WEED RISK ASSESSMENT FORM

Botanical name: *Stellaria media* (L.) Vill.

Common name: common chickweed

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

Roseann Densmore, Ph.D.
Research Ecologist, US Geological Survey, Alaska Biological Science Center, 1101 East Tudor Road Anchorage, AK 99503
tel: (907) 786-3916, fax (907) 786-3636

Jeff Heys
Exotic Plant Management Program Coordinator, National Park Service, Alaska Region - Biological Resources Team, 240 W. 5th Ave, #114, Anchorage, AK 99501 tel: (907)644-3451, fax: 644-3809

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

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	

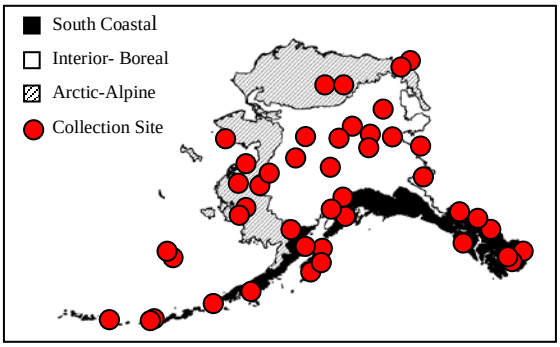
B.	**Invasiveness Ranking**	Total (Total Answered*) Possible	Total for disturbed sites/ for high nutrient communities
1	Ecological impact	40 (40)	10/14
2	Biological characteristic and dispersal ability	25 (25)	12/12
3	Ecological amplitude and distribution	25 (25)	15/20
4	Feasibility of control	10 (10)	5/8
	Outcome score	100 (100)[b]	42/54 [a]
	Relative maximum score†		0.42/0.54

* For questions answered "unknown" do not include point value for the question in parentheses for "Total Answered Points Possible."
† Calculated as [a]/[b].

SPECIAL NOTE: *Stellaria media* appears to be restricted to antropogenically disturbed sites in Alaska. There are no thoughts that this weed poses a threat to native plant communities. However on several arctic and subarctic islands introduced populations of *Stellaria media* represent important component of flora on sea bird colonies sites. These populations on naturally disturbed, high nutrient sites might impact native plant and animal communities. The ecological and community impacts are believed to be different in nutrient rich sea-bird colonies and human-disturbed areas and therefore we assess this impact separately to each type of communities.

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: *Stellaria media* has been documented in all ecogeographical regions of Alaska (Weeds of Alaska Database 2005, Hultén 1968, UAM 2004, Welsh 1974). It is more successful in the cooler and more humid coastal regions of the world (Sobey 1981).

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

Weeds of Alaska Database. 2005. Database of exotic vegetation collected in Alaska. University of Alaska, Alaska Natural Heritage Program – US Forest Service – National Park Service Database. Available: http://akweeds.uaa.alaska.edu/

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

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-	10

native species)

U. Unknown

Score 1/3

Documentation:
Identify ecosystem processes impacted:
Common chickweed is usually found on human disturbed sites. It is unlikely that measurable impacts to ecosystem processes occur due to its presence. It is likely have some impact on ecosystem processes in sea-bird colonies.
Rational:

Sources of information:

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 3/3

Documentation:
Identify type of impact or alteration:
Common chickweed is able to create dense mats of shoots up to 12 inches long, shading young seedlings of other plants (Lawson 1972, Whitson et al. 2000, Welsh 1974).
Rational:

Sources of information:
Lawson, H.M. 1972. Weed competition in transplanted spring cabbage. Weed Research 12: 254-267.
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 and 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.

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 1/3

Documentation:
Identify type of impact or alteration:
Common chickweed can colonize naturally disturbed, nutrient rich soils and dominate the area (Gillham 1956, Sobey and Kenworthy 1979).
Rational:

Sources of information:
Gillham, M.E. 1956. Ecology of the Pembrokeshire Islands. V. Manuring by the colonial sea-birds and mammals, with a note on seed distribution by gulls.

Journal of Ecology 44(2): 429-454.
Sobey, D.G. and J.B. Kenworthy. 1979. The relationship between herring gulls and the vegetation of their breeding colonies. The Journal of Ecology 67(2): 469-496.

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 5/5

Documentation:

Identify type of impact or alteration:

The shoots and seeds of common chickweed are eaten by many animals and birds, both domesticated and wild. Many insect species feed on the plant (Batra 1979, Firbank and Smart 2002, Watson et al. 2003). A large number of nematode species have been reported to attack chickweed (Taylor 1967, Townshend and Davidson 1962, Murant 1970). This plant is also an important host for a number of viruses and fungal species. The flowers of common chickweed are usually self-pollinated; however, cross-pollinating by insects has been recorded. Common chickweed is reported to be potentially toxic to some animals (Case 1957, Sobey 1981). However, in Alaska common chickweed represents small part of plant community, that it is unlikely for common chickweed to have high thophic evvects.

Rational:

Sources of information:

Batra, S.W.T. 1979. Insects associated with weeds in the northeastern United States. III. Chickweed, *Stellaria media*, and stitchwort, *S. graminea* (Caryophyllaceae). Journal of the New York Entomological Society 87(3): 223-235.
Case, A.A. 1957. Some aspects of nitrate intoxication in livestock. Journal of the American veterinary medical association 130(8): 323-329.
Firbank, L. and S. Smart. 2002. The changing status of arable plants that are important food items for farmland birds. Aspects of Applied Biology 67: 165-170.
Murant, A.F. 1970. The importance of wild plants in the ecology of nematode-transmitted plant viruses. Outlook on agriculture 6: 114-121.
Sobey, D.G. 1981. Biological flora of the British Isles. *Stellaria media* (L.) Vill. Journal of Ecology 69: 311-335.
Taylor, C.E. 1967. The multiplication of *Longidorus elongatus* (de Man) on different host plants with reference to virus transmission. Annals of Applied Biology 59: 275-281.
Townshend, J.L. and T.R. Davidson. 1962. Some weed hosts of the northern root-knot nematode, Meloidogyne hapla Chitwood, 1949, in Ontario. Canadian Journal of Botany 40: 543-548.
Watson, S.J., A.L. Mauchline, V.K. Brown and R.J. Froud-Williams. 2003. Post-dispersal losses of *Stellaria media* and *Polygonum aviculare* seeds in spring barley (*Hordeum vulgare*). Aspects of Applied Biology 69: 203-208.

Total Possible 40
Total 10/14

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 3/3

Documentation:
Describe key reproductive characteristics (including seeds per plant):
Common chickweed reproduces mainly by seeds. Seed output per plant can be from 600 to 15 000 (Lutman 2000, Mertens and Jansen 2002, Stevens 1932, Stevens 1957). Vegetative reproduction by fragmentation of stems also can occur (Sobey 1981).
Rational:

Sources of information:
Lutman, P.J.W. 2000. Estimation of seed production by *Stellaria media*, *Sinapis arvensis* and *Tripleurospermum inodorum* in arable crops. Weed Research 42: 359-369.
Mertens, S.K. and J. Hansen. 2002. Weed seed production, crop planting pattern, and mechanical weeding in wheat. Weed Science 50: 748-756.
Sobey, D.G. 1981. Biological flora of the British Isles. *Stellaria media* (L.) Vill. Journal of Ecology 69: 311-335.
Stevens, O.A. 1932. The number and weight of seeds produced by weeds. American Journal of Botany 19(9): 784-794.
Stevens, O.A. 1957. Weights of seeds and number per plant. Weeds 5: 46-55.

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 3/3

Documentation:
Identify dispersal mechanisms:
Seeds can be transported by horses, cattle, deer, pigs, sparrows, quail, and gulls (Gillham 1956, Sobey and Kenworthy 1979). It is also known to be dispersed by ants and earthworms. The seeds are also capable of surviving immersion in sea water (Sobey 1981).
Rational:

Sources of information:
Gillham, M.E. 1956. Ecology of the Pembrokeshire Islands. V. Manuring by the colonial sea-birds and mammals, with a note on seed distribution by gulls. Journal of Ecology 44(2): 429-454.
Sobey, D.G. 1981. Biological flora of the British Isles. *Stellaria media* (L.) Vill. Journal of Ecology 69: 311-335.
Sobey, D.G. and J.B. Kenworthy. 1979. The relationship between herring gulls and the vegetation of their breeding colonies. The Journal of Ecology 67(2): 469-496.

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 3/3

Documentation:
Identify dispersal mechanisms:
Seeds can be transported in mud and dust on boots, animal hooves and machinery. Seeds of chickweed also contaminate some commercial seeds, horticultural stock and topsoil (Hodkinson and Thompson 1997, Sobey 1981, Turkington et al. 1980, Walton 1975).
Rational:

Sources of information:
Hodkinson, D., K. Thompson. 1997. Plant dispersal: the role of man. Journal of Applied Ecology, 34: 1484-1496.
Sobey, D.G. 1981. Biological flora of the British Isles. *Stellaria media* (L.) Vill. Journal of Ecology 69: 311-335.
Turkington, R., N.C. Kenkel and G.D. Franko. 1980. The biology of Canadian weeds. 42. *Stellaria media* (L.) Vill. Canadian Journal of Plant Science 60: 981-992.
Walton, D.W.H. 1975. European weeds and other alien species in the subantarctic. Weed Research 15: 271-282.

2.4. Allelopathic

A. No 0
B. Yes 2
U. Unknown

Score 2/2

Documentation:
Describe effect on adjacent plants:
Results of studies indicate that chickweed can be allelopathic to wheat. Both young and mature growth stages of chickweed contribute water-soluble phenolics to the soil and reduce growth of wheat seedlings (Inderjit and Dakshini 1998).
Rational:

Sources of information:
Inderjit and K.M.M. Dakshini. 1998. Allelopathic interference of chickweed, *Stellaria media* with seedling growth of wheat (*Triticum aestivum*). Canadian Journal of Botany 76: 1317-1321.

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 1/1

Documentation:
Evidence of competitive ability:
Common chickweed is a powerful competitor with annual crop plants, especially in cool wet conditions (Gibson and Courtney 1977, Lawson 1972, Mann and Barnes 1950). However, it has been observed that chickweed can be smothered by perennial herbs (Sobey 1981). Welbank (1963) in a comparative study of competitive effects of some weed species found chickweed to have a relatively small effect.
Rational:
Common chickweed's success as a competitor apparently resulted from a rapid root growth, and thus a more efficient exploitation of soil nutrients (Menn and Barnes 1950). The ability to develop adventitious roots on prostrate stem fragments partially covered by soil greatly increases the plant's competition potential (Roberts and Stokes 1966). Under favorable conditions, three to five generations may be produced during a year (Johnson et al. 1995, Sobey 1981).
Sources of information:
Gibson, D.I. and A.D. Courtney. 1977. Effects of *Poa trivialis*, *Stellaria media* and

Rumex obtusifolius on the growth of *Lolium perenne* in the glasshouse. Annual of Applied Biology 86: 105-110.
Johnson, D., L. Kershaw, A. MacKinnon, J. Pojar. 1995. Plants of the western boreal forest and aspen parkland. Alberta, Canada: Lone Pine. p. 103.
Lawson, H.M. 1972. Weed competition in transplanted spring cabbage. Weed Research 12: 254-267.
Mann, H.H. and T.W. Barnes. 1950. The competition between barley and certain weeds under controlled conditions. IV. Competition with Stellaria media. Annals of Applied Biology 37: 139-148.
Roberts, H.A. and F.G. Stokes. 1966. Studies on the weeds of vegetable crops. VI. Seed populations of soil under commercial cropping. Journal of Applied Ecology 3: 181-190.
Sobey, D.G. 1981. Biological flora of the British Isles. *Stellaria media* (L.) Vill. Journal of Ecology 69: 311-335.

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 0/0

Documentation:
Describe grow form:
Common chickweed does not form dense thickets and does not possess a climbing or smothering growth habit (Douglas and MacKinnon 1998, Hultén 1968, Welsh 1974).
Rational:

Sources of information:
Douglas, G.W. and A. MacKinnon. Caryophyllaceae. In: Douglas, G. W., G. B. Straley, D. Meidinger, and J. Pojar. 1998. Illustrated flora of British Columbia. V. 2. Ministry of Environment, Lands and Parks Ministry of Forests. British Columbia. 401 pp.
Hultén, E. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press, Stanford, CA. 1008 p.
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 0/0

Documentation:
Describe germination requirements:
Disturbance is important for chickweed germination and establishment (Sobey and Kenworthy 1979).
Rational:
Removal of vegetation in an experiment in Scotland revealed the importance of disturbance. Common chickweed became established on areas formerly occupied by perennial species (Sobey and Kenworthy 1979).
Sources of information:
Sobey, D.G. and J.B. Kenworthy. 1979. The relationship between herring gulls and the vegetation of their breeding colonies. The Journal of Ecology 67(2): 469-496.

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

A.	No	0
B.	Yes	3

U. Unknown

Score 0/0

Documentation:
Species:
A number of *Stellaria* species has been introduced to the United States; however none of them are listed as a noxious weed (USDA, NRCS. 2006).
Sources of information:
USDA, NRCS. 2006. *The PLANTS Database*, Version 3.5 (http://plants.usda.gov). Data compiled from various sources by Mark W. Skinner. National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

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 0/0

Documentation:
Describe type of habitat:
In its native range common chickweed is a plant of coastal banks and cliffs, especially in and around the breeding colonies of sea-birds and seals. However, it is more often found on cultivated ground and waste places (Douglas and MacKinnon 1998, Sobey 1981, Welsh 1974, Whitson et al. 2000).).
Rational:

Sources of information:
Douglas, G.W. and A. MacKinnon. Caryophyllaceae. In: Douglas, G. W., G. B. Straley, D. Meidinger, J. Pojar. 1998. Illustrated flora of British Columbia. V. 2. Ministry of Environment, Lands and Parks Ministry of Forests. British Columbia. 401 pp.
Sobey, D.G. 1981. Biological flora of the British Isles. *Stellaria media* (L.) Vill. Journal of Ecology 69: 311-335.
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 and 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.

Total Possible 25
Total 12/12

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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 4/4

Documentation:
Identify reason for selection, or evidence of weedy history:
Common chickweed is a weed of crops, vegetable gardens, pastures and lawns (Alex and Switzer 1976, Sobey 1981, Turkington et al. 1980).
Rational:

Sources of information:
Alex, J.F. and C.M. Switzer. 1976. Ontario weeds. Guelph, Ontario: Ontario

Agricultural College, University of Guelph. 200 p.
Sobey, D.G. 1981. Biological flora of the British Isles. *Stellaria media* (L.) Vill. Journal of Ecology 69: 311-335.
Turkington, R., N.C. Kenkel and G.D. Franko. 1980. The biology of Canadian weeds. 42. *Stellaria media* (L.) Vill. Canadian Journal of Plant Science 60: 981-992.

3.2. Known level of ecological 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 1/3

Documentation:

Identify type of habitat and states or provinces where it occurs:

Common chickweed is well naturalized in breeding colonies of sea-birds and seals on the Commander Islands (Mochalova and Yakubov 2004). It is widespread and common on sand dunes and in maritime habitats in Falkland Islands and a number of islands around Antarctica (Broughton and McAdam 2002, Walton 1975). Common chickweed seems to have visible impact on vegetation of sea-bird islands. Common chickweed has also been documented under deciduous forests in Ontario, but its impact on ecosystem functions is negligible (Alex and Switzer 1976).

Sources of information:

Alex, J.F. and C.M. Switzer. 1976. Ontario weeds. Guelph, Ontario: Ontario Agricultural College, University of Guelph. 200 p.
Broughton, D.A. and J.H. McAdam. 2002. The non-native vascular flora of the Falkland Islands. Botanical Journal of Scotland 54(2): 153-190.
Mochalova, O.A. and V.V. Yakubov. 2004. Flora of Commander Islands. Vladivostok: Institute of Biology and Soil Science. 120 pp. In Russian.
Walton, D.W.H. 1975. European weeds and other alien species in the subantarctic. Weed Research 15: 271-282.

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 0/3

Documentation:

Identify type of disturbance:

Common chickweed establishes readily on human-disturbed ground. However it is readily established in breeding colonies of sea-birds or seals, where habitat is disturbed by physical suppression, collecting of nest material, and defecation (Sobey and Kenworthy 1979, Walton 1975).

Rational:

Sources of information:

Sobey, D.G. and J.B. Kenworthy. 1979. The relationship between herring gulls and the vegetation of their breeding colonies. The Journal of Ecology 67(2): 469-496.
Walton, D.W.H. 1975. European weeds and other alien species in the subantarctic. Weed Research 15: 271-282.

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 5/5

Documentation:
Describe distribution:
Chickweed is native to Europe. It has been spread throughout the world and became one of the most completely cosmopolitan species. It extends from the tropical regions of Africa, South America and Asia to Arctic and sub-Antarctic islands (Hultén 1968, Mochalova and Yakubov 2004, Polunin 1957, Walton 1975).
Rational:

Sources of information:
Hultén, E. 1968. Flora of Alaska and Neighboring Territories. Stanford University Press, Stanford, CA. 1008 p.
Mochalova, O.A. and V.V. Yakubov. 2004. Flora of Commander Islands. Vladivostok: Institute of Biology and Soil Science. 120 pp. In Russian.
Polunin, N. 1959. Circumpolar arctic flora. Oxford: At the Clarendon Press. 514 p.
Walton, D.W.H. 1975. European weeds and other alien species in the subantarctic. Weed Research 15: 271-282.

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 5/5

Documentation:
Identify states invaded:
Common chickweed is common throughout the United States and Canada. This speices is listed as a noxious weed in Alberta, Manitoba, and Quebec (Rice 2006).
Rational:

Sources of information:
Rice, P.M. INVADERS Database System (http://invader.dbs.umt.edu). Division of Biological Sciences, University of Montana, Missoula, MT 59812-4824.

Total Possible 25
Total 15/20

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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 3/3

Documentation:
Identify longevity of seed bank:
Seeds have been reported to live for at least 20 years (McCloskey et al. 1996). Other authors suggested survival of seeds for 30-35 years (Darlington and Steinbauer 1961, Kivilaan and Bandurski 1981). A dramatic decrease in viability was noted after burial for 6 to 10 years in studies of Conn and Deck (1995) and Roberts and Feast (1973).
Rational:

Sources of information:

Conn, J.S. and R.E. Deck. 1995. Seed viability and dormancy of 17 weed species after 9.7 years of burial in Alaska. Weed Science 43: 583-585.
Darlington, H.T. and G.P. Steinbauer. 1961. The eighty-year period for Dr. Beal's seed viability experiment. American Journal of Botany 48(4): 321-325.
Kivilaan, A. and R.S. Bandurski. 1981. The one hundred-year period for Dr. Beal's seed viability experiment. American Journal of Botany 68(9): 1290-1292.
McCloskey, M., L.G. Firbank, A.R. Watkinson and D.J. Webb. 1996. The dynamics of experimental arable weed communities under different management practices. Journal of Vegetation Science 7: 799-808.
Roberts, H.A. and P.M. Feast. 1973. Emergence and longevity of seeds of annual weeds in cultivated and undisturbed soil. The Journal of Applied Ecology 10(1): 133-143.

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 2/2

Documentation:

Describe vegetative response:

Plant fragments have the ability to re-root if partially covered by soil (Guide to weeds in British Columbia 2002, Sobey 1981).

Rational:

Sources of information:

Guide to weeds in British Columbia. 2002. British Columbia, Ministry of Agriculture, Food and Fisheries, Open Learning Agency. Available: http://www.weedsbc.ca/resources.html [April 23, 2005].
Sobey, D.G. 1981. Biological flora of the British Isles. *Stellaria media* (L.) Vill. Journal of Ecology 69: 311-335.

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 and financial resources	2
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 0/3

Documentation:

Identify types of control methods and time-term required:

Mechanical methods can manage chickweed effectively, but all plant fragments should be removed or deeply buried in the soil since plants shoots have the ability to re-root. Common chickweed can be controlled by a variety of chemicals; however, it is resistant to a number of commonly used herbicides. Strong perennials can be used to prevent chickweed reestablishment (Guide to weeds in British Columbia 2002, Sobey 1981). This weed can be very difficult to control on nutrient rich sites such us vegetable crops fields or sea-bird colonies (J. Conn – pers. comm.).

Rational:

Sources of information:

Conn, J., Weed Scientist, USDA Agricultural Research Service PO Box 757200 Fairbanks, Alaska 99775 tel: (907) 474-7652; fax (907) 474-6184.
Guide to weeds in British Columbia. 2002. British Columbia, Ministry of Agriculture, Food and Fisheries, Open Learning Agency. Available:

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Sobey, D.G. 1981. Biological flora of the British Isles. *Stellaria media* (L.) Vill. Journal of Ecology 69: 311-335.

Total Possible	10
Total	5/8

Total for 4 sections Possible	100
Total for 4 sections	42/54

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