NORTH PARK PHACELIA
Conservation Action Plan
2011 Update

North Park phacelia © *Frank Weston*

Plant Species of Focus:
North Park phacelia (*Phacelia formosula*)

Sponsored by the
Colorado Rare Plant Conservation Initiative

Workshop dates: May 2008, August 2008 and July 2010
Report date: August 25, 2011

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Panjabi, S. and B. Neely. 2011. North Park Phacelia Conservation Action Plan 2011 Update. Prepared by The Nature Conservancy and the Colorado Natural Heritage Program. Unpublished report prepared for the National Fish and Wildlife Foundation.

I. Introduction

This document identifies conservation strategies for the North Park phacelia, based on an assessment of the plants' viability and threats by participants of three workshops held in May 2008, August 2008 and July 2010. The primary audience is intended to be the workshop participants and other stakeholders interested in helping to implement the strategies.

An initial Conservation Action Plan was developed in 2008 (Kram et al. 2008; available on-line at http://www.cnhp.colostate.edu/teams/botany.asp#initiative) following the first two workshops. This report, herein, is intended as a comprehensive follow-up to the 2008 action plan.

Located in Jackson County, Colorado, the North Park Priority Action Area contains all of the current confirmed and viable occurrences of the North Park phacelia. The North Park phacelia is considered globally imperiled (G1) by the Colorado Natural Areas Program and is listed as endangered by the U.S. Fish and Wildlife Service. There are two occurrences that fall outside of the Action Area because they are only known from imprecisely documented, historical records (H ranked minutes records). It should also be mentioned that there are an additional three occurrences of a species that closely resembles North Park phacelia that have been documented in Larimer County, Colorado. The species' identification of these records has not been confirmed; they are therefore beyond the scope of this report.

The North Park phacelia is endemic to the vicinity of the North Park Priority Action Area as identified the Colorado Rare Plant Conservation Initiative (RPCI, Neely et al. 2009). A Priority Action Area is an area needing immediate conservation action to prevent the need for listing, extinction, or further losses of imperiled plant species. Selection was based on the level of imperilment of rare plant species, quality of the occurrences, urgency of the management and protection actions, and other opportunities such as funding and land ownership patterns. These areas are based on the Potential Conservation Areas and Networks of Conservation Areas identified by the Colorado Natural Heritage Program, at Colorado State University, with input by the RPCI and the Rare Plant Technical Committee (RPTC). To date, RPCI has identified ten such areas across Colorado.

II. Vision and Goals for the North Park Priority Action Area

Vision:

1. Populations of the imperiled North Park phacelia thrive within a mosaic of native plant communities (e.g., including habitat for the North Park phacelia and its pollinators).
2. Ecological processes that support the habitat and local mosaic of native plant communities associated with North Park phacelia are functioning
3. A coalition of partners work together to ensure its long-term survival and stewardship.

Ecological Goals:

1. Conserve all viable and restorable occurrences of the North Park phacelia (6 occurrences known to date)
2. Conserve (at least 2000 acres of) habitat for the North Park phacelia
3. Maintain/restore a mosaic of high quality plant communities in a minimum 600 meter buffer area around all known occurrences.

III. North Park phacelia

The North Park phacelia (*Phacelia formosula;* G1[1], listed Endangered; Spackman et al. 1997) is a member of the waterleaf family (Hydrophyllaceae) with purple to lavender flowers and striking golden yellow, exserted stamens. This species is known from only six occurrences in the world, all of which lie within the Coalmont Formation in Jackson County, Colorado.

Although all of the known extant occurrences appear to be in fair to excellent condition, the habitat for North Park phacelia is threatened by motorized recreation, residential development, roads, noxious weed invasions, and potentially by future oil and gas development. Conservation issues are discussed in greater detail below.

The focus of the workshops was on this globally imperiled plant species. Attachment 1 describes other significant species and plant communities in this area. A full suite of biodiversity values should be considered during more expansive conservation planning efforts for this area.

IV. North Park Priority Action Area

This document focuses on the North Park Priority Action Area (**Figures 1 and 2**) as recognized by the Colorado Rare Plant Conservation Initiative (RPCI, Neely et al. 2009). The boundary of the North Park Priority Action Area is based on a Network of Conservation Areas developed by the Colorado Natural Heritage Program at Colorado State University (CNHP 2011).

Located in Jackson County, Colorado, the North Park Priority Action Area contains all six of the confirmed, current and viable occurrences of the globally imperiled North Park phacelia. The North Park Priority Action Area occurs within the vicinity of the Upper Colorado River Corridor Priority Landscape identified by the Colorado Conservation Partnership (www.keepitcolorado.org).

[1] The "G rank" is an abbreviation for "Global Rank" as identified by the Colorado Natural Heritage Program. G1 = critically imperiled. G2 = imperiled. For more detail on global ranks please visit the Colorado Natural Heritage Program's website at http://www.cnhp.colostate.edu/heritage.html.

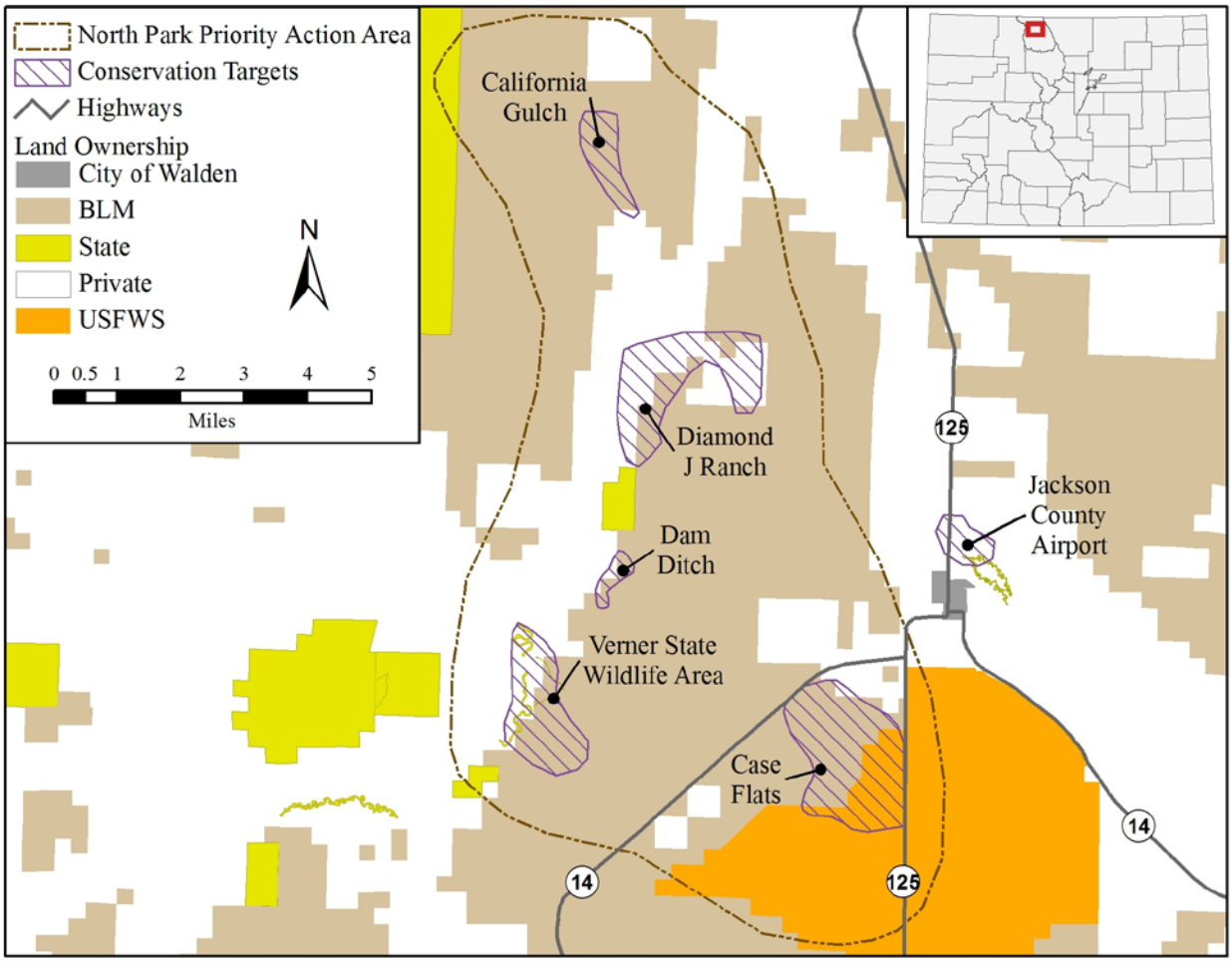

Figure 1. 2008 map of the North Park Priority Action Area. Boundaries were based on Potential Conservation Areas (Conservation Targets in striped purple boundaries) and Networks of Conservation Areas (North Park Priority Action Area in dotted brown outline) developed by the Colorado Natural Heritage Program (2008). The North Park Priority Action Area was recognized by the Colorado Rare Plant Conservation Initiative as an Important Plant Area and a Priority Action Area.

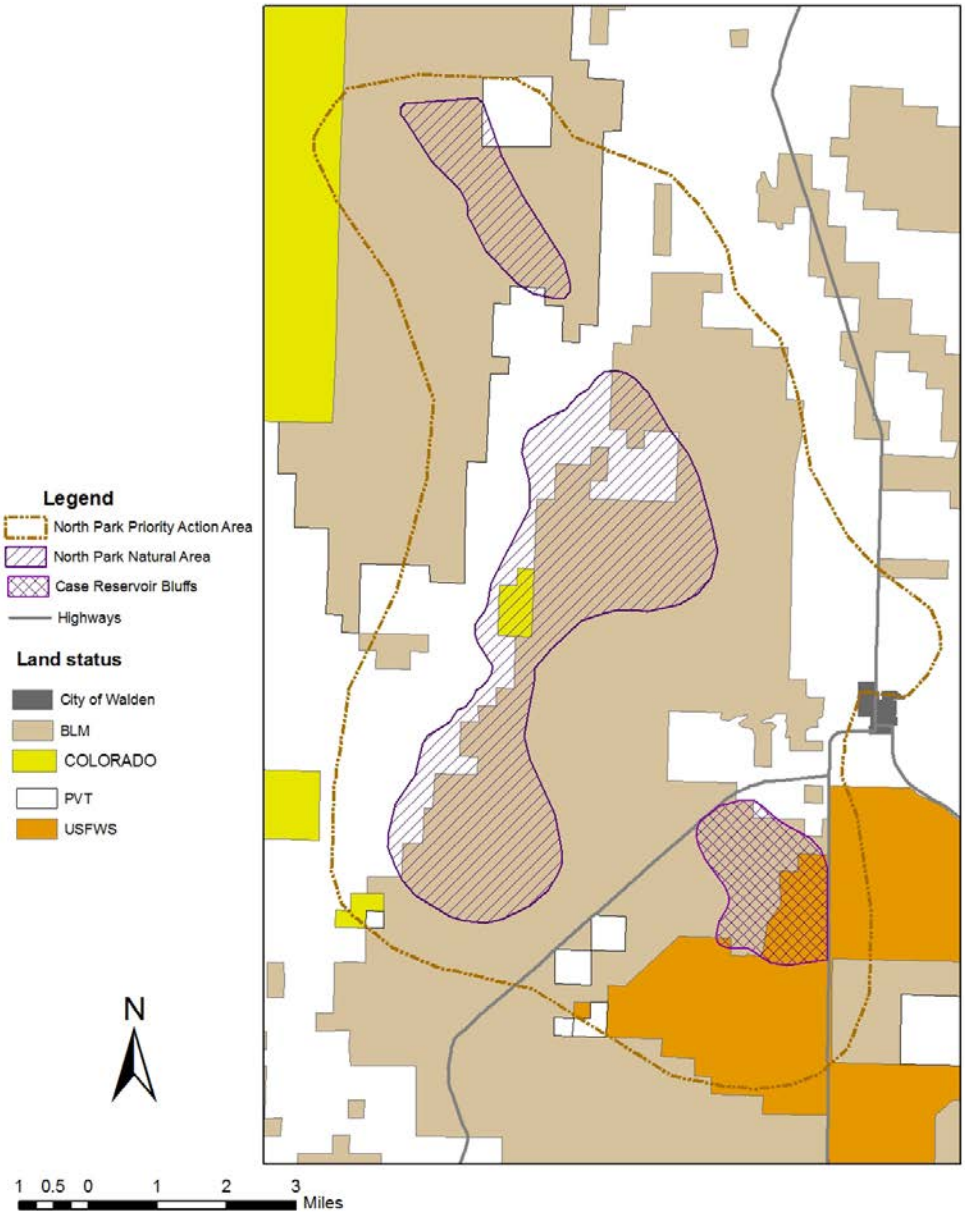

Figure 2. 2011 map of the North Park Priority Action Area. Boundaries are based on Potential Conservation Areas (North Park Natural Area and Case Reservoir Bluffs) and Networks of Conservation Areas (North Park Priority Action Area) developed by the Colorado Natural Heritage Program (2011) and are recognized by the Colorado Rare Plant Conservation Initiative as Important Plant Areas and a Priority Action Area (Neely et al. 2009). Boundaries were modified after the 2008 workshops to include the occurrence just north of Walden in the vicinity of the Jackson County Airport (CNHP does not recognize a Potential Conservation Area here so this area is not delineated on the map as it was in 2008).

V. About the Workshops

Purpose: To identify strategies for conserving the globally imperiled North Park phacelia based on an assessment of the viability and threats to its occurrences and habitat.

Workshop dates: The RPCI completed three workshops for the North Park phacelia. During the first, held in May 2008, CNHP and TNC worked together to identify the viability of and threats to the phacelia. In August 2008, CNHP and TNC facilitated a meeting at the US Forest Service in Walden with partners to identify conservation strategies and actions. In July 2010, the workshop participants met in Walden to refine the information regarding viability and conservation issues, develop a vision and goals, and updated the conservation strategies.

Participants:

Workshop #1. Viability and threats assessment in May 2008 (internal CNHP/TNC effort)

Name	Affiliation
Attended	
Susan Spackman Panjabi	Colorado Natural Heritage Program
Megan Kram	The Nature Conservancy
Betsy Neely	The Nature Conservancy
Terri Schulz (facilitator)	The Nature Conservancy

Workshop #2. Strategy identification in August 2008 (partner effort)

Name	Affiliation
Attended	
Megan McGuire	Bureau of Land Management
Teri Parvin	Bureau of Land Management
Susan Spackman Panjabi (co-facilitator)	Colorado Natural Heritage Program
Megan Kram (co-facilitator)	The Nature Conservancy
Betsy Neely	The Nature Conservancy
Ellen Mayo	U.S. Fish & Wildlife Service
Ann Timberman	U.S. Fish & Wildlife Service
Unable to attend	
Brian Kurzel	Colorado Natural Areas Program
Other contacts	
Nancy Wanamaker	Owl Mountain Partnership
Mike Higuera	The Nature Conservancy

Workshop #3. Strategy identification and implementation in July 2010 (partner effort)

Name	Affiliation
Attended	
Megan McGuire	Bureau of Land Management
Susan Spackman Panjabi (co-facilitator)	Colorado Natural Heritage Program
Lynn Rubright	Colorado Native Plant Society
Betsy Neely (co-facilitator)	The Nature Conservancy
Gina Glenne	U.S. Fish & Wildlife Service
Ann Timberman	U.S. Fish & Wildlife Service
Marti Aitken	U.S. Forest Service
Unable to attend	
Brian Kurzel	Colorado Natural Areas Program
Bob Timberman	
Barbara Vasquez	Basin Roundtable
Other contacts	
Owl Mountain Partnership	Nancy Wanamaker
Mike Higuera	The Nature Conservancy
Debbi Heeney	Natural Resources Conservation Service
Debbie Alpe	CSU Extension
Carolyn Aspelin	Colorado Coalition of Land Trusts
Janie Brands	Jackson County Weed Coordinator
Jim Tolstup	C olorado Native Plant Society

VI. Workshop Results

A. Conservation Targets

Using The Nature Conservancy's (TNC) site conservation planning workshop methodology, "conservation targets" are a limited suite of species, communities, and/or ecological systems, or specific locations of these elements of biodiversity (e.g., sites, occurrences, sub-occurrences, or other areas) that are the basis for setting goals, identifying conservation strategies, and measuring conservation effectiveness. At the North Park Priority Action Area our targets are based on specific areas that support the North Park phacelia and associated land ownerships.

We identified six conservation targets, as shown in **Table 1**, based on landownership and presence of North Park phacelia.

Table 1. Total of six targets based on landownership and presence of North Park phacelia. For example, there are three targets identified at the North Park Natural Area – BLM, Private, and State lands.

Targets (based on CNHP Potential Conservation Areas)	Associated land ownership
Jackson County Airport (includes CNHP Element Occurrence or EO #1*)	▪ County and/or Private (needs to be confirmed)
North Park Natural Area (includes EO #4, 6, 7, and 9)	▪ BLM ▪ Private ▪ State
Case Reservoir Bluffs (EO #14)	▪ BLM ▪ FWS

* EO = Element Occurrence defined by CNHP.

CNHP assigns each occurrence a unique element occurrence number. These numbers are not necessarily in consecutive order because as new locations of plants are found, some occurrences are lumped together, and locations previously documented as two or more occurrences may become one (e.g., if plants are found between two occurrences, they may all together be considered one occurrence because of the proximity and connectedness of the individual plants).

B. Viability

"Viability" per TNC terminology is the "health" or "functionality" of the conservation targets. During the Workshop we attempted to answer two key questions through the viability assessment: *How do we define 'health' (viability) for each of our targets?* and *What is the current status of each of our targets?* **Table 2** shows the viability for each occurrence as identified during Workshop #1 and confirmed during Workshops # 2 and 3.

Table 2. Viability for six known occurrences of North Park phacelia. Overall viability is based on an assessment landscape context (i.e., setting), condition, and size. In the conservation target column, the name of the Potential Conservation Area is listed first, followed by the EO name (if assigned) and the EO number (an ID number for CNHP). The Jackson County Airport target is not included in a separate Potential Conservation Area, but it is included within the Priority Action Area (recognized by RPCI) which is based on the North Park Network of Conservation Areas defined by CNHP.

North Park phacelia occurrences*	Landscape Context	Condition	Size	Overall
Jackson County Airport (EO #1) **	Fair	Fair	Fair	**Fair**
North Park Natural Area at Verner State Wildlife Area (EO #4)	Good	Fair	Good	**Good**
North Park Natural Area at Dam Ditch (EO #6)	Good	Good	Good	**Good**
North Park Natural Area at Diamond J Ranch (EO #7)	Good	Good	Very Good	**Very Good**

North Park phacelia occurrences*	Landscape Context	Condition	Size	Overall
North Park Natural Area at California Gulch (EO #9)	Good	Very Good	Good	**Good**
Case Reservoir Bluffs (EO #14)	Good	Good	Fair	**Good**

*The Larimer County Element Occurrences are not included as a target in this table because there are taxonomic questions that are being addressed.
**The workshop group visited this site after the 2010 workshop and observed numerous plants in a small area of potential habitat. Betsy and Susan visited this site after the August 2008 workshop and observed 3 plants. CNHP records indicate that, prior to 2008, this occurrence had not been observed since 1981.

The overall viability rankings of very good, good, and fair for each occurrence were based on a systematic assessment of the components of viability, or indicators and associated indicator ratings as shown in the table below. These components of viability are "rolled up" into the overall viability rank (**Table 3**).

Table 3. Basis for viability ratings for North Park phacelia.

		Indicator rating criteria			
Key Attribute	Indicator	**D** - Poor	**C** - Fair	**B** - Good	**A** - Very Good
Intactness of occurrence and surrounding area	Percent fragmentation	Highly fragmented	Moderately fragmented	Limited fragmentation	Unfragmented
Population structure & recruitment	Evidence of reproduction	Little or no evidence of successful repro. (few seedlings and/or no flowering or fruiting)	Less productive, but still viable with evidence of flowering and/or fruiting and mixed age classes	Good likelihood of long-term viability as evidenced by flowering, fruiting, and mixed age classes.	Excellent viability as evidenced by high % flowering and fruiting, and mixed age classes
Species composition / dominance	Percent ground cover of invasive species	>50% cover	11-50% cover	1-10% cover	<1% cover
Population size & dynamics	Number of individuals	less than 50	50-199	200 - 1000	more than 1000

C. Conservation Issues

With the viability analysis complete, participants then identified the primary conservation issues (threats, stresses, sources of stress) at each site. Conservation issues include the stresses that impair, degrade or destroy the viability of the targets (e.g., trampling) as well as the stressors, the causes or sources of the stress (e.g., cattle grazing, OHV traffic). The participants identified and ranked the issues based on their expertise, local knowledge, and sense of the key issues facing each target (**Table 4**).

Table 4. Conservation issues for North Park phacelia at specific conservation target areas.

	Conservation Targets						
Conservation Issue	Jackson County Airport (EO #1, County and private? Comap-shows private)	North Park Natural Area--**BLM** (EO # 4, 6, 7, 9)	North Park Natural Area--**Private** (EO # 4, 6, 7, 9)	North Park Natural Area--**State** (EO # 4, 6, 7, 9)	Case Reservoir Bluffs--**BLM** (EO# 14)	Case Reservoir Bluffs--**USFWS** (EO# 14)	**Overall Threat Rank for Conservation Issue**
OHV use	High	Low	Medium?	Low	Low	na	Medium
Non-motorized recreation: fishing, birding, etc.	na	Low	Low	Medium	na	na	Low
Road maintenance	Low	Low	Low	na	na	na	Low
Industrial development - airport expansion	High	na	Low	na	na	na	Low
Powerlines	Low	Low	Low	na	Low	na	Low
Incompatible livestock grazing	na	Low	Low	Low	Low	na	Low
Oil and gas development and associated infrastructure	Medium	Medium	Medium	Low	Medium	na	Medium
Residential development and associated infrastructure	Medium	na	High	Low	na	na	Medium
Non native invasive plants	Medium	Low	Low	Low	Low	Low	Low
Ponds and current water management and infrastructure	na	na	na	na	na	Low-needs evaluation	Low
Road construction	Low	Low	Low	Low	Low	na	Low
Climate change	Medium ?	Medium ?	Medium ?	Medium ?	Medium ?	Medium ?	Medium?
Overall Conservation Issue/Threat Rank for Target	Medium	Low	Low	Low	Low	Low	Medium

D. Strategies

Based on an understanding of viability and threats, participants identified strategies (a) across all targets for North Park phacelia and (b) for specific targets. Regarding the latter, participants identified at least one strategy for all occurrences and generally focused on strategies needed to mitigate key threats. After brainstorming strategies, participants prioritized them as high, medium, or low based on their anticipated effectiveness. Specific to private land protection efforts, the RPCI is also evaluating opportunities to work with willing private landowners and local land trusts to conserve these species and their habitats using voluntary tools such as conservation easements.

Table 5. Strategies for the conservation of North Park phacelia as identified at the 2008 and 2010 workshops. In 2010, the workshop group felt that all of the strategies were high priority. In 2008, the group did not identify strategies based on specific conservation issues.

Conservation Issue	Conservation Target	Owner/ manager	Strategy	Year strategy was develop-ed	Priority	Lead	Notes
ORV use	Jackson County Airport	Private/ County	Verify land ownership, consider fencing and or rocks	2010	High		
ORV use	Jackson County Airport	Private/ County	Survey areas to thoroughly document plants	2010	High		
ORV use	Jackson County Airport	Private/ County	Conduct outreach and education, consider placing a kiosk	2010	High	Anne will talk with troop leader	Work with boy scouts, school groups, okay to point out plants at this location; on private lands plants are only protected by private landowner, if interested
ORV use	All	Public	Conduct rare plant tours of the area and bring $ to community, guest speakers, tie to Walden economy	2010	High		Promotion ideas: life checklist, RPCI tours, stay in nice places, education benefits other sites too
ORV use	North Park Natural Area	BLM	Develop and erect signs--North Park phacelia lives here and only place in world that it lives-do not include picture to prevent vandalism	2010	Medium		This strategy is specific to BLM ACEC

Conservation Issue	Conservation Target	Owner/ manager	Strategy	Year strategy was develop-ed	Priority	Lead	Notes
ORV use		BLM	Team with stay the trail group/message	2010	Medium		See brochures and signs at Great Sand Dunes National Park--"don't tread on me" poster or brochure
ORV and residential development	All	Private	Conduct private land outreach-conservation easements, tax incentives, posters, etc.	2010	Medium		
All	All	Private	Poster-consider including bugseed, north park penstemon, etc.	2010	Medium		Poster is visual draw, brochure to take with
All	All	All	Develop a statewide rare plant poster	2010	Medium		
All	Statewide	Public	Develop a driving/walking tour(s) to kiosks that show rare plants. Include information about the plant habitat and associated ecosystem.	2010	Medium		Include phenology, e.g., Northcental plant tour dates. . .

Conservation Issue	Conservation Target	Owner/ manager	Strategy	Year strategy was develop-ed	Priority	Lead	Notes
All	All	All	Hire a USFWS lead for North Park conservation--GS9 satellite manager who does conservation and outreach as a portion of their job description under the refuges program	2010	High	Anne will talk with USFWS in WY.	Write position description, Gina knows person who reviews pds. New hire would be based in Laramie and travels to refuges. Potential funding for ecological services portion could come from o and g/ recovery funds. See what rare plants are in Albany Co. WY. Salary would come from refuges program and or other partners, owl mt, BLM.
Oil and gas development	BLM	BLM	Land exchange to USFWS refuge?--probably would not work, developer would have rights to lease	2010	Low		Existing leases on BLM lands can't be avoided.
Oil and gas development	BLM	BLM	Prevent additional BLM (Case Flat) land from being leased for oil and gas development by swapping land to USFWS refuge	2010	Low		It is too late to do an ACEC because the BLM RMP is done
Oil and gas development	BLM		No Surface Occupancy (NSO) stipulations already exist within 200 m of listed species on BLM lands	2010			
Oil and gas development	BLM		Write to BLM to comment on existing leases	2010			

Conservation Issue	Conservation Target	Owner/ manager	Strategy	Year strategy was develop-ed	Priority	Lead	Notes
Oil and gas development	all		Encourage implementation of BMPs for oil and gas development (Elliot et al. 2008)	2010	Low		
All	All	All	Coordinate monitoring and inventory efforts	2010	High	Gina, Carol, Peter, Anne	Gina prefers to pay for monitoring on private lands and coordinate with federal agencies and other public efforts.
Climate change	All	BLM	Recommend using ACECs and RNAs for research on climate change	2010	Low		
All	All	All	Identify a coordinator for the North Park Action Area.	2008	High	B. Neely	B.Neely and S.Panjabi to serve in this role in the interim.
Incompatible livestock grazing	All	All	Conduct research on impacts of cattle grazing; natural history; and how to best monitor the phacelia.	2008	High	RPI/ Grad student TBD.	Re natural history: See report from Kathy Darrow - 1990 study. Need to prioritize what is most important.
Lack of understanding of natural history	All	All	Synthesize research on the phacelia to help identify/adjust management needs.	2008	High	Anne	USFWS term position may be able to do this in Jan/Feb/March
Lack of understanding of natural history	All	All	Support a graduate-level research study to provide recommendations for mgmt. of the population.	2008	High	RPCI	

Conservation Issue	Conservation Target	Owner/ manager	Strategy	Year strategy was develop-ed	Priority	Lead	Notes
	All	All	Obtain funding for research and on-the-ground projects.	2008	High	RPCI	Fencing, grazing systems, fencing systems, management plans, research how to help expand the plant.
Energy development	All	All	Investigate plans for oil and gas development and work with energy companies to avoid all occurrences of the phacelia.	2008	High	RPCI	Need GIS analysis of oil and gas development with phacelia occurrences and habitat.
Climate change	All	BLM, FWS	Work together to ensure consistent monitoring	2008	High	BLM (Megan McGuire)	Consider outreaching to CNAP - Brian Kurzel - and Denver Botanic Garden too.
Development	All	Private	Pursue conservation easements with willing landowners to limit residential development and other potential impacts.	2008	High	Land trusts	Work with Colorado Cattleman's.
Development and lack of awareness	All	Private	Outreach to private landowners about the plant and how they can help protect it.	2008	High	Anne	NRCS - Deb Heeney in Walden. Deb Alpe is another good contact.
Development	All	Private	Assist landowners with on-the-ground protections.	2008	Med.	Anne	B.Neely and S.Panjabi to help too.

VII. Next Steps

1. The leads for all High and Medium priority strategies work towards their implementation.

2. Gina Glenne and Ellen Mayo (USFWS) are working to confirm the species identification of Larimer County population with the assistance of Dr. Duane Atwood in Utah.

3. Organize a conference call to check in with workshop participants and other stakeholders to assess progress on implementation of strategies, update this action plan, and confirm coordinator for North Park (e.g., Lynn Rubright, Colorado Native Plant Society).

4. Outreach to stakeholders and partners that couldn't attend the workshops.

5. Research needs: Monitor plant/population response to various land uses, especially those determined to have medium and high conservation issues (e.g., ORV use). Research reproductive ecology (e.g., pollination ecology).

6. Compile natural history and other information on North Park phacelia from Amy Bower's report and Kathy Darrow Warren's thesis, and CNAP report on monitoring.

VIII. References

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Attachment 1. Additional key species and plant communities in the North Park area

Although the focus of the workshop was on the globally imperiled plant, North Park phacelia, other key species and plant communities are known from the North Park area as shown in the table below (Colorado Natural Heritage Program 2011, http://www.cnhp.colostate.edu/). Specifically, the table identifies rare species and rare and/or high quality examples of plant communities in the North Park area. These and other biodiversity values should be considered with more detailed planning efforts for this area.

Scientific name	**Common name**	**G rank**	**S rank**	**Major group**
Bufo boreas	Boreal Toad (Southern Rocky Mountain Population)	G4T1Q	S1	Amphibians
Rana sylvatica	Wood Frog	G5	S3	Amphibians
Haliaeetus leucocephalus	Bald Eagle	G5	S1B,S3N	Birds
Numenius americanus	Long-billed Curlew	G5	S2B	Birds
Pelecanus erythrorhynchos	American White Pelican	G3	S1B	Birds
Plegadis chihi	White-faced Ibis	G5	S2B	Birds
Sterna forsteri	Forster's Tern	G5	S2B,S4N	Birds
Oncorhynchus clarkii stomias	Greenback Cutthroat Trout	G4T2T3	S2	Fish
Hyles gallii	Galium Sphinx Moth	G5	S3?	Insects
Alnus incana / Mesic Forbs Shrubland	Thinleaf Alder/Mesic Forb Riparian Shrubland	G3	S3	Natural Communities
Artemisia nova / Hesperostipa comata Shrubland	Western Slope Sagebrush Shrublands	G3?	S2?	Natural Communities
Artemisia tridentata ssp. *vaseyana / Festuca idahoensis* Shrub Herbaceous Vegetation	Western Slope Sagebrush Shrublands	G5	S3S4	Natural Communities
Artemisia tridentata ssp. *vaseyana / Pascopyrum smithii* Shrubland	Sagebrush Bottomland Shrublands	G3?	S1S2	Natural Communities
Artemisia tridentata ssp. *vaseyana / Pseudoroegneria spicata* Shrubland	Western Slope Sagebrush Shrublands	G5	S2	Natural Communities
Artemisia tridentata ssp. *wyomingensis / Pseudoroegneria spicata* Shrub Herbaceous Vegetation	Xeric Sagebrush Shrublands	G4	S3?	Natural Communities

Scientific name	Common name	G rank	S rank	Major group
Eleocharis quinqueflora - Triglochin ssp. Herbaceous vegetation	Alkaline Spring Wetland	GU	S2	Natural Communities
Pinus contorta / Vaccinium scoparium Forest	Seral Lodgepole Pine Forests	G5	S4	Natural Communities
Populus tremuloides / Alnus incana Forest	Montane Riparian Forests	G3	S3	Natural Communities
Pseudoroegneria spicata - Poa secunda Herbaceous Vegetation	Montane Grasslands	G4?	S1	Natural Communities
Salix drummondiana / Carex aquatilis Shrubland	Drummond Willow/Aquatic Sedge	G2G3	S2	Natural Communities
Salix geyeriana - Salix monticola / Calamagrostis canadensis Shrubland	Montane Willow Carrs	G3	S3	Natural Communities
Salix geyeriana - Salix monticola / Mesic Forbs Shrubland	Geyer's Willow-Rocky Mountain Willow/Mesic Forb	G3	S3	Natural Communities
Salix monticola / Calamagrostis canadensis Shrubland	Montane Willow Carr	G3	S3	Natural Communities
Salix monticola / Mesic Forbs Shrubland	Montane Riparian Willow Carr	G4	S3	Natural Communities
Schoenoplectus acutus - Typha latifolia - (Schoenoplectus tabernaemontani) Sandhills Herbaceous Vegetation	Great Plains Marsh	G4	S2S3	Natural Communities
Schoenoplectus maritimus Herbaceous Vegetation	Emergent Wetland (Marsh)	G4	S2	Natural Communities
Allium schoenoprasum var. *sibiricum*	wild chives	G5T5	S1	Vascular Plants
Corispermum navicula	a bugseed	G1?	S1	Vascular Plants
Eriogonum exilifolium	dropleaf buckwheat	G3	S2	Vascular Plants
Ipomopsis aggregata ssp. *weberi*	rabbit ears gilia	G5T2	S2	Vascular Plants
Lewisia rediviva	bitterroot	G5	S2	Vascular Plants
Oonopsis wardii	Ward's golden-weed	G3	S1	Vascular Plants
Packera debilis	Rocky Mountain ragwort	G4	S1	Vascular Plants
Penstemon laricifolius ssp. *exilifolius*	larch-leaf beardtongue	G4T3Q	S2	Vascular Plants
Penstemon radicosus	matroot penstemon	G5	S1	Vascular Plants
Sisyrinchium pallidum	pale blue-eyed grass	G2G3	S2	Vascular Plants

For more information about these and other biodiversity values, see reports including but not limited to the following:

- Colorado Wildlife Action Plan http://wildlife.state.co.us/WildlifeSpecies/ColoradoWildlifeActionPlan/
- The Nature Conservancy Ecoregional Assessments. http://conserveonline.org/workspaces/cbdgateway/era/reports/index_html The Southern Rocky Mountains Ecoregional Assessment pertains to the North Park Priority Action Area.
- Southern Rockies Ecosystem Project: http://www.restoretherockies.org/reports.html