

Willamette Valley Native Plant Materials Partnership



2014

Annual Report

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PREFACE

IAE is a non-profit organization whose mission is conservation of native ecosystems through restoration, research and education. IAE provides services to public and private agencies and individuals through development and communication of information on ecosystems, species, and effective management strategies. Restoration of habitats, with a concentration on rare and invasive species, is a primary focus. IAE conducts its work through partnerships with a diverse group of agencies, organizations and the private sector. IAE aims to link its community with native habitats through education and outreach.



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COOPERATORS

Benton County; Bureau of Land Management; Cascade Pacific Resource Conservation & Development; City of Corvallis; City of Eugene; Confederated Tribes of Grand Ronde; Friends of Buford Park & Mt Pisgah; Greenbelt Land Trust; Heritage Seedlings, Inc.; Kenagy Family Farms, Inc.; Long Tom Watershed Council; Marys River Watershed Council; McKenzie River Trust; Natural Resources Conservation Service; Oregon Department of Fish & Wildlife; Oregon Department of Transportation; Oregon Metro; Oregon Parks and Recreation Department; Oregon Seed Certification; Pacific Northwest Natives; Polk County Soil & Water Conservation District; The Nature Conservancy; Triangle Farms, Inc.; Trillium Gardens; U.S. Army Corps of Engineers; U.S. Fish and Wildlife Service; and Willamette Habitat Restoration.

ACKNOWLEDGEMENTS

Funding for this project was provided by the Oregon Watershed Enhancement Board, U.S. Fish & Wildlife Service, Bureau of Land Management, Oregon Department of Fish & Wildlife, U.S. Army Corps of Engineers, and the Institute for Applied Ecology. We thank the many partners, including restoration practitioners, growers, and other stakeholder organizations, who have contributed time and expertise to the development of this cooperative. We also thank the public and private landowners who have permitted seed collection on their properties.

Cover photograph: Rose checkermallow on a mid-Valley seed collection site. *Photo by IAE.*

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INTRODUCTION

The Willamette Valley Native Plant Materials Partnership (Partnership or Cooperative) was founded in 2012 by 21 restoration organizations and native plant producers in the valley to cooperatively fund and produce plant materials for use in restoration, revegetation, and mitigation projects in the Willamette Valley Ecoregion. The Cooperative is housed and coordinated by the Institute for Applied Ecology, and funded by restoration partners. In 2014 five organizations, including the Bureau of Land Management – Eugene District (BLM), contributed funding in cash to support production, seed collection of priority species throughout the valley, plan-writing, and coordination. This report details Cooperative activities that occurred in 2014, and gives a funding and spending summary for the Cooperative in general and specifically for the BLM-funded portion of its operations.

SUMMARY OF ACCOMPLISHMENTS

Goal 1 – Establish the Willamette Valley Native Plant Materials Partnership and build organizational infrastructure to support WVNPMP activities.

- Received 50% of signatures for the WVNPMP MOU.
- Updated a 5-year budget projection (2013-2017) (see Financial Summary).
- Secured 100% of funding for 2014 and 80% of 2015 operations.
- Developed draft process for determining the monetary value of seed produced through the Partnership – Presented to Partnership on November 13, 2014.
- Added one new partner – Willamette Habitat Restoration.

Goal 2 – Increase availability of native plant materials, increase marketplace stability by aligning projected needs with grower capacity, and reduce the risk of growing plant materials on speculation.

- Used partner projections to forecast plant materials needs over the next few years of the top priority species.
- Received harvests of two adopted fields – *Juncus occidentalis* (83 lbs) and *Symphotrichum hallii* (5 lbs) (pictured at right).
- Maintained two production fields started in fall 2013 – *Potentilla gracilis* and *Solidago lepida* var. *salebroso* (first harvest projected in 2015).
- Entered three new species into seed increase production – *Acmispon americanus* (*Lotus unifoliolatus*), *Carex tumulicola*, and *Prunella vulgaris* var. *lanceolata*.



FIGURE 1. WESTERN YARROW.

- Developed agreement for seed increase fields – Corvallis Plant Materials Center.
- Donated collected seed of *Prunella vulgaris* var. *lanceolata* to two growers in order to increase availability of valley-wide genetics – Heritage Seedlings, Inc. and Kenagy Family Farms, Inc.

Goal 3 – Centralize coordination of collecting, producing, and distributing native plant materials to improve efficiency and lower costs.

- Refined prioritized species focus list.
- Refined and implemented seed collection, cleaning, and storage protocols.
- Hired a four-person seed collection crew for 2014 collection.
- Collected 35# of seed of 15 native species from the prioritized list.
- Received contributions of wild-collected seed from three partners – Friends of Buford Park, Oregon Metro, and West Eugene Wetlands.

Goal 4 – Improve quality and genetic appropriateness of native plant materials used in restoration, mitigation, and revegetation projects in the Willamette Valley.

- Draft guidelines for ensuring genetic appropriateness on a species-by-species basis refined in 2014.
- Seed from 30 sites in the Willamette Valley collected for evaluating genetics of *Eriophyllum lanatum* (pictured at right) before entering into production. Seed from two partners donated for this study.



FIGURE 2. OREGON SUNSHINE.

Goal 5 – Provide an online forum for sharing information within the WVNMP and to other interested parties and the general public.

- Job openings for seasonal seed collection crew posted on the website and postings in other places linked to the website.
- Cooperative website used for communicating internally with partners and for posting updates – 2 posts in 2014.

SEED COLLECTION

In 2014, the Cooperative hired a four-person seed collection crew for its second season collecting wild seed for production. This four-person crew was part of a larger five-person crew funded by multiple projects, which provided flexibility in managing logistics associated with scouting and collecting over the entire Willamette Valley (i.e. on any given day there could be three teams collecting for the Cooperative in different areas of the valley, five people collecting at the same site, all five focusing on collection for different projects, or have different teams working on different projects). The crew as a whole spent over 80% of their time working on Cooperative planning, scouting, and collection. The crew scouted for 18 species from the priority list at 160 sites, and collected seed from 15 species at over 130 sites throughout the Willamette Valley. See Table 1 for a list of species with common names, and collection information. For species with two years of collection data, the sites visited in 2014 often include the same sites visited in 2013. Also, the total amount collected is rarely evenly distributed among the collection sites; in most cases, the majority of the seed comes from the south and/or west valley.



FIGURE 3. SEED COLLECTION.

Seed of several species was collected in sufficient quantities to initiate production, but with low site number and/or diversity; conversely, two to three species were collected from enough sites but with low quantities of seed or with significant gaps in site locations (i.e. no collections in the north valley, or east valley, or certain counties where we know there are populations). As in 2013, we will collect priority species over multiple years when we think we can meet our goals within 2-3 years. In 2014, all three species entered into production had been collected for two years (see below).

Three partners contributed wild-collected seed to the Cooperative project: the City of Eugene (*Eriophyllum lanatum* and *Prunella vulgaris*), Oregon Metro (*Achillea millefolium*), and Friends of Buford Park (*E. lanatum*), which contributed a small amount of seed for use in conducting a ploidy study of that species from populations around the Willamette Valley. These donations contributed enough site diversity and quantity to be able to enter the two species into production in the fall of 2014. See Appendix A for a map of 2014 seed collection sites throughout the valley.

Table 1. 2013-2014 seed collection summary.

Scientific Name	Common Name	Collection year (# sites)		Amt collected		Production started
		2013	2014	2013	2014	
<i>Achillea millefolium</i>	western yarrow	3	16	28 g	88 g	*2015
<i>Camassia leichtlinii</i>	tall camas	-	20	-	3.8 lbs	*2015
<i>Camassia quamash</i>	common camas	-	15	-	3.8 lbs	*2015
<i>Carex tumulicola</i>	foothill sedge	11	17	159 g	1.8 lbs	2014
<i>Clarkia amoena</i>	farewell-to-spring	2	11	3 g	163 g	
<i>Danthonia californica</i>	California oatgrass	7	20	100 g	1.8 lbs	
<i>Eriophyllum lanatum</i>	woolly sunflower	-	25	-	1.5 lbs	
<i>Lomatium nudicaule</i>	barestem biscuitroot	4	16	1.9 lbs	2.1 lbs	
<i>Lotus unifoliolatus</i>	Spanish clover	15	34	1.4 lbs	8.3 lbs	2014
<i>Madia elegans</i>	common madia	-	11	-	0.5 lbs	
<i>Plectritis congesta</i>	rosy seablush	4	9	23 g	0.5 lbs	*2015
<i>Potentilla gracilis</i>	slender cinquefoil	14	24	1.2 lbs	1.2 lbs	2013+14
<i>Prunella vulgaris</i> var. <i>lanceolata</i>	self-heal	19	28	1.1 lbs	4.7 lbs	2014
<i>Sidalcea campestris</i>	meadow checkermallow	7	26	5.5 g	1.9 lbs	*2015
<i>Sidalcea malviflora</i> ssp. <i>virgata</i>	dwarf checkermallow	7	22	46.2 g	0.6 lb	*2015

Scientific Name	Common Name	Collection year (# sites)		Amt collected		Production started
		2013	2014	2013	2014	
<i>Solidago lepida</i> var. <i>salebrosa</i>	western goldenrod	12	-	0.5 lb	-	2013

*Planned 2015 production

PRODUCTION



FIGURE 4. SELF-HEAL

Prunella vulgaris var. *lanceolata* (pictured at left), *Carex tumulicola*, and *Lotus unifoliolatus* (pictured below) were entered into production in the fall of 2014 or spring of 2015 (in the case of *L. unifoliolatus*). In the case of the two former, plugs grown from the wild-collected seed will be outplanted to the field in the spring of 2015. The field size for each species is based upon grower yield estimates combined with usage estimates from the Partnership. All three species are considered to be in seed increase; the first significant harvest from each field will be used to plant a larger field and to store seed for future re-planting or genetic refresh.

The Cooperative received harvests from the two fields adopted in 2014 (*Juncus occidentalis* and *Symphotrichum hallii*). The first harvests for *Potentilla gracilis* and *Solidago lepida* var. *salebrosa* will be received in 2015. The *S. hallii* field flowered very weakly in 2014, possibly signaling a decline for that field. In 2015 a new field will be established using cuttings from the current field in hopes that it will raise yields. See Table 2 for a summary of current production and harvest.



FIGURE 5. SPANISH CLOVER

Table 2. 2013-2014 production summary.

Species	Common Name	Yields		Production started
		2013	2014	
<i>Juncus occidentalis</i>	western rush	42 lbs	83 lbs	2007
<i>Symphotrichum hallii</i>	Hall's aster	5 lbs	0	2007
<i>Potentilla gracilis</i>	slender cinquefoil	-	0	2013
<i>Solidago lepida</i> var. <i>salebrosa</i>	western goldenrod	-	0	2013
<i>Achillea millefolium</i>	western yarrow	-	-	2014
<i>Acmispon americanus</i>	Spanish clover	-	-	2014
<i>Prunella vulgaris</i> var. <i>lanceolata</i>	self-heal	-	-	2014

FINANCIAL SUMMARY

2014 Funding

In 2014, the Cooperative received \$119,500 in new funding, which, combined with the \$30,890 remaining from 2013, gave us \$150,390. Funds remaining from 2013 were due to a decision to delay

production for several species until more collections could augment the genetic diversity of the accessions. See Table 2 for a list of funders and contributions in 2014.

Table 3. 2014 funding contributions.

Partner contributions	2014
BLM	\$ 20,000
ODFW	\$ 2,500
TNC	\$ 45,000
USACE	\$ 10,000
USFWS	\$ 42,000
2013 Funds	\$ 30,890
Total	\$ 150,390

Table 4. 2014 budget (actual spending).

Cost (4-person crew)	2014
Program management and coordination	\$ 26,968
Seed collection	\$ 72,020
Production	\$ 17,115
Total	\$ 116,103
Moved forward to 2015	\$ 34,287

2015 Funding

We have received 80% of the funding requested for 2015, with 20% left to fund. With \$34,287 brought forward from 2014, we have \$119,949 available for the upcoming year's operations. The projected budget for 2015 is \$150,783, leaving us with approximately \$30,000 still to be secured for the upcoming year. Table 5 lists the partners who have already contributed to the 2015 operations costs. Table 6 breaks down the projected budget for 2015 into three categories: program management/coordination, seed collection, and plant materials production.

Table 5. 2015 funding contributions.

Partner contributions	2015
BLM	\$ 23,162
ODFW	\$ 2,500
TNC	\$ 45,000
USACE	\$ 5,000
USFWS	\$ 10,000
2014 Funds	\$ 34,287
Total	\$ 119,949

Table 6. 2015 budget (projected spending).

Cost (4-person crew)	2015
Program management and coordination	\$ 28,626
Seed collection	\$ 70,169
Production	\$ 51,988
Total	\$ 150,783
Remaining to fund	\$ 30,834

SUCCESSSES & LESSONS LEARNED

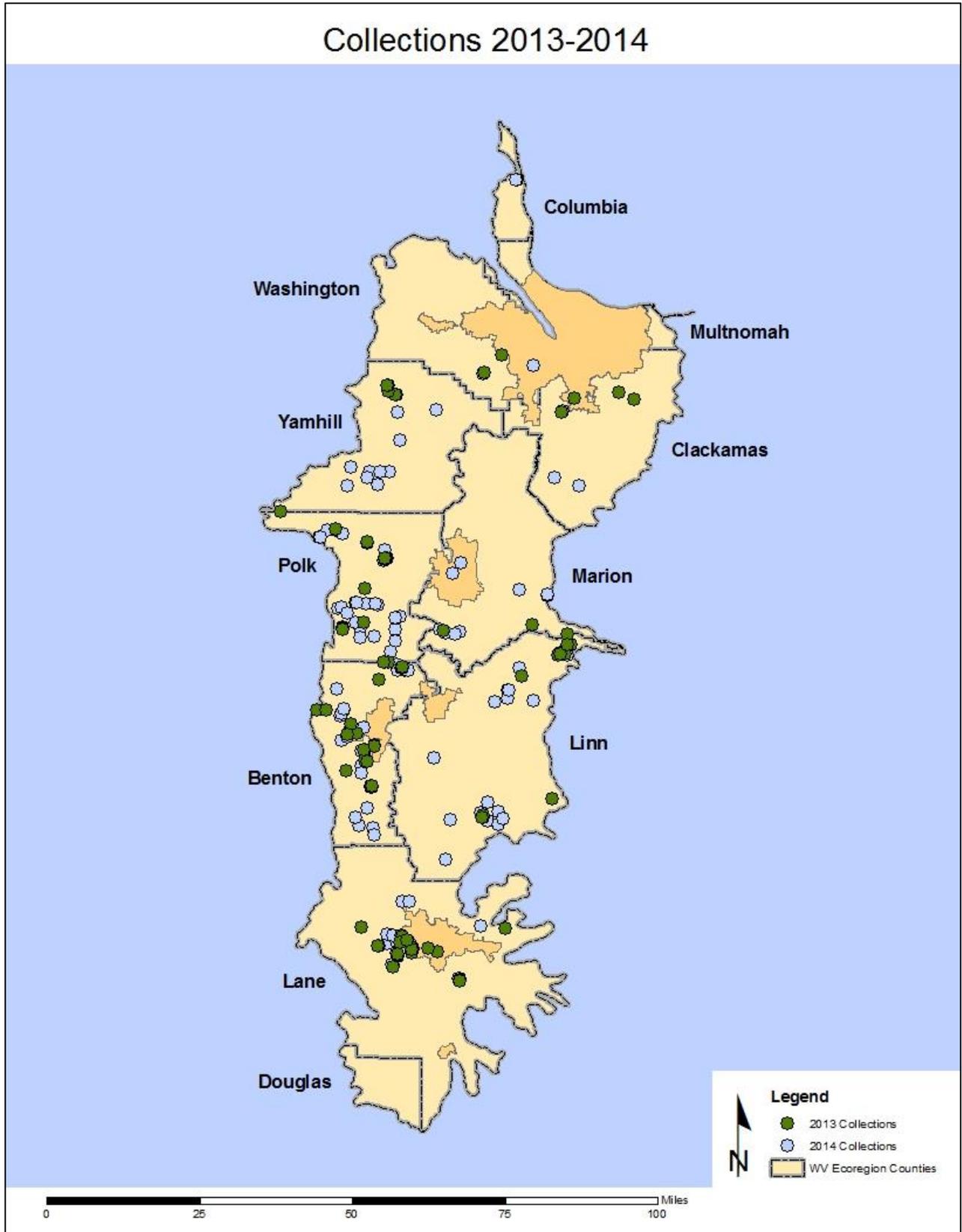
1. By hiring four people instead of two we were able to increase the effectiveness of our seed collection efforts. We had twice as many people devoted to Cooperative seed collection, of course, but also, because the IAE seed collection crew conducts other seed collection projects, we had a fifth person (paid for through other projects) on the crew. This allowed the crew lead to spend a lot more time on planning and coordination while still having four people out in the field.

2. We were able to build on the previous year of seed collection and gain genetic diversity both through site diversity but also through temporal diversity. There were several sites collected from in both years, and we were able to concentrate on sites with little or no seed collected from the previous year. We did not collect a given species from sites with enough seed from the previous year.
3. For the second year in a row we received contributions of wild collected seed from partners that allowed us to move forward toward our production goals.
4. It is becoming very apparent that there are a lot fewer remnant collection sites in the east valley. Many sites in Linn and Marion counties that were donor sites in past years have become overgrown, sprayed out, or regularly mowed. In 2015 we will be able to spend time in the beginning of the season scouting strategically by driving around those counties (especially Linn and Marion) with few remnants.

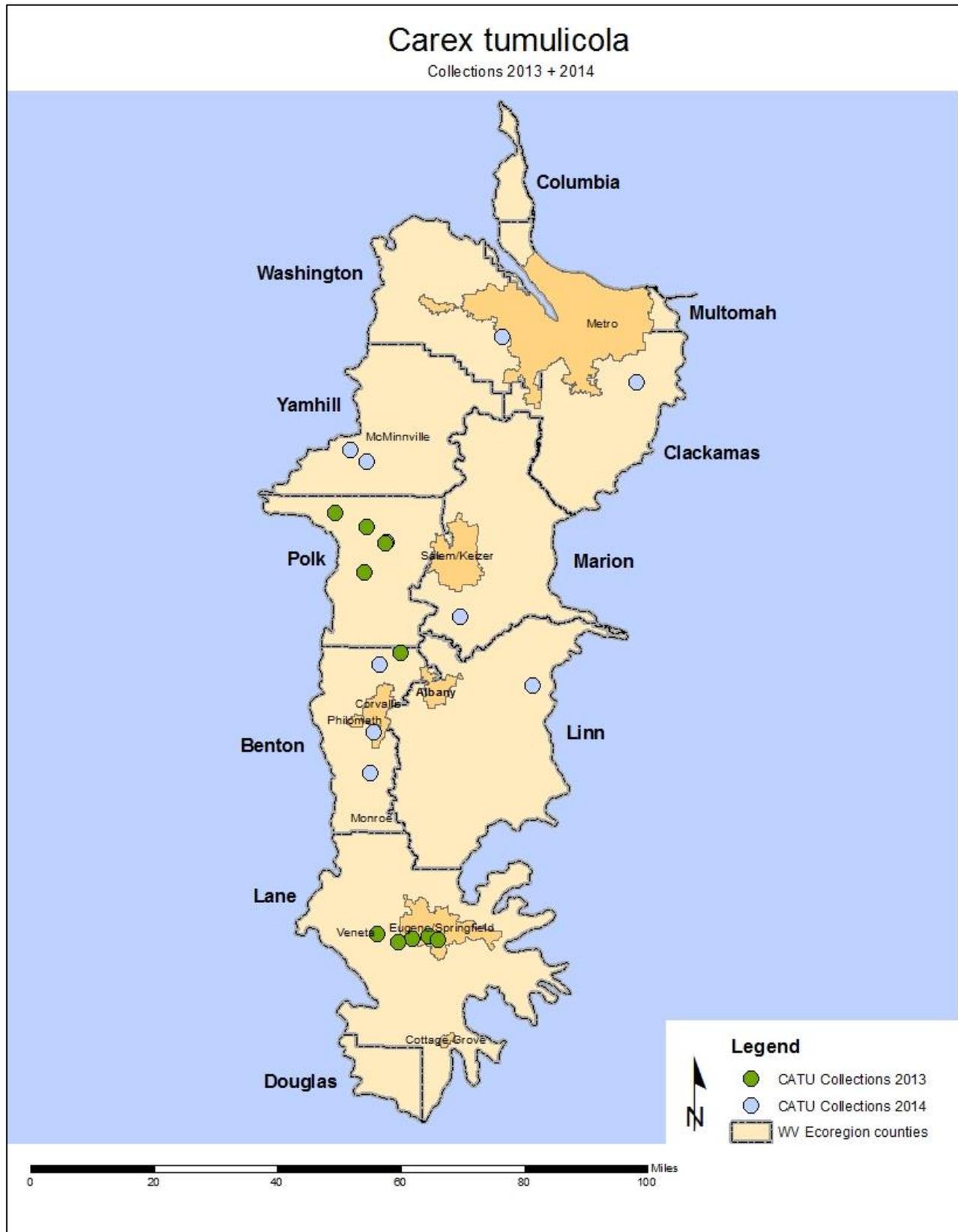
NEXT STEPS

1. Scout and collect 10-15 species in 2015 – the highest priority species will be those for which collections occurred in 2013 and 2014, and that are close to having sufficient quantity, sites, and site diversity to initiate production.
2. Refine the draft plan for pricing and sharing seed within the Partnership by using the plan to disburse the first significant harvest in 2015 (likely slender cinquefoil and western goldenrod). The result of this process will help inform how we move forward financially with the Cooperative.
3. Put 5 new species into production.
4. Add at least one new partner.
5. Give partners a share of the harvest of 2-4 species.
6. Collect all signatures of MOU partners.

APPENDIX A: 2013-14 COLLECTION MAP



APPENDIX B: WILD COLLECTIONS OF PRODUCTION SPECIES IN 2013-14



Lotus unifoliolatus

Collections 2013 + 2014



Prunella vulgaris var. lanceolata

Collections 2013 + 2014

