WEED RISK ASSESSMENT FORM

Botanical name: *Taraxacum officinale* ssp. *officinale* G.H. Weber ex Wiggers

Common name: common dandelion

Assessors:

Irina Lapina
Botanist, Alaska Natural Heritage Program, University of Alaska Anchorage, 707 A Street, Anchorage, Alaska 99501
tel: (907) 257-2710; fax (907) 257-2789

Matthew L. Carlson, Ph.D.
Assistant Professor, Alaska Natural Heritage Program, University of Alaska Anchorage, 707 A Street, Anchorage, Alaska 99501
tel: (907) 257-2790; fax (907) 257-2789

Reviewers:

Michael Shephard
Vegetation Ecologist Forest Health Protection State & Private Forestry 3301 C Street, Suite 202, Anchorage, AK 99503 (907) 743-9454; fax 907 743-9479

Jeff Conn, Ph.D.
Weed Scientist, USDA Agricultural Research Service PO Box 757200 Fairbanks, Alaska 99775
tel: (907) 474-7652; fax (907) 474-6184

Page Spencer, Ph.D.
Ecologist, National Park Service, Alaska Region - Biological Resources Team 240 W. 5th Ave, #114, Anchorage, AK 99501 tel: (907) 644-3448

Jamie M. Snyder
UAF Cooperative Extension Service 2221 E. Northern Lights Blvd. #118 Anchorage, AK 99508-4143
tel: (907) 786-6310 alt.tel: (907) 743-9448

Julie Riley
Horticulture Agent, UAF Cooperative Extension Service 2221 E. Northern Lights Blvd. #118 Anchorage, AK 99508-4143
tel: (907) 786-6306

Outcome score:

A.	**Climatic Comparison**		
	This species is present or may potentially establish in the following eco-geographic regions:		
1	South Coastal	Yes	
2	Interior-Boreal	Yes	
3	Arctic-Alpine	Yes	

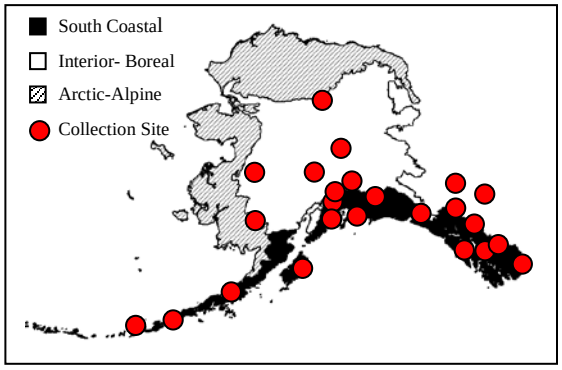
B.	**Invasiveness Ranking**	Total (Total Answered*) Possible	Total
1	Ecological impact	40 (40)	18
2	Biological characteristic and dispersal ability	25 (25)	14
3	Ecological amplitude and distribution	25 (25)	18
4	Feasibility of control	10 (10)	8
	Outcome score	100 (100)[b]	58 [a]
	Relative maximum score†		0.58

* For questions answered "unknown" do not include point value for the question in parentheses for "Total Answered Points Possible."

† Calculated as [a]/[b].

A. CLIMATIC COMPARISON:

	1.1 Has this species ever been collected or documented in Alaska?
Yes	Yes – continue to 1.2
	No – continue to 2.1
	1.2. Which eco-geographic region has it been collected or documented (see inset map)? *Proceed to Section B. Invasiveness Ranking.*
Yes	South Coastal
Yes	Interior-Boreal
Yes	Arctic-Alpine



Documentation: *Taraxacum officinale* has been collected in South Coastal, Interior-Boreal, and Arctic-Alpine ecogeographic regions in Alaska (Hultén 1968, UAM 2004).
Sources of information:
Hultén, E. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press, Stanford, CA. 1008 p.
University of Alaska Museum. University of Alaska Fairbanks. 2004. http://hispida.museum.uaf.edu:8080/home.cfm

2.1. Is there a 40% or higher similarity (based on CLIMEX climate matching) between climates any where the species currently occurs and

a. Juneau (South Coastal Region)?
Yes – *record locations and similarity; proceed to Section B. Invasiveness Ranking*
No

b. Fairbanks (Interior-Boreal)?
Yes – *record locations and similarity; proceed to Section B. Invasiveness Ranking*
No

c. Nome (Arctic-Alpine)?
Yes – *record locations and similarity; proceed to Section B. Invasiveness Ranking*
No – *If "No" is answered for all regions, reject species from consideration*

Documentation:
Sources of information:

B. INVASIVENESS RANKING

1. ECOLOGICAL IMPACT

1.1. Impact on Natural Ecosystem Processes

A.	No perceivable impact on ecosystem processes	0
B.	Influences ecosystem processes to a minor degree (e.g., has a perceivable but mild influence on soil nutrient availability)	3
C.	Significant alteration of ecosystem processes (e.g., increases sedimentation rates along streams or coastlines, reduces open water that are important to waterfowl)	7
D.	Major, possibly irreversible, alteration or disruption of ecosystem processes (e.g., the species alters geomorphology; hydrology; or affects fire frequency, altering community composition; species fixes substantial levels of nitrogen in the soil making soil unlikely to support certain native plants or more likely to favor non-native species)	10
U.	Unknown	

Score 5

Documentation:
Identify ecosystem processes impacted:
Common dandelion can cause modest impacts on community succession. It likely delays establishment of native species, since it is an early colonizer of recently disturbed areas (Auchmoody and Walters 1988, Densmore et al. 2001, Rutledge and McLendon 1996). Common dandelion reduces the availability of moisture and nutrients for native plants.
Rational:

Sources of information:
Auchmoody, L.R. and R.S. Walters. 1988. Revegetation of a brine-killed forest site. Soil Science Society of America Journal. 52: 277-280.
Densmore, R.V., P. C. McKee, C. Roland. 2001. Exotic plants in Alaskan National Park Units. Report on file with the National Park Service – Alaska Region, Anchorage, Alaska. 143 pp.
Rutledge, C.R. and T. McLendon. 1996. An Assessment of Exotic Plant Species of

Rocky Mountain National Park. Department of Rangeland Ecosystem Science, Colorado State University. 97 pp. Northern Prairie Wildlife Research Center Home Page. http://www.npwrc.usgs.gov/resource/othrdata/Explant/explant.htm (Version 15DEC98).

1.2. Impact on Natural Community Structure

A.	No perceived impact; establishes in an existing layer without influencing its structure	0
B.	Influences structure in one layer (e.g., changes the density of one layer)	3
C.	Significant impact in at least one layer (e.g., creation of a new layer or elimination of an existing layer)	7
D.	Major alteration of structure (e.g., covers canopy, eradicating most or all layers below)	10
U.	Unknown	

Score 3

Documentation:
Identify type of impact or alteration:
In Alaska common dandelion often establishes in existing herbaceous layer, changing the density of the layer (I. Lapina – pers. obs.). It also can form a new herbaceous layer on nearly mineral soil along banks and roadsides (M. L. Carlson & I. Lapina – pers. obs.)
Rational:

Sources of information:
Carlson, M. L., Assistant Professor, Alaska Natural Heritage Program, University of Alaska Anchorage, 707 A Street, Anchorage, Alaska. Tel: (907) 257-2790 – Pers. obs.
Lapina, I., Botanist, Alaska Natural Heritage Program, University of Alaska Anchorage, 707 A Street, Anchorage, Alaska. Tel: (907) 257-2710 – Pers. obs.

1.3. Impact on Natural Community Composition

A.	No perceived impact; causes no apparent change in native populations	0
B.	Influences community composition (e.g., reduces the number of individuals in one or more native species in the community)	3
C.	Significantly alters community composition (e.g., produces a significant reduction in the population size of one or more native species in the community)	7
D.	Causes major alteration in community composition (e.g., results in the extirpation of one or several native species, reducing biodiversity or change the community composition towards species exotic to the natural community)	10
U.	Unknown	

Score 5

Documentation:
Identify type of impact or alteration:
Common dandelion is highly competitive. It may reduce the number of individuals of other species in early-successional communities (Royer and Dickinson 1999).
Rational:

Sources of information:
Royer, F. and R. Dickinson. 1999. Weeds of the Northern U.S. and Canada. The University of Alberta press. 434 pp.

1.4. Impact on higher trophic levels (cumulative impact of this species on the animals, fungi, microbes, and other organisms in the community it invades)

A.	Negligible perceived impact	0
B.	Minor alteration	3
C.	Moderate alteration (minor reduction in nesting/foraging sites, reduction in habitat connectivity, interference with native pollinators, injurious components such as spines, toxins)	7
D.	Severe alteration of higher trophic populations (extirpation or endangerment of an existing native species/population, or significant reduction in nesting or foraging sites)	10
U.	Unknown	

Score 5

Documentation:

Identify type of impact or alteration:

Common dandelion is quite palatable and is commonly eaten by moose and bears (J. Snyder – pers. com., P. Spencer – pers. com.), grouse, gophers, deer, elk, and sheep (Esser 1993). Populations of sage grouse and deer benefit from high amounts of dandelion. Common dandelion is important source of nectar and pollen for bees in Alaska (Esser 1993). Its presence may therefore alter pollination ecologies of co-occurring plants. It is also an alternate host for number of viruses (Royer and Dickinson 1999).

Rational:

Sources of information:

Esser, L.L. 1993. *Taraxacum officinale*. In: Fire Effects Information System, (Online). U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: www.fs.fed.us/database/feis/

Royer, F. and R. Dickinson. 1999. Weeds of the Northern U.S. and Canada. The University of Alberta press. 434 pp.

Snyder J.M., UAF Cooperative Extension Service, 2221 E. Northern Lights Blvd. #118 Anchorage, AK 99508-4143 tel: (907) 786-6310 alt.tel: (907) 743-9448.

Spencer P., Ecologist, National Park Service, Alaska Region - Biological Resources Team, 240 W. 5th Ave, #114, Anchorage, AK 99501 tel: (907) 644-3448. Pers. com.

Total Possible 40

Total 18

2. BIOLOGICAL CHARACTERISTICS AND DISPERSAL ABILITY

2.1. Mode of reproduction

A.	Not aggressive reproduction (few [0-10] seeds per plant and no vegetative reproduction)	0
B.	Somewhat aggressive (reproduces only by seeds (11-1,000/m^2)	1
C.	Moderately aggressive (reproduces vegetatively and/or by a moderate amount of seed, <1,000/m^2)	2
D.	Highly aggressive reproduction (extensive vegetative spread and/or many seeded, >1,000/m^2)	3
U.	Unknown	

Score 3

Documentation:

Describe key reproductive characteristics (including seeds per plant):

Common dandelion reproduces entirely by seeds (Densmore et al. 2001, Whitson et al. 2000). Each plant is capable if producing up to 5,000 seeds (Royer and Dickinson 1999). Reproduction from cut pieces is possible (Rutledge and McLendon 1996).

Rational:

Sources of information:

Densmore, R.V., P.C. McKee, C. Roland. 2001. Exotic plants in Alaskan National Park Units. Report on file with the National Park Service – Alaska Region, Anchorage, Alaska. 143 pp.

Royer, F. and R. Dickinson. 1999. Weeds of the Northern U.S. and Canada. The University of Alberta press. 434 pp.

Rutledge, C.R. and T. McLendon. 1996. An Assessment of Exotic Plant Species of Rocky Mountain National Park. Department of Rangeland Ecosystem Science, Colorado State University. 97 pp. Northern Prairie Wildlife Research Center Home Page. http://www.npwrc.usgs.gov/resource/othrdata/Explant/explant.htm (Version 15DEC98).

Whitson, T.D., L.C. Burrill, S.A. Dewey, D.W. Cudney, B.E. Nelson, R.D. Lee, R.

Parker. 2000. Weeds of the West. The Western Society of Weed Science in cooperation with the Western United States Land Grant Universities, Cooperative Extension Services. University of Wyoming. Laramie, Wyoming. 630 pp.

2.2. Innate potential for long-distance dispersal (bird dispersal, sticks to animal hair, buoyant fruits, wind-dispersal)

A.	Does not occur (no long-distance dispersal mechanisms)	0
B.	Infrequent or inefficient long-distance dispersal (occurs occasionally despite lack of adaptations)	2
C.	Numerous opportunities for long-distance dispersal (species has adaptations such as pappus, hooked fruit-coats, etc.)	3
U.	Unknown	

Score 3

Documentation:
Identify dispersal mechanisms:
Seeds are wind dispersed - pappus and light seed weight enable seeds travel long distances. In tall grass prairie communities in Iowa, seeds were blown several hundred meters from the nearest source population (Platt 1975).
Rational:

Sources of information:
Platt, W.J. 1975. The colonization and formation of equilibrium plant species associations on badger disturbances in a tall-grass prairie. Ecological Monographs. 45: 285-305.

2.3. Potential to be spread by human activities (both directly and indirectly – possible mechanisms include: commercial sales, use as forage/revegetation, spread along highways, transport on boats, contamination, etc.)

A.	Does not occur	0
B.	Low (human dispersal is infrequent or inefficient)	1
C.	Moderate (human dispersal occurs)	2
D.	High (there are numerous opportunities for dispersal to new areas)	3
U.	Unknown	

Score 3

Documentation:
Identify dispersal mechanisms:
Common dandelion is spreading by vehicles and horticultural material (Hodkinson and Thompson 1997). It is a common contaminant in crop and forage seeds (Rutledge and McLendon 1996).
Rational:

Sources of information:
Hodkinson, D., K. Thompson. 1997. Plant dispersal: the role of man. Journal of Applied Ecology, 34: 1484-1496.
Rutledge, C.R. and T. McLendon. 1996. An Assessment of Exotic Plant Species of Rocky Mountain National Park. Department of Rangeland Ecosystem Science, Colorado State University. 97 pp. Northern Prairie Wildlife Research Center Home Page. http://www.npwrc.usgs.gov/resource/othrdata/Explant/explant.htm (Version 15DEC98).

2.4. Allelopathic

A.	No	0
B.	Yes	2
U.	Unknown	

Score 0

Documentation:
Describe effect on adjacent plants:

Common dandelion is not listed as allelopathic (USDA 2002).
Rational:

Sources of information:
USDA (United States Department of Agriculture), NRCS (Natural Resource Conservation Service). 2002. The PLANTS Database, Version 3.5 (http://plants.usda.gov). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

2.5. Competitive ability

A.	Poor competitor for limiting factors	0
B.	Moderately competitive for limiting factors	1
C.	Highly competitive for limiting factors and/or nitrogen fixing ability	3
U.	Unknown	

Score 1

Documentation:
Evidence of competitive ability:
Common dandelion is very competitive with crops for moisture and nutrients; however it is a much less aggressive competitor in tall herbaceous communities (Royer and Dickinson 1999, Rutledge and McLendon 1996).
Rational:

Sources of information:
Royer, F. and R. Dickinson. 1999. Weeds of the Northern U.S. and Canada. The University of Alberta press. 434 pp.
Rutledge, C.R. and T. McLendon. 1996. An Assessment of Exotic Plant Species of Rocky Mountain National Park. Department of Rangeland Ecosystem Science, Colorado State University. 97 pp. Northern Prairie Wildlife Research Center Home Page. http://www.npwrc.usgs.gov/resource/othrdata/Explant/explant.htm (Version 15DEC98).

2.6. Forms dense thickets, climbing or smothering growth habit, or otherwise taller than the surrounding vegetation

A.	No	0
B.	Forms dense thickets	1
C.	Has climbing or smothering growth habit, or otherwise taller than the surrounding vegetation	2
U.	Unknown	

Score 0

Documentation:
Describe grow form:
Common dandelion does not grow in very dense stands and does not overtop surrounding vegetation. The stem is very short, leafless flowering stalks grow to 2 feet tall (Welsh 1974).
Rational:

Sources of information:
Welsh, S.L. 1974. Anderson's flora of Alaska and adjacent parts of Canada. Brigham University Press. 724 pp.

2.7. Germination requirements

A.	Requires open soil and disturbance to germinate	0
B.	Can germinate in vegetated areas but in a narrow range or in special conditions	2
C.	Can germinate in existing vegetation in a wide range of conditions	3
U.	Unknown	

Score 0

Documentation:
Describe germination requirements:

Common dandelion requires open disturbed soil for germination (Densmore et al. 2001).
Rational:

Sources of information:
Densmore, R.V., P.C. McKee, C. Roland. 2001. Exotic plants in Alaskan National Park Units. Report on file with the National Park Service – Alaska Region, Anchorage, Alaska. 143 pp.

2.8. Other species in the genus invasive in Alaska or elsewhere

A.	No	0
B.	Yes	3
U.	Unknown	

Score 3

Documentation:
Species:
Taraxacum scanicum Dahlstedt (Hultén 1968).
Sources of information:
Hultén, E. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press, Stanford, CA. 1008 p.

2.9. Aquatic, wetland, or riparian species

A.	Not invasive in wetland communities	0
B.	Invasive in riparian communities	1
C.	Invasive in wetland communities	3
U.	Unknown	

Score 1

Documentation:
Describe type of habitat:
Common dandelion grows in moist sites, including lawns, meadows, pastures and overgrazed areas. It is also occurs along highway and railroad rights-of-ways, waste places, and old fields (Royer and Dickinson 1999, Rutledge and McLendon 1996). It is found along river banks and terraces in south central Alaska near anthropogenic disturbance (M. L. Carlson – pers. obs.)
Rational:

Sources of information:
Carlson, M.L., Assistant Professor, Alaska Natural Heritage Program, University of Alaska Anchorage, 707 A Street, Anchorage, Alaska. Tel: (907) 257-2790 – Pers. obs.
Royer, F. and R. Dickinson. 1999. Weeds of the Northern U.S. and Canada. The University of Alberta press. 434 pp.
Rutledge, C.R. and T. McLendon. 1996. An Assessment of Exotic Plant Species of Rocky Mountain National Park. Department of Rangeland Ecosystem Science, Colorado State University. 97 pp. Northern Prairie Wildlife Research Center Home Page. http://www.npwrc.usgs.gov/resource/othrdata/Explant/explant.htm (Version 15DEC98).

Total Possible 25
Total 14

---

3. DISTRIBUTION

3.1. Is the species highly domesticated or a weed of agriculture

A.	No	0
B.	Is occasionally an agricultural pest	2
C.	Has been grown deliberately, bred, or is known as a significant agricultural pest	4
U.	Unknown	

Score 2

Documentation:

Identify reason for selection, or evidence of weedy history:
Common dandelion is a weed of lawns, pastures, and cultivated fields (Royer and Dickinson 1999). It is also grown commercially as a salad green in California.
Rational:

Sources of information:
Royer, F. and R. Dickinson. 1999. Weeds of the Northern U.S. and Canada. The University of Alberta press. 434 pp.

3.2. Known level of impact in natural areas

A.	Not known to cause impact in any other natural area	0
B.	Known to cause impacts in natural areas, but in dissimilar habitats and climate zones than exist in regions of Alaska	1
C.	Known to cause low impact in natural areas in similar habitats and climate zones to those present in Alaska	3
D.	Known to cause moderate impact in natural areas in similar habitat and climate zones	4
E.	Known to cause high impact in natural areas in similar habitat and climate zones	6
U.	Unknown	

Score 3

Documentation:
Identify type of habitat and states or provinces where it occurs:
Common dandelion has invaded partially disturbed and undisturbed montane forest and alpine communities in Montana (Esser 1993). In Alaska it is observed invading forb meadows in Glacier Bay National Park and Preserve, colonizing burned areas in Kenai Peninsular, reported from Nenana and Stikine Rivers bars (M. Shephard – pers. com., P. Spencer – pers. com.).
Sources of information:
Esser, L.L. 1993. *Taraxacum officinale*. In: Fire Effects Information System, (Online). U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: www.fs.fed.us/database/feis/
Shephard, M., Vegetation Ecologist, USDA, Forest Service, Forest Health Protection, State and Private Forestry, 3301 C Street, Suite 202, Anchorage, Alaska 99503 Division. Tel: (907) 743-9454 - Pers. com.
Spencer, P., Ecologist, National Park Service, Alaska Region - Biological Resources Team, 240 W. 5th Ave, #114, Anchorage, AK 99501 tel: (907) 644-3448 – Pers. com.

3.3. Role of anthropogenic and natural disturbance in establishment

A.	Requires anthropogenic disturbances to establish	0
B.	May occasionally establish in undisturbed areas but can readily establish in areas with natural disturbances	3
C.	Can establish independent of any known natural or anthropogenic disturbances	5
U.	Unknown	

Score 3

Documentation:
Identify type of disturbance:
Common dandelion is reported that dandelion does not establish where the organic layer is undisturbed. Additionally, it does not persist after it is shaded out by taller native species in natural succession (Densmore et al. 2001). In south central Alaska, it has established along river banks downstream from anthropogenic disturbances, such as boat launches and pull outs (M. L. Carlson – pers. obs.)
Rational:

Sources of information:
Carlson, M.L., Assistant Professor, Alaska Natural Heritage Program, University of Alaska Anchorage, 707 A Street, Anchorage, Alaska. Tel: (907) 257-2790 – Pers. obs.
Densmore, R.V., P.C. McKee, C. Roland. 2001. Exotic plants in Alaskan National Park Units. Report on file with the National Park Service – Alaska Region,

Anchorage, Alaska. 143 pp.

3.4. Current global distribution

A.	Occurs in one or two continents or regions (e.g., Mediterranean region)	0
B.	Extends over three or more continents	3
C.	Extends over three or more continents, including successful introductions in arctic or subarctic regions	5
U.	Unknown	

Score 5

Documentation:

Describe distribution:

Common dandelion is of Eurasian origin. It is now introduced into southern Africa, South and North America, New Zealand, Australia, and India (Esser 1993, Hultén 1968).

Rational:

Sources of information:

Esser, L.L. 1993. *Taraxacum officinale*. In: Fire Effects Information System, (Online). U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: www.fs.fed.us/database/feis/

Hultén, E. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press, Stanford, CA. 1008 p.

3.5. Extent of the species U.S. range and/or occurrence of formal state or provincial listing

A.	0-5% of the states	0
B.	6-20% of the states	2
C.	21-50%, and/or state listed as a problem weed (e.g., “Noxious,” or “Invasive”) in 1 state or Canadian province	4
D.	Greater than 50%, and/or identified as “Noxious” in 2 or more states or Canadian provinces	5
U.	Unknown	

Score 5

Documentation:

Identify states invaded:

Common dandelion occurs in all 50 states and almost all Canadian provinces (USDA 2002). It is a noxious weed in Alberta, Manitoba, Quebec, Saskatchewan (Invaders Database System 2003). It has been reported from all three primary eco-regions of Alaska (Hultén 1968, University of Alaska Museum 2003).

Rational:

Sources of information:

Hultén, E. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press, Stanford, CA. 1008 p.

Invaders Database System. The University of Montana. 2003. Montana Noxious Weed Trust Fund. Department of Agricultural. http://invader.dbs.umt.edu/

University of Alaska Museum. University of Alaska Fairbanks. 2003. http://hispida.museum.uaf.edu:8080/home.cfm

USDA (United States Department of Agriculture), NRCS (Natural Resource Conservation Service). 2002. The PLANTS Database, Version 3.5 (http://plants.usda.gov). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Total Possible 25

Total 18

4. FEASIBILITY OF CONTROL

4.1. Seed banks

A.	Seeds remain viable in the soil for less than 3 years	0

B. Seeds remain viable in the soil for between 3 and 5 years 2
C. Seeds remain viable in the soil for 5 years and more 3
U. Unknown

Score 3

Documentation:
Identify longevity of seed bank:
Common dandelion creates a long-lived seedbank (Esser 1993, Pratt 1984). Seeds of common dandelion were viable up to 5 years in soil samples from Montana (Bard 1952), and up to 9 years in experiments in Nebraska (Burnside et al. 1996).
Rational:

Sources of information:
Bard, G.E. 1952. Secondary succession on the Piedmont of New Jersey. Ecological Monographs. 22(3):195-215.
Burnside, O.C., R.G. Wilson, S. Weisberg, and K.G. Hubbard. 1996. Seed longevity of 41 weed species buried 17 years in Eastern and Western Nebraska. Weed Science. 44: 74-86.
Esser, L.L. 1993. *Taraxacum officinale*. In: Fire Effects Information System, (Online). U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: www.fs.fed.us/database/feis/
Pratt, D.A., H.E. Ahles, R.C. Bell. 1984. Buried viable seed in a ponderosa pine community. Canadian Journal of Botany. 62:44-52.

4.2. Vegetative regeneration

A. No resprouting following removal of aboveground growth 0
B. Resprouting from ground-level meristems 1
C. Resprouting from extensive underground system 2
D. Any plant part is a viable propagule 3
U. Unknown

Score 2

Documentation:
Describe vegetative response:
Common dandelion sprouts from caudex and root crowns (Densmore et al. 2001, Staniforth and Scott 1991, Whitson et al. 2000). Reproduction from cut pieces is possible (Rutledge and McLendon 1996).
Rational:

Sources of information:
Densmore, R.V., P.C. McKee, C. Roland. 2001. Exotic plants in Alaskan National Park Units. Report on file with the National Park Service – Alaska Region, Anchorage, Alaska. 143 pp.
Rutledge, C.R. and T. McLendon. 1996. An Assessment of Exotic Plant Species of Rocky Mountain National Park. Department of Rangeland Ecosystem Science, Colorado State University. 97 pp. Northern Prairie Wildlife Research Center Home Page. http://www.npwrc.usgs.gov/resource/othrdata/Explant/explant.htm (Version 15DEC98).
Staniforth, J.G. and P.A. Scott. 1991. Dynamics of weed populations in a northern subarctic community. Canadian Journal of Botany. 69: 814-821.
Whitson, T.D., L.C. Burrill, S.A. Dewey, D.W. Cudney, B.E. Nelson, R.D. Lee, R. Parker. 2000. Weeds of the West. The Western Society of Weed Science in cooperation with the Western United States Land Grant Universities, Cooperative Extension Services. University of Wyoming. Laramie, Wyoming. 630 pp.

4.3. Level of effort required

A. Management is not required (e.g., species does not persist without repeated anthropogenic disturbance) 0
B. Management is relatively easy and inexpensive; requires a minor investment in human 2

	and financial resources	
C.	Management requires a major short-term investment of human and financial resources, or a moderate long-term investment	3
D.	Management requires a major, long-term investment of human and financial resources	4
U.	Unknown	

Score 3

Documentation:

Identify types of control methods and time-term required:

Common dandelion can be controlled with repeated chemical and mechanical control measures. Seeding a mixture of native species after treatment is recommended (Densmore et al. 2001, MAFRI 2004).

Rational:

Sources of information:

Densmore, R.V., P.C. McKee, C. Roland. 2001. Exotic plants in Alaskan National Park Units. Report on file with the National Park Service – Alaska Region, Anchorage, Alaska. 143 pp.

MAFRI - Manitoba Agriculture, Food and Rural Initiatives. 2004. Weeds, Insects & Diseases: Dandelion. Available: http://www.gov.mb.ca/agriculture/crops/weeds/fab07s00.html [October 5, 2004].

Total Possible	10
Total	8
Total for 4 sections Possible	100
Total for 4 sections	58

References:

Auchmoody, L.R. and R.S. Walters. 1988. Revegetation of a brine-killed forest site. Soil Science Society of America Journal. 52: 277-280.

Bard, G.E. 1952. Secondary succession on the Piedmont of New Jersey. Ecological Monographs. 22(3):195-215.

Burnside, O.C., R. G. Wilson, S. Weisberg, and K.G. Hubbard. 1996. Seed longevity of 41 weed species buried 17 years in Eastern and Western Nebraska. Weed Science. 44: 74-86.

Carlson, M.L., Assistant Professor, Alaska Natural Heritage Program, University of Alaska Anchorage, 707 A Street, Anchorage, Alaska. Tel: (907) 257-2790 – Pers. obs.

Densmore, R.V., P.C. McKee, C. Roland. 2001. Exotic plants in Alaskan National Park Units. Report on file with the National Park Service – Alaska Region, Anchorage, Alaska. 143 pp.

Esser, L.L. 1993. *Taraxacum officinale*. In: Fire Effects Information System, (Online). U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: www.fs.fed.us/database/feis/

Hodkinson, D. and K. Thompson. 1997. Plant dispersal: the role of man. Journal of Applied Ecology, 34: 1484-1496.

Hultén, E. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press, Stanford, CA. 1008 p.

Invaders Database System. The University of Montana. 2003. Montana Noxious Weed Trust Fund. Department of Agricultural. http://invader.dbs.umt.edu/

Lapina, I., Botanist, Alaska Natural Heritage Program, University of Alaska Anchorage, 707 A Street, Anchorage, Alaska. Tel: (907) 257-2710 – Pers. obs.

MAFRI - Manitoba Agriculture, Food and Rural Initiatives. 2004. Weeds, Insects & Diseases: Dandelion. Available: http://www.gov.mb.ca/agriculture/crops/weeds/fab07s00.html [October 5, 2004].

Platt, W.J. 1975. The colonization and formation of equilibrium plant species associations on badger disturbances in a tall-grass prairie. Ecological Monographs. 45: 285-305.

Pratt, D.A. and H.E. Ahles, R.C. Bell. 1984. Buried viable seed in a ponderosa pine community. Canadian Journal of Botany. 62:44-52.

Royer, F. and R. Dickinson. 1999. Weeds of the Northern U.S. and Canada. The University of Alberta press. 434 pp.

Rutledge, C.R. and T. McLendon. 1996. An Assessment of Exotic Plant Species of Rocky Mountain National Park. Department of Rangeland Ecosystem Science, Colorado State University. 97 pp. Northern Prairie Wildlife Research Center Home Page. http://www.npwrc.usgs.gov/resource/othrdata/Explant/explant.htm (Version 15DEC98).

Shephard, M., Vegetation Ecologist, USDA, Forest Service, Forest Health Protection, State and Private Forestry, 3301 C Street, Suite 202, Anchorage, Alaska 99503 Division. Tel: (907) 743-9454 - Pers. com.

Snyder J.M., UAF Cooperative Extension Service, 2221 E. Northern Lights Blvd. #118 Anchorage, AK 99508-4143 tel: (907) 786-6310 alt.tel: (907) 743-9448 – Pers. com.

Spencer P., Ecologist, National Park Service, Alaska Region - Biological Resources Team, 240 W. 5th Ave, #114, Anchorage, AK 99501 tel: (907) 644-3448 – Pers. com.

Staniforth, J.G. and P.A. Scott. 1991. Dynamics of weed populations in a northern subarctic community. Canadian Journal of Botany. 69: 814-821.

University of Alaska Museum. University of Alaska Fairbanks. 2003. http://hispida.museum.uaf.edu:8080/home.cfm

USDA (United States Department of Agriculture), NRCS (Natural Resource Conservation Service). 2002. The PLANTS Database, Version 3.5 (http://plants.usda.gov). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

Welsh, S.L. 1974. Anderson's flora of Alaska and adjacent parts of Canada. Brigham University Press. 724 pp.

Whitson, T.D., L.C. Burrill, S.A. Dewey, D.W. Cudney, B.E. Nelson, R.D. Lee, R. Parker. 2000. Weeds of the West. The Western Society of Weed Science in cooperation with the Western United States Land Grant Universities, Cooperative Extension Services. University of Wyoming. Laramie, Wyoming. 630 pp.