

City of Sutherlin
Conservation Agreement
and
Conservation Plan and
Implementation Guide
for
Rough Popcorn Flower
(*Plagiobothrys hirtus*)

March 7, 2007

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Rough Popcorn Flower Conservation Agreement

I. Introduction

The success of the Sutherlin Popcorn Flower Conservation Plan and Implementation Guide hinges upon all the partners working together. This part of the document outlines the role of each partner in assisting with rough popcorn flower conservation on publicly owned or managed land within the City of Sutherlin. Participation in this agreement will assist the City in complying with Oregon Revised Statute 564, and associated Oregon Administrative Rule 603-073. This legislation mandates the management of Oregon's public lands for the conservation of threatened and endangered species and their habitats, places the responsibility for coordinating plant conservation with the Oregon Department of Agriculture (ODA) and provides guidelines for the conservation of rare plants, such as Douglas County's wetland endemic rough popcorn flower (*Plagiobothrys hirtus*). Compliance with this agreement also promotes recovery of rough popcorn flower by conserving existing populations as specified in US Fish and Wildlife Service's (The Service) Recovery Plan for the Rough Popcornflower (2003). Contact people and information for each partner organization are listed in Appendix A.

II. Partner Tasks

A. City of Sutherlin

The City of Sutherlin will:

- Prohibit activities which would disturb or destroy existing populations of rough popcorn flower, or their habitat, on land owned or managed by the City
- Contract or coordinate appropriately timed surveys for new populations of rough popcorn flower on city owned or managed land prior to initiating ground disturbing projects
- Contact ODA Native Plant Conservation Program if a new population of rough popcorn flower is found during a pre-project survey
- Cooperate with ODA Native Plant Conservation Program to develop conservation-based alternatives to proposed projects which would impact rough popcorn flower populations or their habitat
- Cooperate with ODA Native Plant Conservation Program to implement the management plan promoting the conservation of the populations of rough popcorn flower at the Timber Days Grounds

B. Oregon Department of Agriculture, Native Plant Conservation Program

The ODA Native Plant Conservation Program will:

- Designate an ODA staff person as the liaison to meet with City of Sutherlin staff and other interested parties to coordinate implementation of the Conservation Plan
- Advise and assist City of Sutherlin staff regarding rough popcorn flower surveying, monitoring and other conservation efforts
- Provide annual training during popcorn flower blooming period on monitoring protocols and rough popcorn flower identification to City of Sutherlin staff, volunteers and other interested parties
- Assist City of Sutherlin in developing conservation based alternatives to proposed projects which would impact rough popcorn flower populations and their habitat
- Coordinate annual review of conservation agreement in conjunction with monitoring training

C. U.S. Fish and Wildlife Service, Roseburg Office

US Fish and Wildlife Service will:

- Assist the City of Sutherlin, upon their request, in conducting appropriate seasonal surveys and identifying popcorn flower populations on city or other publicly owned or managed lands within the corporate limits as staffing allows
- Provide technical advice and assistance with conservation of rough popcorn flower populations on City owned or managed land if requested
- Participate in cost-sharing projects for restoration, habitat conservation, and rough popcorn flower monitoring activities as funding allows

D. Sutherlin Blackberry Festival, Inc.

Sutherlin Blackberry Festival, Inc. will:

- Coordinate with City of Sutherlin and ODA Native Plant Conservation Program regarding Blackberry Festival operations during development of the Rough Popcorn Flower Conservation Plan
- Cooperate with City of Sutherlin and ODA Native Plant Conservation Program to ensure compliance with conservation measures specified in the Plan during the Blackberry Festival

E. Sutherlin Stampede Association

Sutherlin Stampede Association will:

- Coordinate with City of Sutherlin and ODA Native Plant Conservation Program regarding Sutherlin Stampede operations during development of the Rough Popcorn Flower Conservation Plan
- Cooperate with City of Sutherlin and ODA Native Plant Conservation Program to ensure compliance with conservation measures specified in the Plan during the Sutherlin Stampede

F. Native Plant Society of Oregon, Umpqua Valley Chapter

Native Plant Society of Oregon, Umpqua Valley Chapter will:

- Provide technical advice and assistance with conservation of rough popcorn flower populations on City owned or managed land if requested
- Assist the City with yearly monitoring of popcorn flower populations at the Timber Days Grounds

III. Maintenance

A. Conservation Agreement Review

This agreement will be reviewed annually. Oregon Department of Agriculture Native Plant Conservation Program staff will coordinate the review of the agreement.

B. Withdrawal from Conservation Agreement

Partners wishing to withdraw from the conservation agreement may notify the Oregon Department of Agriculture's Native Plant Conservation Program in writing

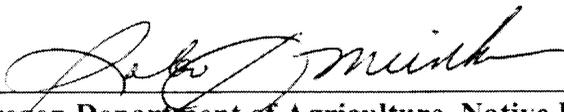
IV. Signature Page

By signing this document, partners make a good faith agreement to work together to conserve rough popcorn flower in Sutherlin. If a partner must withdraw from the agreement before the annual review takes place, a representative of the partner may notify the Oregon Department of Agriculture's Native Plant Conservation Program, in writing, of the partner's decision.



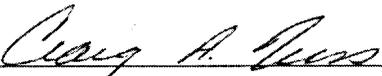
City of Sutherlin

5/22/07
Date



Oregon Department of Agriculture, Native Plant Conservation Program

12 April 2007
Date



U.S. Fish and Wildlife, Roseburg Office

6/15/07
Date



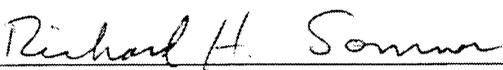
Sutherlin Blackberry Festival, Inc.

8/13/07
Date



Sutherlin Stampede Association

6/19/07
Date



Native Plant Society of Oregon, Umpqua Chapter

6/19/07
Date

Rough Popcorn Flower Conservation Plan and Implementation Guide

I. Introduction

A. Overview of City responsibility

Oregon Senate Bill 533 and its corresponding Oregon Revised Statute (ORS 564) require all non-federal public agencies to protect populations of listed plants, and their habitats, that occur on lands owned or managed by the agency. The purpose of this bill is to facilitate the protection and conservation of Oregon's threatened and endangered plants and their habitats. The Oregon Department of Agriculture (ODA) is the agency responsible for the listing of plants as threatened or endangered, and for coordinating conservation efforts for these rare species.

Any land action on Oregon non-federal public lands which might result in the taking of a threatened or endangered species requires either a permit or a consultation with staff at ODA. Land actions include activities such as ground disturbance, vegetation disturbance, plant growth suppression or reproduction inhibiting activities within the known or suspected habitats of the listed species. A "take" occurs when a listed plant is collected, cut, damaged, destroyed, dug, killed, picked, removed, transplanted, transported, or otherwise disturbed. A take can also occur if pollinators or other organisms required by the plant are collected, disturbed or destroyed.

More information about government agency responsibilities can be found in Oregon Administrative Rule (OAR) 603-073-0090, which can be accessed at the following website: http://arcweb.sos.state.or.us/rules/OARS_600/OAR_603/603_073.html , and on ODA Native Plant Conservation Program's website: <http://www.oregon.gov/ODA/PLANT/CONSERVATION/index.shtml>

B. Sutherlin Blackberry Festival, Inc.

The Sutherlin Blackberry Festival is held annually in August in Sutherlin, Oregon, with events organized by the Sutherlin Blackberry Festival, Inc. In 2006, activities included a blackberry cook-off, a car show, lawn mower races, mud volleyball, bingo, street dances, a classic car cruise, karaoke, and a belly dancing contest. Many of the activities take place at the Timber Days Grounds. Recognizing the importance of higher education, the Sutherlin Blackberry festival raises money to provide High School Scholarships to graduates to help them in their quest to achieve a college education. More information is available on the Blackberry Festival, Inc.'s website <http://www.sutherlinbbfest.org>

C. Sutherlin Stampede Association

The Sutherlin Stampede Rodeo Association was created to provide activities for youth and the community through rodeo participation and equestrian activities. As a non-profit corporation staffed by volunteers and supported by local sponsors, the Association sponsors the Sutherlin Stampede Rodeo each July at the Timber Days Grounds. With the donation of a canned food item, all spectators enter free. The Sutherlin Stampede Association was involved in purchasing the land which constitutes the Timber Days Grounds – this parcel was subsequently donated to the City of Sutherlin for use in local activities and celebrations. More information is available on the Association’s website <http://www.sutherlinstampede.com>

D. Rough popcorn flower conservation history

Rough popcorn flower occurs only in Douglas County, Oregon. Currently restricted to a few protected sites, often on the margins of highways, rough popcorn flower is rapidly declining in its native habitat. Urbanization of the Sutherlin area continues to impact remaining populations, and filling and draining of adjacent wetlands has reduced the habitat quality at most remaining localities. In response to this decline, the species was listed as Endangered by both the ODA in 1989, and US Fish and Wildlife Service (The Service) in 2000.

However, recovery efforts for this species are promising. A Recovery Plan for the species was issued by the Service in 2003, and successful methods for greenhouse propagation and cultivation have been developed. New populations have been created in protected habitat on Bureau of Land Management’s North Bank Habitat Management Area, and active management of The Nature Conservancy’s Oerding Popcorn Swale Preserve has produced thriving populations in this site. Protection for a population owned by Douglas County Soil and Water Conservation District is now guaranteed, and Oregon Department of Transportation continues to successfully manage populations in the I-5 right-of-way. Conservation planning for populations managed by the City of Sutherlin further improves the viability of this species, contributing to the move toward full recovery.

E. The plant

Rough popcorn flower is an herbaceous plant which can be perennial and grow to two feet tall, but is usually considerably smaller and annual. Plants flourish as aquatics throughout the winter, emerge when wetlands dry in spring, and bloom in mid-summer. Flowers are produced in profusion, and attract many generalist pollinators; they are also self-fertile. Seed production is generally prolific, and seeds germinate readily when fall rains begin. Plants may reproduce asexually by rooting at the stem nodes, and older plants in optimally hydric habitat produce large clonal vegetation mats before flower initiation begins. In drier sites, plants may reproduce precociously as annuals.

Rough popcorn flower's preferred habitat is sedge/grass dominated open marsh, although many naturally occurring sites currently suffer from infestations of exotic weeds. Associated native species include American slough grass, Douglas' meadowfoam, Cusick's checkermallow, tufted hair grass, and common rush. Weedy associates include pennyroyal, tall fescue, and teasel.



Rough popcorn flower growing in the west subpopulation of the Timber Days Grounds site. Insert shows a close-up of a flower. Photos by Troy Maddux.

II. Location of currently known site

A. Directions to site

Currently, one population of the rough popcorn flower, consisting of two subpopulations or patches, is known to occur on City of Sutherlin land. These two subpopulations are reached by parking at Central Park in Sutherlin, crossing the footbridge over Sutherlin Creek, and walking past the old restrooms toward the rodeo arena. Two patches of plants occur here; one just north of the rodeo arena in the lowland between the arena and the road above the creek, and the second in the same lowland 0.10 miles to the east, behind the eastern-most grandstand. See Appendix B (aerial photo) for exact location.

B. Site description

The west subpopulation consists of a small round group of plants approximately 10.5 square meters, and a narrow patch about 33 meters long and about 2 meters wide. The GPS coordinates listed below represent the center of this subpopulation. The area

occupied by rough popcorn flower plants widens out to about 7 or 8 meters near the middle of the elongated portion of this subpopulation; occupied area tapers down to about 1 meter at its eastern end near the end of the fence where a gate enters the rodeo grounds. The northern edge of this subpopulation receives deeper water in winter due to its lower topography (a roadside ditch). Plants in this lower area are larger (15-20 inches tall), while the more upland plants are smaller (4-8 inches tall). More than 1,000 plants were estimated to exist in this subpopulation in 2005, although far fewer were observed in 2006.

The eastern subpopulation is behind the last (eastern-most) grandstand. This subpopulation consists of a patch of scattered individuals measuring 8 meters east-west (parallel with the ditch and road) by 4 meters north-south (perpendicular to the road and ditch). Eighty-two plants were counted in this subpopulation in 2005.

C. GPS coordinates

West subpopulation: 43° 23.34 N 123° 18.50 W

East subpopulation: 43° 23.33 N 123° 18.38 W

III. Plan objective

The objective of this Plan is to provide guidance to the City of Sutherlin to conserve populations of rough popcorn flower (*Plagiobothrys hirtus*) that occur on City owned or managed lands.

IV. Rough popcorn flower management at Timber Days Grounds

A. Ground disturbing activities

Contact ODA Native Plant Conservation Program Permit and Consultation Specialist (Rebecca Currin, 541 737-4135), currinr@science.oregonstate.edu) prior to scheduling ground disturbing activities such as grading, ditch clean-out, building replacement, utility work, brush removal or any other activities that alter or compact existing soil topography in areas which support rough popcorn flower populations. Plans for activities in adjacent areas which would impact hydrology of rough popcorn flower habitat, such as the installation of drain tile for wetland draining and the filling of wetlands or ditches for in preparation for development also require consultation with ODA. Upon receiving a request for a consultation, ODA staff will assist in the development of an alternative or a mitigation plan for preventing damage to rough popcorn flower populations. See ODA Native Plant Conservation website at <http://www.oregon.gov/ODA/PLANT/CONSERVATION/index.shtml> for more

information regarding the responsibilities of non-federal public land managers to conserve listed plant species, and how to initiate the required consultation process.

B. Mowing

Mowing benefits popcorn flower populations by removing competing vegetation and encouraging new plant growth. Mowing of the area supporting the rough popcorn flower population should be completed after plants have finished flowering and produced and dispersed their seed, usually by late July. Mowers should be set as high as possible to prevent injury to plant crowns, and to avoid disturbing the soil surface. Mowing should not occur when soil is wet, and should be accomplished without excessive soil compaction (i.e. by using a lightweight mower, or a mower with a boom that allows mowing from outside the occupied area).

C. Herbicide treatments

Herbicide treatments should not be used within populations of rough popcorn flower. If herbicide treatments are needed within the Timber Days Grounds area (i.e. to remove infestations of knapweed or other noxious weeds), application should be scheduled to minimize impact to the popcorn flower population. Spraying should be restricted to periods when rough popcorn flower plants are dormant (late summer), or by restricting spraying to areas 100 ft or more away from popcorn flower plants and spraying during windless conditions. Contact Rebecca Currin at ODA Native Plant Conservation Program (541 737-4135, currinr@science.oregonstate.edu), or Ken French at Oregon Department of Agriculture, Noxious Weed Control (541-839-4929, kfrench@oda.state.or.us) for more information on herbicide spraying near listed plant populations.

V. Monitoring and adaptive management

A. Evaluating rough popcorn flower population viability

The two subpopulations of rough popcorn flower at the Timber Days Grounds should be monitored yearly to assess population health. Monitoring should consist of estimating the number of ramets (stems emerging from the ground) in each subpopulation. Accurate estimations can be made by counting the number of stems emerging from the ground in a designated area (such as a square meter), measuring the occupied area of the patch, and multiplying the two values together. Because correct identification of plants is necessary for accurate data collection, and plants are most easily identified in flower, population size estimates should be completed during the plant's flowering season (mid-May through early July). To reduce seasonal variability, monitoring should occur at the same time each year. Establishment of permanent photopoints, with pictures taken each year at the same time from the same point, also provides information on trends in population size and viability. A sample form for collecting population viability data is provided in Appendix C.

B. Monitoring for noxious weed infestations

One of the greatest threats to native plant populations in Oregon is infestations of exotic weeds. Diffuse, meadow and spotted knapweed occur in Douglas County – invasions of these weeds negatively impact agricultural and natural landscapes, and can invade wetlands. Other noxious weeds also occur in Douglas County – more information on weeds, including information on identification is available at <http://www.oregon.gov/ODA/PLANT/WEEDS/statelist2.shtml> Oregon Department of Agriculture’s Noxious Weed Control Program provides information and support to private and public landowners with weed issues – contact Ken French (ODA Integrated Weed Management Specialist) in Canyonville for more information (541-839-4929, kfrench@oda.state.or.us). The Timber Days Grounds should be inspected annually for weed infestations, and ODA Native Plant Conservation Program should be notified if weed infestations of noxious weeds are found.

C. Adaptive management

Should yearly monitoring indicate that the rough popcorn flower populations are declining in numbers (a loss of more than 20% for two consecutive years), ODA Native Plant Conservation Program should be contacted. Possible causes for the decline will be evaluated by ODA and City of Sutherlin staff, and a plan for preventing further decline will be cooperatively developed by the City and ODA.

Appendices

Appendix A. Contact person information

City of Sutherlin

Planning Director

City of Sutherlin

126 E. Central Ave.

Sutherlin, OR 97479

Phone: 541-459-9363

Email: planning@ci.sutherlin.or.us

<http://www.ci.sutherlin.or.us/Departments/PlanningDepartment/tabid/1274/Default.aspx>

Oregon Department of Agriculture, Native Plant Conservation Program

Robert Meinke

Program Supervisor

Native Plant Conservation Program

Oregon Department of Agriculture

Cordley 2082, Department of Botany and Plant Pathology

Oregon State University

Corvallis, Oregon 97331

Phone: 541-737-2317

Email: meinker@science.oregonstate.edu (or plant-info@oda.state.or.us)

http://www.oregon.gov/ODA/PLANT/CONSERVATION/contact_us.shtml

US Fish and Wildlife Service

Craig Tuss

Field Supervisor

USFWS Roseburg Field Office

2900 NW Stewart Pkwy

Roseburg, OR 97470

Phone: 541-957-3478

Email: Craig_Tuss@fws.gov

<http://www.fws.gov/oregonfwo/FieldOffices/Roseburg/RoseburgMainPage.asp>

Sutherlin Blackberry Festival, Inc.

Pat Greer

Secretary

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<http://www.sutherlinbbfest.org>

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Native Plant Society of Oregon

President

Native Plant Society of Oregon

Umpqua Valley Chapter

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Email: uv_president@NPSOregon.org

<http://www.umpquavalley.npsoregon.org/>

Appendix B. Location of Timber Days Grounds rough popcorn flower populations



The two Timber Days Grounds subpopulations of rough popcorn flower (east and west rough popcorn flower site on this photo) can be reached by crossing the footbridge from Central Park (on Central Ave. in Sutherlin) and going east along the access road. The two mapped points represent the GPS coordinates $43^{\circ} 23.34' N$ $123^{\circ} 18.50' W$ and $23.33^{\circ} N$ $123^{\circ} 18.38' W$ - these points are located at the centers of the two subpopulations. (Map courtesy of Dan Huff.)

Appendix C. Rough popcorn flower population viability monitoring datasheet

Monitoring date: _____

Subpopulation: _____

Data collector: _____

Number of plants counted in 1 sq. meter _____

Occupied area (sq. meters) _____

Estimated number of plants in subpopulation _____

What percentage of the plants are flowering? _____

Are any noxious weeds present in the area? _____

Describe weed infestation _____

Comments? _____