Coastal Native Seed Partnership



1/22/2024 Report to the Coastal Native Seed Partnership

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PREFACE

The Coastal Native Seed Partnership is coordinated by the Institute for Applied Ecology (IAE), 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 and aims to link its community with native habitats through education and outreach.



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COOPERATORS

Bureau of Land Management; Center for Natural Lands Management; Columbia River Estuary Study Taskforce; Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians; Confederated Tribes of the Siletz Indians; Coos Watershed Association; Coquille Indian Tribe; Coquille Watershed Association; Curry Watersheds Partnership; Institute for Applied Ecology; Lincoln Soil and Water Conservation District; MidCoast Watersheds Council; National Park Service; Natural Resources Conservation Service; Necanicum Watershed Council; North Coast Land Conservancy; North Coast Watershed Association; Oregon Department of Parks and Recreation; Oregon Military Department; Rogue Native Plant Partnership; Siuslaw Soil and Water Conservation District; Siuslaw Watershed Council; South Slough National Estuarine Research Reserve; Stillwater Natives Nursery; The Nature Conservancy; The Understory Initiative; Tillamook Estuaries Partnership; U.S. Fish and Wildlife Service; U.S. Forest Service; Washington Department of Natural Resources

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Cover photograph: Acmispon parviflorus scouting at Big Creek. Photo by IAE.

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Coastal Native Seed Partnership

2023 ANNUAL REPORT

INTRODUCTION

The Coastal Native Seed Partnership (CNSP) was founded in 2020 by 22 restoration organizations and native plant producers on the coast to increase the availability and affordability of native seed to restore Pacific Northwest coastal habitats. The CNSP is housed and coordinated by the Institute for Applied Ecology and funded by the Oregon Watershed Enhancement Board (OWEB). This report details CNSP activities that occurred in 2023 and provides a financial summary for the partnership.

SUMMARY OF ACCOMPLISHMENTS TO DATE

In 2021, the CNSP developed a five-year strategic plan (2021-2025) that identified five goals that members wished to accomplish in that time frame. Below is a summary of the progress towards achieving these goals.

Goal 1 – Implement initial CNSP infrastructure, as outlined in the CNSP Operations Plan, to support CNSP activities.

- Drafted and adopted an Operations Plan in 2020.
- Drafted 5-year Strategic Action Plan in 2020 and adopted on June 28, 2021.
- Drafted and adopted Memorandum of Understanding; received 65% of signatures.
- Drafted a 5-year budget projection for 2019-2023.
- Secured 100% of funding for 2021, 2022, and 2023 operations.
- Received \$20,000 in cash match funding for production in 2021-22 from Oregon Parks & Recreation Department and the U.S. Fish & Wildlife Service.
- Held general partnership kickoff meeting on January 8, 2020.
- Held two regional partnership meetings in March and April 2020.
- Held general partnership meetings in November 2020, November 2021, December 2022, and November 2023.
- Established a Steering Committee and Species Selection Committee.
- Held three Species Selection Committee meetings and two Steering Committee meetings in 2023.

Goal 2 – Increase the availability of genetically and ecologically appropriate native seed for use in coastal restoration, revegetation, and recovery projects.

- Convened four meetings of the Species Selection Committee to prioritize species in 2020.
- Compiled list of high priority species for seed collection in 2020.
- Held three Species Selection Committee meetings in 2021 to prioritize species for amplification.
- Finalized prioritized species focus list with Species Selection Committee in 2021 (Appendix A).
- Developed seed collection protocols based on Seeds of Success national protocols.

- Hired seasonal seed collection crews in 2020-2023 to collect seed for high priority species.
- Coordinated with partners on seed collection and received seed from 3-5 partners each year.
- Collected seed for 6 high priority species in 2020, 5 high priority species in 2021, 3 high priority species in 2022, and 1 high priority species in 2023.
- Arranged for storage of CNSP seed in IAE storage facilities.
- Finalized species selection tool for prioritizing production targets in January 2023.

Goal 3 – Help expand, stabilize, and support the local native seed marketplace.

- Distributed partner survey to assess production needs in 2021 and received 17 responses.
- Distributed partners survey to assess seed needs in 2023 and received 10 responses.
- Inherited one production field of *Plectritis brachystemon* for the partnership in 2020 that was established in fall 2019 and maintained through 2021.
- Started 2,000 plugs in 2020 for a production field of *Trifolium wormskioldii* that was established by The Nature Conservancy in 2021 at Coos Watershed Association growing facilities.
- Adopted one field of Cirsium edule from the U.S. Fish and Wildlife Service in 2021.
- Started production of Carex lyngbyei plugs in fall 2021 and a production field in 2022.
- Hosted new grower info session in October 2021, attended by two potential new growers.
- Began Lupinus rivularis production with two new growers in fall 2022.
- Adopted one field of *Eriophyllum lanatum* from the U.S. Fish and Wildlife Service in 2023.

Goal 4 – Engage partnership and create online forum for sharing information within the CNSP and the public.

- Developed website for CNSP with access to strategic plan, annual report, and seed order form.
- Conducted one-on-one meetings with 9 partners in January 2022 to discuss individual partners' plant materials needs and barriers to meeting those needs.

2023 ACTIVITIES

Seed Collection

In 2023, the partnership focused on one target species from the priority seed collection list (Appendix A) that was agreed upon by the Species Selection Committee. *Acmispon parviflorus*, small-flowered lotus, was selected based on the estimated need from partners reported in the 2023 Seed Needs Survey, the lack of available seed for restoration, and the species' success in production trials.

In 2023, the CNSP collected 0.32 ounces of wild seed for Acmispon parviflorus from 4 sites along the Central and North Oregon Coast (Table 2). These collections, along with past collections of Acmispon parviflorus from a total of 7 unique sites along the Central and North Coast, were transferred to a new grower for establishing a 2024 production field. The CNSP also collected 0.64 ounces of wild seed for two species identified as priorities for production through the Oregon Silverspot Butterfly Recovery Challenge Grant (Table 3), of which the CNSP is a partner. These collections will be used to establish a new field of *Bromus carinatus* in 2024 and to add to the *Poa macrantha* field already in production. All seed was collected via a two-person IAE crew and through coordinated efforts with partners.

Three partners contributed wild-collected seed to the partnership in 2023: The Understory Initiative, U.S. Fish and Wildlife Service, and The Nature Conservancy. Because of the geographic scope of the partnership, assistance with seed collection by partners up and down the coast is critical to achieve enough site diversity and quantity to be able to continue to enter new target species into production. See Appendix B for a full summary of CNSP's seed collection efforts to date.

TABLE 1. 2023 COASTAL NATIVE SEED PARTNERSHIP SEED COLLECTION SUMMARY

Scientific Name	Common Name	# Sites	Amt Collected (oz)
Acmispon parviflorus	Small-flowered lotus	4	0.32
Total		4	0.32

TABLE 2. 2023 OREGON SILVERSPOT BUTTERFLY SEED COLLECTION SUMMARY

Scientific Name	Common Name	# Sites	Amt Collected (lbs.)
Bromus carinatus	California brome	4+3 donations	0.007
Poa macrantha	Dune bluegrass	2	0.09
Total		9	0.027

*Total unique sites

Seed Production

In 2023, the CNSP established a new ¹/₄-acre field of *Lupinus rivularis* at Matt-Cyn Farms, which is expected to produce a significant crop in 2024. The partnership also adopted a field of Eriophyllum lanatum established at the IAE farm in 2020 from the U.S. Fish and Wildlife Service and harvested 2.5 lbs. of seed for the partnership. Additionally, the CNSP maintained the field of Carex lyngbyei, which did not produce a significant harvest this year.

Table 3 summarizes the species in production and the seed yields for 2023. See Appendix C for more detailed species-specific production history. Table 4 summarizes the species entered into production in 2023 through the Oregon Silverspot Butterfly Recovery Challenge Grant.

Species	Common Name	Field Size (acres)	Current Producer*	Production Started	2023 Yields (lbs.)
Carex lyngbyei	Lyngbye's sedge	0.007	IAE	2022	-
Eriophyllum lanatum	Oregon sunshine	0.03	IAE	2020	2.51
Lupinus rivularis	Riverbank lupine	0.25	MCF	2023	-
Total		0.287			2.51

COASTAL NATIVE SEED DADTHEDSLUD SEED DDODUCTION FIELDS AND VIELDS

* IAE = Institute for Applied Ecology; MCF = Matt-Cyn Farms

Species	Common Name	Field Size (acres)	Current Producer*	Production Started	2023 Yields (lbs.)
Anaphalis margaritacea	Pearly everlasting	0.007	IAE	2023	-
Danthonia californica	California oatgrass	0.021	IAE	2023	-
Elymus glaucus	Blue wildrye	0.043	IAE	2023	2.46
Lupinus rivularis	Riverbank lupine	0.018	46N	2023	-
Poa macrantha	Dune bluegrass	0.043	IAE	2023	-
Total		0.132			2.46

TABLE 4. 2023 OREGON SILVERSPOT BUTTERFLY SEED PRODUCTION FIELDS AND YIELDS.

* 46N = 46 North Farm; IAE = Institute for Applied Ecology Farm

Seed Inventory

Table 5 summarizes the seed currently available to CNSP partners. Partners are encouraged to place orders for this seed at any time during the year. Table 6 summarizes the wild seed currently being stored in CNSP inventory for future production efforts.

TABLE 1. SUMMARY OF COASTAL NATIVE SEED PARTNERSHIP A	VAILABLE SEED INVENTORY AS OF DECEMBER 15, 2023.

Species	Common Name	Seed Available (lbs.)
Plectritis brachystemon	shortspur seablush	18.4
Ranunculus occidentalis	Western buttercup	13.8
Total		32.2

TABLE 6. SUMMARY OF COASTAL NATIVE SEED PARTNERSHIP WILD SEED INVENTORY AS OF DECEMBER 15, 2023.

Species	es Common Name Seed Inver			
Calamagrostis nutkaensis	Pacific reedgrass	0.17		
Carex lyngbyei	Lyngbye's sedge	2.04		
Carex obnupta	slough sedge	0.50		
Deschampsia cespitosa	tufted hairgrass	3.79		
Hordeum brachyantherum	meadow barley	1.01		
Lupinus rivularis	riverbank lupine	1.45		
Luzula comosa	Pacific woodrush	0.04		
Symphyotrichum subspicatum	Douglas aster	0.25		
Trifolium wormskioldii	cow clover	0.01		
Total		9.37		

Seed Sales

In 2023, the CNSP sold 23.0 pounds of seed, generating \$5,327 in income for the partnership. Table 7 summarizes 2023 sales. See Appendix D for a summary of CNSP seed sales to date.

Coastal Native Seed Partnership 2023 Sales								
Species Amount (lbs.) Price Value								
Eriophyllum lanatum	2.5	\$150	\$375.00					
Plectritis brachystemon	16.0	\$233	\$3,728.00					
Ranunculus occidentalis	4.5	\$272	\$1,224.00					
Total	23.0		\$5,327.00					

TABLE 7. 2023 COASTAL NATIVE SEED PARTNERSHIP SEED SALES.

FINANCIAL SUMMARY

2019 - 2020 Funding

In 2019, the partnership received \$74,602 in funding from the Oregon Watershed Enhancement Board (OWEB) to establish the partnership. This grant funded partnership activities through April 2021. The grant was supported by substantial in-kind support from 14 partners to assist with wild seed collection, project planning and coordination, technical assistance, and plant materials.

2021-2023 Funding

In 2020, the partnership received \$187,424 in funding from OWEB and \$12,000 in contract funding from The Nature Conservancy. This funding will support partnership operations through part of 2024 including coordination, seed collection, seed production, and partnership development. The OWEB grant included \$20,000 in cash funding from Oregon Parks & Recreation Department and U.S. Forest Service to support partnership operations in 2021-22. See Table 8 for a summary of 2023 CNSP spending on seed collection and production. Appendix C lists production costs for partnership fields since 2020.

 TABLE 8. SUMMARY OF 2023 CNSP SEED COLLECTION AND PRODUCTION COSTS.

Activity	2023 Cost
Seed collection	\$3,768
Seed production (w/ admin)	\$7,633
Total	\$11,401

SUCCESSES & LESSONS LEARNED

- Prior to holding the kickoff general meeting in 2020, a survey was circulated to partners asking questions pertaining to their plant materials needs and goals, habitats that they restored, and thoughts on goals, policies, and procedures for the developing partnership. This survey was essential for developing an agenda prior to the meeting and directing conversation during the meeting. Topics and discussion were translated into language used in the Operations Plan, the first guiding document for the partnership.
- 2. Coordinating with partners along the coastline to help with seed collection efforts is crucial to gain the genetic diversity desired to establish seed production fields.

- 3. Each partner organization faces a unique set of challenges in pursuing their restoration goals. These challenges shift from year to year, underlining the value of frequent check-ins and communication with partners.
- 4. The development of the MOU was based on the format used for the Willamette Valley Native Plant Partnership (WVNPP) and of similar organizations. The CNSP made edits to accommodate the needs of as many partner organizations as possible, and that process helped get the MOU for the partnership signed in a timely manner.

NEXT STEPS

- 1. Develop seed mix species lists and guidelines with Species Selection Committee in 2024.
- 2. Scout and collect seed for species needed in seed mixes.
- 3. Secure funding for future partnership operations.
- 4. Continue coastal grower outreach.
- 5. Maintain 3 coastal production fields and establish 1 new field of Acmispon parviflorus.
- 6. Sell partners harvest of 4 species at a reduced price. Proceeds will fund future partnership operational costs.
- 7. Add new partners and engage partnership through species demand surveys, partnership updates via email, regular website updates, and partner interviews.

APPENDICES

Appendix A: Target Species for Production

Species	Annual/Perennial	Habitat
Acmispon parviflorus	Annual	Grassland
Calamagrostis nutkaensis	Perennial	Wetland, grassland
Carex lyngbyei	Perennial	Wetland
Carex obnupta	Perennial	Wetland
Cerastium arvense	Perennial	Grassland
Cirsium edule	Perennial	Grassland
Clarkia amoena	Annual	Grassland
Deschampsia cespitosa	Perennial	Wetland
Elymus glaucus	Perennial	Grassland
Hordeum brachyantherum	Perennial	Estuary
lris tenax	Perennial	Grassland
Lomatium martindalei	Perennial	Grassland
Lupinus rivularis	Perennial	Grassland, dune
Luzula comosa	Perennial	Grassland
Poa macrantha	Perennial	Dune
Prunella vulgaris	Perennial	Grassland, wetland
Ranunculus occidentalis	Perennial	Grassland
Symphyotrichum chilense	Perennial	Grassland, dune, marsh
Symphyotrichum subspicatum	Perennial	Estuary
Trifolium wormskioldii	Perennial	Grassland, dune, estuary

Appendix B: Summary of Seed Collection to Date

Scientific Name	Common Name	Production	tion Amount Collected in Lbs. (# of unique collection sites)				
		Started	2020	2021	2022	2023	Total
Acmispon parviflorus	small-flowered lotus		0.10 (3)	-	-	0.02 (4)	0.12 (7)
Anaphalis margaritacea ¹	pearly everlasting	2023	-	-	0.0004 (2)	-	0.0004 (2)
Bromus carinatus	California brome		-	-	-	0.007 (4)	0.007 (4)
Calamagrostis nutkaensis	Pacific reedgrass		0.17 (2)	-	-	-	0.17 (2)
Carex lyngbyei	Lyngbye's sedge	2022	0.88 (2)	0.013 (2)	-	-	0.893 (4)
Carex obnupta	slough sedge		-	0.50 (5)	-	-	0.50 (5)
Cirsium edule ¹	edible thistle		-	-	0.058 (2)	-	0.058 (2)
Danthonia californica ¹	California oatgrass	2023	-	-	0.011 (1)	-	0.011 (1)
Deschampsia cespitosa	tufted hairgrass		-	0.35 (3)	3.1 (4)	-	3.45 (7)
Elymus glaucus ¹	blue wildrye	2023	-	-	0.063 (2)	-	0.063 (2)
Hordeum brachyantherum	meadow barley		-	-	0.7 (2)	-	0.7 (2)
Lupinus rivularis	streambank lupine	2023	-	0.14 (1)	5.3 (5)	-	5.44 (5)
Luzula comosa	Pacific woodrush		0.17* (4)	-	-	-	0.17* (4)
Poa macrantha	Dune bluegrass	2023	-	-	-	0.09 (2)	0.09 (2)
Solidago elongata ¹	West Coast goldenrod				0.063 (1)	-	0.063 (1)
Symphyotrichum subspicatum	Douglas aster		0.04 (1)	0.22 (1)	-	-	0.25 (2)
Trifolium wormskioldii	springbank clover	2021	0.09 (1)	-	-	-	0.09 (1)
Total			1.93 (13)	1.22 (12)	9.29 (19)	0.117 (9)	12.55 (24)

¹OSB Recovery Challenge Grant collections *uncleaned weight

Species	Common Name	Grower*	Field Size (acres)	Production Year		Production Cost (w/ admin)				Yields (lbs.)				
				Start	End	2020	2021	2022	2023	2020	2021	2022	2023	Total
Anaphalis margaritacea	Pearly everlasting	IAE	0.0071	2023	Ongoing	-	-	-	\$1,855	-	-	-	-	-
Carex lyngbyei	Lyngbye's sedge	IAE	0.007	2022	Ongoing	-	-	\$2,473	\$1,236	-	-	-	-	-
Cirsium edule	edible thistle	IAE	0.005	2020	2021	USFWS field	\$1,812	-	-	-	0.24	-	-	0.24
Danthonia californica	California oatgrass	IAE	0.0211	2023	Ongoing	-	-	-	\$4,637	-	-	-	-	-
Elymus glaucus	Blue wildrye	IAE	0.0431	2023	Ongoing	-	-	-	\$4,637	-	-	-	2.46	2.46
Eriophyllum Ianatum	Oregon sunshine	IAE	0.03	2020	Ongoing	USFWS	USFWS	USFWS	\$2,473	-	-	-	2.51	2.51
Lupinus rivularis	Riverbank lupine	46N	0.018 ¹	2023	Ongoing	-	-	-	\$2,046	-	-	-	TBD	TBD
		MCF	0.25	2023	Ongoing	-	-	-	\$3,924	-	-	-	TBD	TBD
Plectritis brachystemon	shortspur seablush	IAE	0.086	2020	2022	\$6,182	OPRD field	\$6,182	-	25.9	-	14.2	-	40.1
Poa macrantha	Dune bluegrass	IAE	0.0431	2023	Ongoing	-	-	-	\$4,637	-	-	-	-	-
Ranunculus occidentalis	Western buttercup	IAE	0.1	2020	2022	-	OPRD field	\$7,418	-	-	-	18.4	-	18.4
Trifolium wormskioldii	springbank clover	CoosWA	0.1	2020	2022	-	\$7,800	-	-	-	0.01	0.03	-	0.01
Total OSB Total		J	1	1	1	\$6,182	\$9,612	\$16,073	\$7,633 \$17,812 ¹	25.9	0.25	32.63	2.51 2.46 ¹	61.26 2.46 ¹

Appendix C: Summary of Seed Production and Yields to Date

¹OSB Recovery Challenge Grant fields

*46N = 46 North Farm; CoosWA = Coos Watershed Association; IAE = Institute for Applied Ecology Farm; MCF = Matt-Cyn Farms

Appendix D: Summary of Seed Sales to Date

Partner/Species	Pounds of Seed Purchased								
	2020	2021	2022	2023	All Years				
Columbia River Estuary S	tudy Taskf	orce							
Plectritis brachystemon	-	-	-	2.0	2.0				
Oregon Parks & Recreation	on Departm	nent							
Cirsium edule	-	0.06			0.06				
Eriophyllum Ianatum	-	-	-	1.0	1.0				
North Coast Land Conser	vancy	1							
Ranunculus occidentalis	-	-	-	0.5	0.5				
Stillwater Natives									
Eriophyllum Ianatum	-	-	-	0.5	0.5				
Plectritis brachystemon	0.25	-	-	-	0.25				
US Fish and Wildlife Serv	ice								
Plectritis brachystemon	-	-	0.5	4.0	4.5				
Ranunculus occidentalis	-	-	-	4.0	4.0				
US Forest Service		I	I	<u> </u>					
Eriophyllum Ianatum	-	-	-	1.0	1.0				
Plectritis brachystemon	3.0	-	3.0	10.0	16.0				
Total	3.25	0.06	3.5	23.0	29.81				