



## OPEN SPACE & TRAILS DEPARTMENT

970.668.4060 ph | 970.668.4225 f  
www.SummitCountyCO.gov

0037 Peak One Dr. | PO Box 5660  
Frisco, CO 80443

September 26, 2017

Chris Sturm  
Colorado Water Conservation Board  
1313 Sherman Street, Room 718  
Denver, CO 80203

RE: CWCB Watershed Restoration Grant – POGGI PDAA 201800000221 Final Report – Swan River Restoration

Mr. Sturm:

This letter serves as a final report for activities completed on the Swan River Restoration Project (Project) for the above referenced Watershed Restoration Grant approved on August 27, 2017. As of the submission of this Final Report, all tasks as identified in the associated Exhibit A –Scope of Work are complete.

CWCB Watershed Restoration Grant funds were used to incorporate upland planting enhancements into approximately 20 acres of upland area associated with the Swan River Restoration Project Reach A project site (Site). Larger nursery produced shrubs and trees were secured, delivered, and installed by Western States Reclamation (Contractor) with oversight by the project design consultant, Ecological Resource Consultants (ERC). Larger shrub and tree plantings were focused in several planting pockets throughout the Site as depicted on the as-built planting plan contained in Attachment A.

Smaller nursery stock procured from the Colorado State Forest Service Nursery (CSFSN) were randomly installed by a ten member Rocky Mountain Youth Corps (RMYC) crew in six (6) planting pockets across the Site as depicted on the RMYC planting plan contained in Attachment B. Summit County Open Space and Trails Department (OST) staff provided oversight of the RMYC crew during plant installation.

Larger upland enhancements installed by the Contractor included 37 6-9' Colorado Blue Spruce, 31 single/multi-stem 3-4" caliper Aspen trees, 65 Woods Rose, 43 Big sage brush, and 42 Silver sage brush. Contractor plant installation was completed in late August 2017. Temporary wildlife fencing was installed around all Aspen trees. Smaller upland enhancements installed by RMYC consisted of a 340 plant mix of Rocky Mountain juniper, Woods Rose, Engelmann spruce, and Aspen. RMYC plant installation was completed in early July 2017. Please refer to Attachment C for the CSFSN plant list. Pre- and Post-Construction site photographs are attached as Attachment D.

We are very pleased with the upland planting results on the Project site and wish to thank CWCB and their staff for their continued support of the Swan River Restoration Project. We look forward to ongoing collaboration with CWCB and value the expertise CWCB staff bring to the Swan River Restoration Project team.

Please feel free to contact me at 970.668.4213 with any questions.

Sincerely,

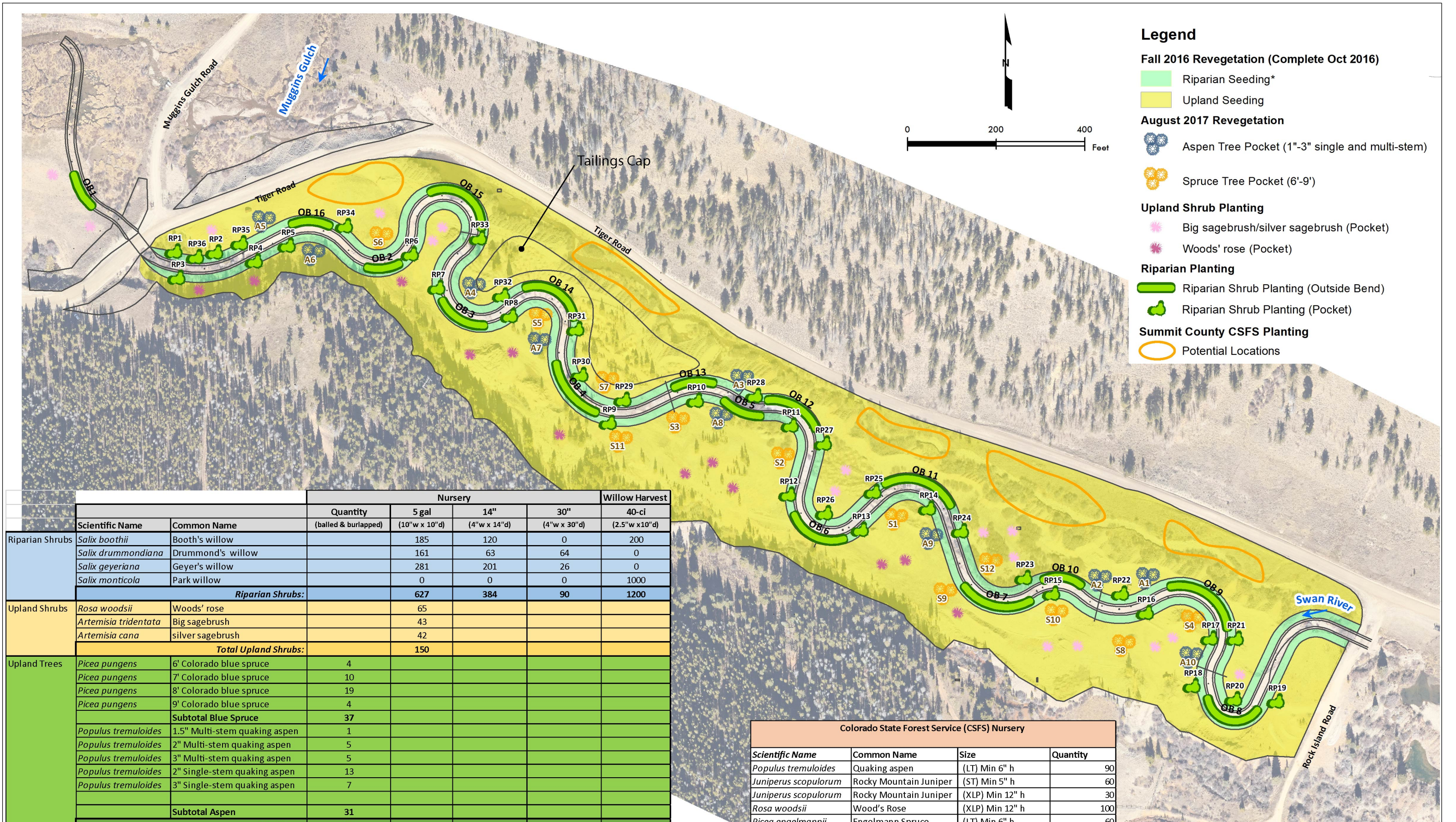
*Jason Lederer*

Jason Lederer, Senior Resource Specialist

Encl: Attachment A. Final Planting Plan As-built – 09/13/2017  
Attachment B. RMYC Planting Plan  
Attachment C. CSFSN Plant Order List  
Attachment D. Pre- and Post-Construction Photographs

**Exhibit A**  
**Final Planting Plan As-Built – 09/13/2017**

CPW Wetlands Grant – POGGI PMMA 2017000005968 Final Report – Swan River Restoration



Legend

Fall 2016 Revegetation (Complete Oct 2016)

- Riparian Seeding\*
- Upland Seeding

August 2017 Revegetation

- Aspen Tree Pocket (1"-3" single and multi-stem)
- Spruce Tree Pocket (6'-9')

Upland Shrub Planting

- Big sagebrush/silver sagebrush (Pocket)
- Woods' rose (Pocket)

Riparian Planting

- Riparian Shrub Planting (Outside Bend)
- Riparian Shrub Planting (Pocket)

Summit County CSFS Planting

- Potential Locations

			Nursery				Willow Harvest
			Quantity	5 gal	14"	30"	40-ci
	Scientific Name	Common Name	(balled & burlapped)	(10" w x 10" d)	(4" w x 14" d)	(4" w x 30" d)	(2.5" w x 10" d)
Riparian Shrubs	Salix boothii	Booth's willow		185	120	0	200
	Salix drummondiana	Drummond's willow		161	63	64	0
	Salix geyeriana	Geyer's willow		281	201	26	0
	Salix monticola	Park willow		0	0	0	1000
	Riparian Shrubs:			627	384	90	1200
Upland Shrubs	Rosa woodsii	Woods' rose		65			
	Artemisia tridentata	Big sagebrush		43			
	Artemisia cana	silver sagebrush		42			
	Total Upland Shrubs:			150			
Upland Trees	Picea pungens	6' Colorado blue spruce	4				
	Picea pungens	7' Colorado blue spruce	10				
	Picea pungens	8' Colorado blue spruce	19				
	Picea pungens	9' Colorado blue spruce	4				
		Subtotal Blue Spruce	37				
	Populus tremuloides	1.5" Multi-stem quaking aspen	1				
	Populus tremuloides	2" Multi-stem quaking aspen	5				
	Populus tremuloides	3" Multi-stem quaking aspen	5				
	Populus tremuloides	2" Single-stem quaking aspen	13				
	Populus tremuloides	3" Single-stem quaking aspen	7				
		Subtotal Aspen	31				
Total Trees:			68				

Colorado State Forest Service (CSFS) Nursery			
Scientific Name	Common Name	Size	Quantity
<i>Populus tremuloides</i>	Quaking aspen	(LT) Min 6" h	90
<i>Juniperus scopulorum</i>	Rocky Mountain Juniper	(ST) Min 5" h	60
<i>Juniperus scopulorum</i>	Rocky Mountain Juniper	(XLP) Min 12" h	30
<i>Rosa woodsii</i>	Wood's Rose	(XLP) Min 12" h	100
<i>Picea engelmannii</i>	Engelmann Spruce	(LT) Min 6" h	60
Total			340

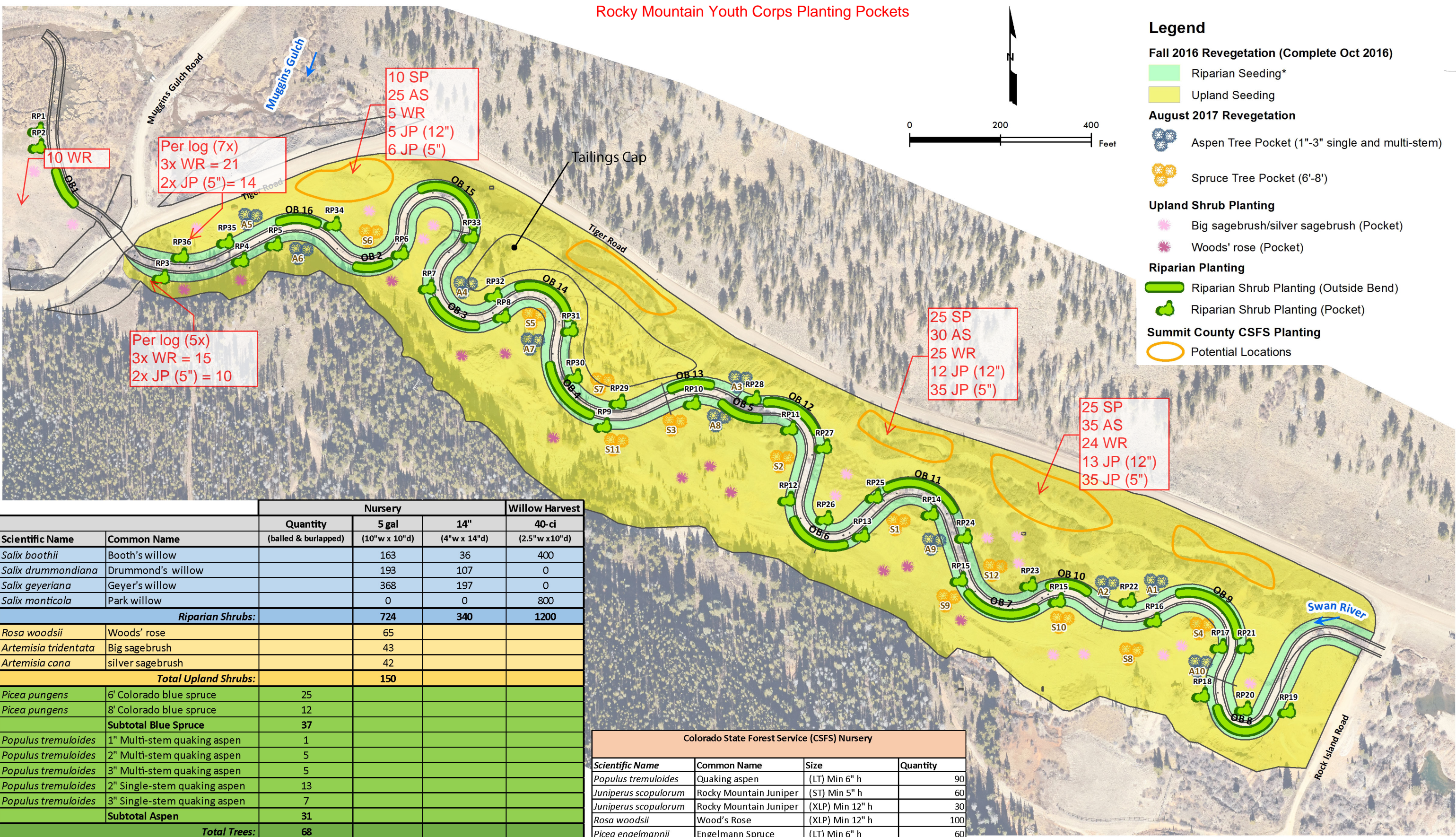
REV	DATE	DESCRIPTION

## **Exhibit B**

### **RMYC Planting Plan**

CPW Wetlands Grant – POGGI PMMA 2017000005968 Final Report – Swan River Restoration

Rocky Mountain Youth Corps Planting Pockets



		Nursery			Willow Harvest
Scientific Name	Common Name	Quantity (balled & burlapped)	5 gal (10" w x 10" d)	14" (4" w x 14" d)	40-ci (2.5" w x 10" d)
<i>Salix boothii</i>	Booth's willow		163	36	400
<i>Salix drummondiana</i>	Drummond's willow		193	107	0
<i>Salix geyeriana</i>	Geyer's willow		368	197	0
<i>Salix monticola</i>	Park willow		0	0	800
Riparian Shrubs:			724	340	1200
<i>Rosa woodsii</i>	Woods' rose		65		
<i>Artemisia tridentata</i>	Big sagebrush		43		
<i>Artemisia cana</i>	silver sagebrush		42		
Total Upland Shrubs:			150		
<i>Picea pungens</i>	6' Colorado blue spruce	25			
<i>Picea pungens</i>	8' Colorado blue spruce	12			
Subtotal Blue Spruce		37			
<i>Populus tremuloides</i>	1" Multi-stem quaking aspen	1			
<i>Populus tremuloides</i>	2" Multi-stem quaking aspen	5			
<i>Populus tremuloides</i>	3" Multi-stem quaking aspen	5			
<i>Populus tremuloides</i>	2" Single-stem quaking aspen	13			
<i>Populus tremuloides</i>	3" Single-stem quaking aspen	7			
Subtotal Aspen		31			
Total Trees:		68			

Colorado State Forest Service (CSFS) Nursery			
Scientific Name	Common Name	Size	Quantity
<i>Populus tremuloides</i>	Quaking aspen	(LT) Min 6" h	90
<i>Juniperus scopulorum</i>	Rocky Mountain Juniper	(ST) Min 5" h	60
<i>Juniperus scopulorum</i>	Rocky Mountain Juniper	(XLP) Min 12" h	30
<i>Rosa woodsii</i>	Wood's Rose	(XLP) Min 12" h	100
<i>Picea engelmannii</i>	Engelmann Spruce	(LT) Min 6" h	60
Total			340

REV	DATE	DESCRIPTION

**Exhibit C**  
**CSFSN Plant Order List**

CPW Wetlands Grant – POGGI PMMA 2017000005968 Final Report – Swan River Restoration



# Colorado State Forest Service Nursery

5060 Campus Delivery, Bld. 1060

Fort Collins, CO 80523-5060

Phone: 970-491-8429

Fax: 970-491-8250

# Sales Order

Date	S.O. No.
11/10/2016	23179

Name / Address	Ship To
Summit County Open Space & Trails PO Box 5660 Frisco, CO 80443-5660	Summit County Open Space and Trails 37 Peak One Dr., SCR1005 Frisco, CO 80443-5660
	Customer Phone 970-668-4067
	Customer E-mail brian.lorch@summitcountyco.gov

Pmt Method	Pmt Date	Check #	PU/Ship Date	Ship Via	Customer Name		
MC	11/10/2016		7/10/2017	Local Pick Up	Brian Lorch		
Item		Description		Ordered	Rate	Amount	
201-GU		LT-Aspen - (Populus tremuloides) - Gunnison, CO Source		90	2.53333	228.00	
310		ST - Rocky Mountain Juniper - (Juniperus scopulorum)		60	2.16667	130.00	
410		XLP - Rocky Mountain Juniper - (Juniperus scopulorum)		30	9.00	270.00	
415		XLP - Wild rose aka Wood's Rose - (Rosa woodsii)		100	9.00	900.00	
204		LT-Engelmann Spruce - (Picea engelmannii)		60	2.53333	152.00	
		Subtotal		340		1,680.00	
Vet Day 15%		A 15% discount for veterans during the week of Veteran's Day.			-15.00%	-252.00	
Thank you for your business.					Subtotal		\$1,428.00
					Sales Tax (0.0%)		\$0.00
					Total		\$1,428.00

## **Exhibit D**

### **Pre- and Post-Construction Photographs**

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# Swan River Stream Restoration Project

## Photo Point Monitoring

### Figures

**Figure 1:** Swan River Restoration; Photo Point Monitoring map providing an overview of the restoration area and ten photo monitoring point locations. *(Note that four additional photo monitoring points were added in February 2016.)*

### Photo Points

**Photo Point 1:** Swan River; View east across the Phase 1 restoration reach from an adjacent hillside. Muggins Gulch is visible in the foreground.

**Photo Point 2:** Swan River; View south across the Phase 1 restoration reach from an adjacent hillside. Where visible, recently installed piezometers are circled in red.

**Photo Point 3:** Swan River; View north and west across the Phase 1 restoration reach from the top of a tailings pile adjacent to the Tiger Townsite.

**Photo Point 4:** Swan River; View north, east, and west across the Phase 1 restoration reach.

**Photo Point 5:** Swan River; View north, east, and west across the Phase 1 restoration reach.

**Photo Point 6:** Swan River; View north, east, and west across the Phase 1 restoration reach.

**Photo Point 7:** Swan River; View south and west across Phase 1 restoration reach.

**Photo Point 8:** Swan River; View north, west, and south across Phase 1 restoration reach from within the restoration site.

**Photo Point 9:** Swan River; View north, east, and south across Phase 1 restoration reach from within the restoration site.

**Photo Point 10:** Swan River; View south and west across portion of restoration reach to the west of Tiger Road.



Photo Point 1

May 31, 2016



August 30, 2017



Photo Point 2

September 9, 2015



August 30, 2017



Photo Point 3

September 9, 2015



August 30, 2017



Photo Point 4

September 9, 2015



August 30, 2017



## Photo Point 5

September 9, 2015



August 30, 2017



## Photo Point 6

September 9, 2015



August 30, 2017



# Photo Point 7

May 31, 2016



August 30, 2017



Photo Point 8  
May 31, 2016



August 30, 2017



Photo Point 9  
May 31, 2016



August 30, 2017



Photo Point 10  
May 31, 2016



August 30, 2017











