect line.</u>			
View 2	Camera Height: 1 M	Compass Bearing: 300	
Photo Subject/Purpose: _____			
View 3	Camera Height: 1 M	Compass Bearing: 30	
Photo Subject/Purpose: _____			
View 4	Camera Height: _____	Compass Bearing: 120	
Photo Subject/Purpose: _____			
Notes: _____			



B-7 210



B-7 300



B-7 30



B-7 120

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2010		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-7		Time: 9:25am	Location UTM's (NAD 83): 493802 / 3815597
Weather Conditions: _____			
View 1	Camera Height: 1 M	Compass Bearing: 210	
Photo Subject/Purpose: <u>Bank condition monitoring</u>			
View 2	Camera Height: 1 M	Compass Bearing: 300	
Photo Subject/Purpose: General meadow condition			
View 3	Camera Height: 1 M	Compass Bearing: 30	
Photo Subject/Purpose: General meadow condition			
View 4	Camera Height: 1 M	Compass Bearing: 120	
Photo Subject/Purpose: General meadow condition			
Notes: _____			



B-7 210



B-7 300



B-7 30



B-7 120

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 10, 2009		Photographer: Dorum	
Camera: Olympus Nikon D80			
Photo Point No.: B-7		Time:	Location UTM's (NAD 83): 493802 / 3815597
Weather Conditions: _____			
View 1	Camera Height: 1 M	Compass Bearing: 210	
Photo Subject/Purpose: <u>Bank condition monitoring</u>			
View 2	Camera Height: 1 M	Compass Bearing: 300	
Photo Subject/Purpose: General meadow condition			
View 3	Camera Height: 1 M	Compass Bearing: 30	
Photo Subject/Purpose: General meadow condition			
View 4	Camera Height: 1 M	Compass Bearing: 120	
Photo Subject/Purpose: General meadow condition			
Notes:			



B-7 210



B-7 300



B-7 30



B-7 120

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2008		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-7		Time: 10:30am	Location UTM's (NAD 83): 493802 / 3815597
Weather Conditions: Partly cloudy and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 210	
Photo Subject/Purpose: Bank condition monitoring			
View 2	Camera Height: 1 M	Compass Bearing: 300	
Photo Subject/Purpose: General meadow condition			
View 3	Camera Height: 1 M	Compass Bearing: 30	
Photo Subject/Purpose: General meadow condition			
View 4	Camera Height: 1 M	Compass Bearing: 120	
Photo Subject/Purpose: General meadow condition			
Notes:			



B-7 210



B-7 300



B-7 30



B-7 120

Fairchild Draw Riparian Restoration Project
Photo Point Monitoring Data Sheet

Date: September 18, 2007		Photographer: Dorum	
Camera: Olympus Stylus 400			
Photo Point No.: B-7		Time: 1015	Location UTM's (NAD 83): 493802 / 3815597
Weather Conditions: Sunny and breezy			
View 1	Camera Height: 1 M	Compass Bearing: 210	
Photo Subject/Purpose: Baseline for bank treatment			
View 2	Camera Height: 1 M	Compass Bearing: 300	
Photo Subject/Purpose: General meadow condition			
View 3	Camera Height: 1 M	Compass Bearing: 30	
Photo Subject/Purpose: General meadow condition			
View 4	Camera Height: 1 M	Compass Bearing: 120	
Photo Subject/Purpose: General meadow condition			
Notes:			



B-7 210



B-7 300



B-7 30



B-7 120

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.

Hopkins Fence Co

P.O. Box 3195
 30341 US Hwy 60/89, Suite D
 Wickenburg, AZ 85358
 (928)684-2648



INVOICE

DATE	INVOICE #
9/27/2007	3430

BILL TO
Az. Game & Fish David Doran 2878 E. White Mountain Blvd. Pinetop, AZ 85935

SHIP TO
Fairchild Elk Enclosure Pinetop, AZ

P.O. NO.	TERMS	DUE DATE	REP	SHIP VIA	PROJECT
E0069499		9/27/2007	GAG	Hopkins	Fairchild Elk Encl.

DESCRIPTION	QTY	RATE	AMOUNT
2 1/2" x 12' BLACK PIPE UPRIGHTS	110	27.00	2,970.00T
2 1/2" x 10' BLACK PIPE BRACES	104	22.50	2,340.00T
2 1/2" x 5' BLACK PIPE FOR WALK THROUGHS	8	11.25	90.00T
3 1/2" X 12' DRILL PIPE, SCD 80, GATE POSTS	2	39.00	78.00T
10' 1.33 T-POST	1,100	9.08	9,988.00T
4' FIELD FENCE	72	157.00	11,304.00T
12-GA HOG RING, 25LB BOX	3	45.00	135.00T
T-POST CLIPS	10,000	0.05	500.00T
POST MIX	330	2.75	907.50T
TTS WIRE, 100*	2	81.00	162.00T
12' X 8' SWING GATE, 1 5/8" BLACK PIPE FRAME,	2	120.00	240.00T
WELD ON HINGES, SLIDE LATCH			
Sales Tax		8.00%	3,329.16

To be closed 2007-10-15

THANK YOU FOR YOUR BUSINESS.	Total	531,443.66
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All past due balances are subject to a service charge of 2.00% per month

Hopkins Fence Co

P.O. Box 3195
 909 E. Wickenburg Way, Suite D
 Wickenburg, AZ 85358
 (928)684-2648
 ROC10461 ROC107849 ROC167839



INVOICE

DATE	INVOICE #
1/8/2008	3453

BILL TO
Az. Game & Fish David Doran 2878 E. White Mountain Blvd. Pinaltop, AZ. 85935

SHIP TO
Fairchild Elk Enclosure Pinaltop, AZ

P.O. NO.	TERMS	DUE DATE	REP	SHIP VIA	PROJECT
E0069499		1/8/2008	GAG		DavidDoran

DESCRIPTION	QTY	RATE	AMOUNT
LABOR - 11-9-07 TO 11-11-07 - 1 MAN, 3 DAYS HAUL EQUIPMENT & MATERIALS TO JOBSITE & SET-UP - 13 HRS PER DAY @ \$45.00 PER MAN HOUR	39	45.00	1,755.00
LABOR - 11-19-07 TO 11-21-07 - 2 MEN, 3 DAYS DISTRIBUTE MATERIALS IN PREPARATION FOR CONSTRUCTION - 60 MAN HOURS @ \$45.00 PER MAN HOUR	60	45.00	2,700.00
LABOR - 11-26-07 TO 12-01-07 - 4 MEN SET BRACES - 240 MAN HOURS @ \$45.00 PER MAN HOUR	240	45.00	10,800.00
LABOR - 12-03-07 TO 12-04-07 - 3 MEN SET BRACES - 60 MAN HOURS @ \$45.00 PER MAN HOUR	60	45.00	2,700.00
LABOR - 12-05-07 TO 12-07-07 - 4 MEN FINISH SETTING BRACES, START DRIVING T-POSTS - 120 MAN HOURS @ \$45.00 PER MAN HOUR	120	45.00	5,400.00
DANDY DRIGER FENCE MACHINE - DIG POST HOLES, MIX CEMENT, DRIVE T-POSTS @ \$75.00 PER HOUR	40	75.00	3,000.00
SALES TAX		0.00%	0.00
THANK YOU FOR YOUR BUSINESS.			Total \$26,355.00

All past due balances are subject to a service charge of 2.00% per month

*Received okay to pay
 David Doran 1/10/08*

Hopkins Fence Co

P.O. Box 2195
 Wickenburg, AZ 85368
 (928)684-2648



INVOICE

DATE:	INVOICE #
6/11/2008	3474

ROC:10461 ROC:07845 ROC:07838

BILL TO
Az. Game & Fish David Doran 2878 E. White Mountain Blvd. Pinetop, AZ 85935

SHIP TO
Fairchild Elk Enclosure Pinetop, AZ

P.O. NO.	TERMS	DUE DATE	REP	SHIP VIA	PROJECT
E0069469		6/11/2008	ELH	Hopkins	Fairchild Elk Enclo...
DESCRIPTION	QTY	RATE	AMOUNT		
LABOR - 70% COMPLETION ON FAIRCHILD DRAW RIPARIAN RESTORATION PROJECT	1	79,012.73	79,012.73		
SALES TAX		0.00%	0.00		
<i>Rec'd 6/13/08 Sent to Phyllis</i>					
THANK YOU FOR YOUR BUSINESS.				Total	\$79,012.73

All past due balances are subject to a service charge of 2.00% per month

*okay to pay
 David Doran 6/10/08
 6/12/2008*

Hopkins Fence Co

P.O. Box 3195
 Wickenburg, AZ 85358
 (928)684-2648



INVOICE

DATE	INVOICE #
7/18/2008	3477

ROC210461 ROC107849 ROC107838

BILL TO
Az. Game & Fish David Doran 2878 E. White Mountain Blvd. Pinetop, AZ 85935

SHIP TO
Fairchild Elk Exclosure Pinetop, AZ

P.O. NO.	TERMS	DUE DATE	REP	SHIP VIA	PROJECT
E0069499		7/18/2008	ELF		DavidDoran

DESCRIPTION	QTY	RATE	AMOUNT
BALANCE DUE ON ELK EXCLOSURE FOR FAIRCHILD DRAW RIPARIAN RESTORATION PROJECT		33,862.61	33,862.61
SALES TAX		0.00%	0.00

THANK YOU FOR YOUR BUSINESS.	Total	\$33,862.61
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All past due balances are subject to a service charge of 2.00% per month



DISTRIBUTION AND DELIVERY RECORD
Los Lunas Plant Materials Center, Los Lunas, NM

D&D To: David Dorum
ARIZONA GAME AND FISH DEPARTMENT
2878 E. White Mountain Blvd.
Pinetop, AZ 85935
Phone: (928) 367-4281; Fax: (928) 367-1258

Ship To: David Dorum
ARIZONA GAME AND FISH DEPARTMENT
2878 E. White Mountain Blvd.
Pinetop, AZ 85935
Phone: (928) 367-4281; Fax: (928) 367-1258

Order Date: 7/15/2009 Ship Date: 7/22/2009 Number of Packages:
ECS-1 Number: Ship via: Pick-up

D&D Number: NMPMC-09-073

Accession	Scientific Name (Symbol) / Common Name	Lot Number	Cert Class	Age	Test Date	Purity	Total Viab	Bulk Shipped	PLS Shipped	U/M
9066704	Salix bebbiana (SABE2) / Bebb willow	VCO-09-1GALTP	CO			0		50	0	ea

Remarks: Order picked on 7/22/09 at the Los Lunas PMC by Apache Sitgreaves National Forest employees.

PLEASE SIGN AND RETURN ONE COPY TO:

Los Lunas Plant Materials Center
1036 Miller St., S.W.
Los Lunas, NM 87031
Phone: (505) 865-4684
Fax: (505) 865-5163

<i>For PMC Use</i> D & D By: Kathleen Valadez Purpose: Field Planting #: Study #: Ordered By: NMPMC Ordered Filled By: David Dreesen
--

Received By: *David Dorum* 105
Name/Title: David Dorum / Herb Program Mgr.
Date: 7/23/2009

Approved By: *David R Dreesen*
Name/Title: David Dreesen / Agronomist
Date: 7/31/09



DISTRIBUTION AND DELIVERY RECORD
Los Lunas Plant Materials Center, Los Lunas, NM

D&D To: David Dorum
ARIZONA GAME AND FISH DEPARTMENT
2878 E. White Mountain Blvd.
Pinetop, AZ 85935
Phone: (928) 367-4281; Fax: (928) 367-1258

Ship To: David Dorum
ARIZONA GAME AND FISH DEPARTMENT
2878 E. White Mountain Blvd.
Pinetop, AZ 85935
Phone: (928) 367-4281; Fax: (928) 367-1258

Order Date: 8/15/2011 Ship Date: 8/22/2011 Number of Packages:
ECS-1 Number: Ship via: Pick-up

D&D Number: NMPMC-11-040

Accession	Scientific Name (Symbol) / Common Name	Lot Number	Cert Class	Age	Test Date	Purity	Total Viab	Bulk Shipped	PLS Shipped	U/M
9066704	Salix bebbiana (SABE2) / Bebb willow	VCO-10-1GALTP	CO			0		50	0	ca

Remarks: This plant materials order was picked up at the Los Lunas PMC on 8/22/11 by David Dorum.

PLEASE SIGN AND RETURN ONE COPY TO:

Los Lunas Plant Materials Center
1036 Miller St., S.W.
Los Lunas, NM 87031
Phone: (505) 865-4684
Fax: (505) 865-5163

For PMC Use
D & D By: Kathleen Valadez
Purpose:
Field Planting #:
Study #:
Ordered By: NMPMC
Ordered Filled By: David Dreesen

Received By: David Dorum

Approved By: David R. Dreesen

Name/Title: David Dorum / Habitat Program Manager

Name/Title: David R. Dreesen / Agronomist

Date: 9/6/2011

Date: 9/1/11

