August 13, 2003

Response to species-specific comments on draft R2 sensitive plant list

This document contains three sections:

1. FEEDBACK ON DRAFT SENSITIVE SPECIES
2. FEEDBACK EXPRESSING DISAGREEMENT WITH DRAFT NON-SENSITIVE
3. FEEDBACK ON TAXA NOT EVALUATED IN OUR PROCESS

Comments from the Forests, state and federal agencies, and Regional Office responses are summarized by species within each of these sections, and a final recommendation is provided. Except for species recommended for sensitive status, this document omits species for which no comments were received, or only supplementary information was provided, or for which feedback agreed with the draft recommendation. Species recommended in the draft list as sensitive have been included in this document whether or not any feedback was received.

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1. FEEDBACK ON DRAFT SENSITIVE SPECIES

Note that COBLM agrees with all determinations for plants in Colorado, WYG&F concurs with the status of plants for Wyoming, KSNHI concurs with status of plants on Cimarron NG, and NENF concurs with status for all plants except that they wonder why *Botrychium campestre* was recommended for sensitive status when this isn't reflected in the recommendation form (they also offer two corrections for the tables). PSICC agrees entirely with feedback from Barry Johnston, so I have tracked their concurrence as "GMUG/PSICC".

Note too that the response from the SHO indicates whether or not they agree (or are ambivalent) about the draft recommendations for SS status for taxa that occur on their Forest and were recommended for SS status, but they provided no specific info on their deliberations for each species considered. They did provide some general thoughts on situations that they did not feel merited SS status (e.g., "circumpolar in distribution, with the only known populations on the Shoshone for Region 2**").**

Adiantum aleuticum – Consistent responses from four NFs recommending "insufficient info". GMUG/PSICC says "we don't know number of populations, population sizes, habitat, and distribution within R2." WHR recites a more-or-less standard paragraph, adding that lack of info should not be used as a basis for SS status, and pointing out that it is unlikely to occur on their Forest. BLKH says, "This species is known from a single historical collection in 1929 and no occurrences have been documented since, even though this is not a hard species to identify. Because of one historical occurrence, it is unknown if a viable population of this species even exists within the Black Hills, let alone on FS administered land." SHO provides no rationale for their recommendation.

Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- This species is a widespread species (G5?). Region 2 is at the eastern periphery of its distribution, with populations in CO and WY disjunct from the main range of the species. It occurs on wet rock fissures and moist ravines in R2, and a greater variety of habitats elsewhere in the range. Although apparently rare in R2, surveys are inadequate, no information is available regarding threats, and there is no information regarding known or predicted downward trend in habitat or populations in R2. There is insufficient information available at this time to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Adiantum capillus-veneris – Inconsistent responses from two NFs. BLKH agrees with SS status, but GMUG/PSICC says "Should be 'Insufficient Information Available to make a recommendation,' because we don't know number of populations, population sizes, and distribution in the Colorado portion of the distribution in R2." Barry says the habitats in Colorado are moderately resistant. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- This species is widely distributed (G5), although peripheral in CO and disjunct in SD. It occurs on wet seeps and sandstone in CO, and in SD appears to be limited to warm calcareous springs. Although rare and occurring in restricted habitats, the population in SD has persisted for 100 years and appears to withstand disturbance. There is no evidence of downward trends, but because of its rarity in the region, this species should be considered by the forests (Black Hills, PSICC, San Juan) for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Aletes humilis – Inconsistent responses from three NFs. GMUG/PSICC agrees with SS status (decline has been predicted, but the evaluations lack some of the available info, and habitat is appears to be resilient; should have checked to see if predicted decline has occurred). MBR also agrees (says no new info to support removing from SS list). ARP says SS warranted if only a few populations, but if 40+ it shouldn't be SS. BLKH says not SS based on what evaluations say about habitat and population trend; BLKH suggests "insufficient info". Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- This species is endemic to CO (G2). Moderate survey effort has identified 12 populations in Boulder County and 3 populations in Larimer County, with one historical occurrence in WY. It typically is found on north-facing granite cliffs and rock outcrops, and occasionally on pine duff. The Phantom Canyon population appears to be stable based on five years of monitoring. Threats appear to be low and would be localized. There is no evidence of downward trends, but the species is a rare endemic, and should be considered by the AR and MBR for **other Emphasis Species lists.**

FINAL RECOMMENDATION: Other emphasis

Amerochis rotundifolia – One NF responding specifically on this species agrees with sensitive status (SHO).

FINAL RECOMMENDATION: Sensitive

Androsace chamaejasme* ssp. *carinata – Inconsistent responses from four NFs. GMUG/PSICC says, "apparently the species has many occurrences in Colorado, although we don't really know" and recommends "not of concern" or "insufficient info". WHR says there isn't enough information, and makes the same recommendation as GMUG. BLKH says SS status not warranted based on what evaluation says about habitat and population trend; BLKH says it's the same case as *Aletes humilis* ("insufficient info"). SHO is ambivalent, recommending either "sensitive" or "other emphasis".

RESPONSE- We lack information for the species in Colorado, but there is enough from other sources (e.g., Weber and Wittmann, 2001) to indicate it may be relatively abundant in the state. We agree with comments from the Forests that based on available information this taxon does not warrant viability concern at the regional level. However, we do not feel it should be characterized as "insufficient info" or "not of concern," but rather as "other emphasis".

Weber, William A.; and Ronald C. Wittmann. 2001. Colorado flora: Western slope, Third Edition. Niwot, CO: Colorado Associated University Press. 488 pp.

FINAL RECOMMENDATION: Other emphasis

Aquilegia brevistyla – Inconsistent responses: one NF disagrees and one is ambivalent, while another provides discussion, and WYNDD comments on lack of data from SD. BLKH argues that there is insufficient info, and provides statements about low population numbers and management risks to habitat on the NF. GMUG/PSICC comments that the information is scant, and is not persuaded that the species merits SS status. WYNDD only commented, "South Dakota data were seriously wanting" for this species. SHO is ambivalent, recommending either "sensitive" or "other emphasis". Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- Review of the evaluation form, recommendation rationale, and comments from Forests, indicate that sensitive species status is warranted. The species is disjunct in R2 and known from only the Shoshone and Black Hills (the Shoshone record may be erroneous). Information from the Black Hills NF indicates that "Its riparian, deciduous or spruce dominated habitats may also be at risk from various management activities" and "Despite the increased number of occurrences located during the 2002 field season on the Black Hills, the number of individuals in most populations is low."

FINAL RECOMMENDATION: Sensitive

Aquilegia chrysantha* var. *rydbergii – Consistent responses from two NFs recommending "insufficient info". GMUG/PSICC cites "the lack of dedicated searches for new populations, uncertainty over the role of hybridization, lack of a complete evaluation, and distributional confusion." BLKH says "This species really better fits the 'insufficient information' category until more of this information can be obtained."

RESPONSE- Although there is uncertainty about the true distribution of the taxon, thorough inventories have not been conducted, and hybridization may play a confounding role, the available information in the evaluation and supplied in comments from the Forests, indicates that the species is quite rare Region 2. There is some level of threat from recreation impacts to at least one occurrence, and the species known

distribution along the Front Range makes it likely that other occurrences may be at risk too. Though the draft recommendation overstated the threat from recreation, we feel that there is adequate information to warrant regional viability concern, and we recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Aquilegia laramiensis – Inconsistent responses from two NFs. MBR agrees with SS status. BLKH says that with five "D" ranks, and conflicting statements about threats, it should be "insufficient info" (despite "A" rank for threats).

RESPONSE- We reviewed the evaluation, recommendation rationale, and comments from the Forests, and conclude that there is sufficient information to warrant sensitive species status. The Medicine Bow/Routt NF, which manages the species, also agrees that it warrants sensitive status.

FINAL RECOMMENDATION: Sensitive

Aquilegia saximontana – Inconsistent responses from six NFs. RIOG agrees, but GMUG/PSICC, MBR, WHR, BLKH and ARP do not think it merits SS status. GMUG says the evaluation was inadequate and missed important info, this species is less threatened than *Telesonix jamesii* which was recommended for "other emphasis", and this species should also be "other emphasis". MBR cites Barry Johnston's comments, and says the species should be re-evaluated. WHR repeats their standard paragraph and recommends "other emphasis". BLKH says endemism should not be used as a criterion for SS status, and the species merits "insufficient info" rather than sensitive. ARP doubts the threat from collectors.

RESPONSE- Based on comments from the Forests, plus review of the evaluation form and draft recommendation rationale, we concur with the majority of responding Forests that this species does not merit sensitive status. The evaluation did not convey the full number of known occurrences, and appears to have overstated the level of threat from collectors. Because this is an endemic, occurring primarily (or exclusively) on NFS lands, and there may be local concerns over maintaining viable populations, we recommend consideration for "other emphasis lists."

FINAL RECOMMENDATION: Other emphasis

Arctostaphylos rubra – Inconsistent responses from two NFs. SHO is ambivalent, recommending either "sensitive" or "other emphasis". BLKH says, "The Forest agrees with the fact that due to one location this species is at risk just because of rarity. However, population trend is stable and habitat trend is unknown. It does not fit the Forest Service definition of downward trend for sensitive status to compel the species to be on the R2 list." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- A circumboreal arctic species, the one occurrence in WY on the Shoshone NF is the only known occurrence in the contiguous U.S. The area where this population occurs has been designated a Botanical Special Interest Area. Based on monitoring over the past 10 years, the population appears to be stable. The Shoshone NF should consider this species for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Armeria maritima* ssp. *sibirica – Inconsistent responses from four NFs. GMUG/PSICC and WHR agree with SS status, though Barry says the evaluation missed important information. BLKH says it merits "insufficient info" because of the number of "D" ranks in the evaluation. SHO recommends "other emphasis" without discussion. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- – The species distribution is primarily in Alaska and several provinces in Canada (G5), with a disjunct distribution in CO. This species is known from three sites in Summit and Park Counties on the White River and PSICC NFs. All three CO populations have been counted, and total numbers remain at fewer than 500. It occurs in alpine environments at elevations of 11,800 – 12,500 ft, on west-northwest to east aspect, 2-55% slope. A report prepared for the White River Forest Plan revision indicates that one of the White River NF populations is partially protected by an established RNA, but additional efforts need to be made to protect it from illegal vehicular travel; the other two sites are unprotected and vulnerable. Because there are so few populations, which are small in numbers, and existing threats have been identified, the species merits **sensitive** status.

FINAL RECOMMENDATION: Sensitive

Asclepias uncialis – Only one specific response. BLKH notes the number of "D" ranks on the evaluation forms, and says, "Based on the species has no longer been found on Forest System lands, it is questionable if a 'viable' population even exists. Using existing definitions and criteria direction it is a species of 'insufficient information.'"

RESPONSE- Although there is insufficient information to rank some of the evaluation criteria, it is sufficient to recommend sensitive status. This regional endemic is known to occur on the Comanche NG, populations appear to be small, and reproductive success has been shown to be limited.

FINAL RECOMMENDATION: Sensitive

Asplenium trichomanes-ramosum – Consistent responses from four NFs that it doesn't merit SS status. BIGH recommends "insufficient info" and seems persuaded by Fertig's categorization as "low conservation priority". BLKH says they evaluated it for local concern on their Forest, and found "Over 20 documented locations in the Black Hills, and habitat is secure and is not vulnerable to disturbance." They say it is in stable environments elsewhere, not threatened, and therefore is "not of concern". GMUG/PSICC says is merits "insufficient info" because we don't know its distribution, nor the number and size of populations. WHR repeats their standard paragraph and agrees with GMUG.

RESPONSE- New information from the Black Hills NF indicates that the species is more abundant there than reflected in the evaluation forms. Furthermore, analysis for their forest plan indicated that these habitats are secure and not vulnerable to disturbance. The Bighorn NF also indicated that threats to the habitat on their Unit were low. Though the species occurs in specialized habitats, and may be scattered in its distribution, we concur with the Forests that it does not merit sensitive species status, but recommend that

it be considered for "other emphasis" by Units where there may be local viability concerns.

FINAL RECOMMENDATION: Other emphasis

Aster alpinus* var. *vierhapperi – Inconsistent responses from four NFs. Apparently the RIOG agrees that the taxon merits SS status, and only offers a correction to the table as known to occur on the RIOG. GMUG/PSICC recommends "insufficient info" because of all the "D" ranks, and suggests that more inventory is needed. WHR repeats their standard paragraph and agrees with GMUG. SHO recommends "other emphasis" without discussion. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- This species occurs in alpine tundra. Occurrences in CO (GMUG, PSICC, and White River NFs) are widely disjunct from the nearest populations in western Canada. No information was available regarding habitat or population trends. No specific threats were identified. There is insufficient information available at this time to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Astragalus anisus – Only one specific response. GMUG/PSICC says there are over 100 populations, with a total of over 500,000 individuals, no threats, habitat is resilient and stable, and more plants being discovered all the time; it "should not be Sensitive in Region 2, just because it is peripheral on us" (apparently the majority of plants occur off NFS lands).

RESPONSE- After review of the species evaluation and recommendation rationale, we concur with the comments from the GMUG that the species does not merit sensitive species status, but we think it should be considered for "other emphasis" if there are local viability concerns. The only identified potential threat is illegal off-road vehicle use, but there does not seem to be a regional viability concern at this time.

FINAL RECOMMENDATION: Other emphasis

Astragalus barrii – Consistent responses from two NFs disagreeing with SS status, though not making the same alternative recommendation. GMUG/PSICC disagrees with team's statement about "limited habitat availability" and doesn't buy the assertion that coal bed methane production is a threat. Barry recommends "other emphasis". MBR recommends "insufficient info" because there is reason to believe it is under-collected on the Thunder Basin NG, though there may threats from disturbances associated with coal bed methane (roads and weeds). They say a Master's project will be conducting a viability analysis.

RESPONSE- In WY, about one-third of the known populations occur on the Thunder Basin NG. Coal bed methane and other resource extraction activities are a potential threat, with extirpation of one population previously documented. Invasive species and roads may also pose threats to the species. After review of the 3 evaluations, rationale, and comments, we conclude that sensitive species status is warranted. Inventories and population analysis slated for the Thunder Basin NG will be valuable information when re-evaluating the status of this species in the future.

FINAL RECOMMENDATION: Sensitive

Astragalus leptaleus – Inconsistent responses from three NFs, but one only offers a correction for the table. ARP says the "likely" indication in the distribution table should be a "4". MBR agrees with SS status, saying "Good call. Very low numbers on FS, mostly on MBR. Clear threats associated with grazing; lots of potential habitat on MBR." GMUG/PSICC says "should be rated 'Insufficient Information Available to make a recommendation,' because of lack of information about number of occurrences in Colorado, lack of knowledge of population sizes or trends in R2." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- This species is a regional endemic with bimodal distribution: partly within Region 2 in WY (S1 - 2 occurrences) and CO (SR – 5 occurrences), and partly in ID and MT (Region 4 sensitive species). It occurs in wet meadows, streamside willows and aspen from 6500 – 9500 ft. These habitats have been subjected to grazing, mowing and invasion by exotic plant species. This species is palatable to livestock. Due to its rarity and documented threats, this species merits **sensitive** status.

FINAL RECOMMENDATION: Sensitive

Astragalus missouriensis var humistratus – Only one specific response. SANJ says "insufficient info" based on evaluation form indication that population trends are unknown.

RESPONSE- This is an endemic species that appears to be extremely rare. Although habitat and population trends are unclear, it appears that the species could be vulnerable to stochastic events, invasive species, management activities such as roadside spraying, or other mishaps. Because of the risks associated with the limited number of occurrences and small population size, we conclude that sensitive status and focused management attention are warranted.

FINAL RECOMMENDATION: Sensitive

Astragalus oocalycis – Only one specific response. SANJ says a recent survey "found eight new locations of *A. oocalycis* representing many thousands of individuals" and the SANJ does not believe the species is of concern.

RESPONSE-The San Juan NF provided additional recent survey information indicating that the species is more abundant than previously thought. Therefore we agree with the recommendation not to designate the species as sensitive, but conclude that there may be local concerns, particularly related to the threats identified in the evaluation, that would warrant consideration for inclusion on other emphasis species lists.

FINAL RECOMMENDATION: Other emphasis

Astragalus proximus – One NF specifically responding agreed with sensitive status (SANJ).

FINAL RECOMMENDATION: Sensitive

Astragalus ripleyi – One NF specifically responding agreed with sensitive status (RIOG).

FINAL RECOMMENDATION: Sensitive

Astragalus wetherillii – Inconsistent responses from two NFs. GMUG/PSICC says SS status may be justified, but the species must be re-evaluated. After repeating their basic response, the WHR argues "no concern" in part because "Recent discussions with the local BLM ecologist indicates that the BLM has removed this species from their SS list due to a large number of apparently secure populations that have been located over the past several years. " Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- A narrowly restricted endemic species from the Colorado Plateau, most commonly on Mancos or Green River shale formations. Known from western CO with one historical record from UT. About 3 dozen populations have been recorded, with a small percentage on NFS lands. Threats are well documented and include oil and gas exploration and development, road construction, grazing and mining. Significant population decreases have been noted from 1967 to 1991, with an additional 20% decline reported in 2002. Due to its rarity, narrow distribution, documented threats, and downward population trends, this species merits **sensitive** status.

FINAL RECOMMENDATION: Sensitive

***Arabis crandellii* (*Boechera crandallii*)** – Partially consistent responses from two NFs. GMUG/PSICC recommends "not of concern" and making the case that the species is abundant, while also discussing some taxonomic issues that could result in a recommendation of "insufficient info". WHR recites their standard paragraph and recommends "insufficient info".

RESPONSE- Comments from the GMUG raise significant questions about the accuracy or completeness of the evaluation for this species. Furthermore, there are taxonomic issues involving the splitting off of *Boechera pallidifolia* from *B. crandellii* which further cloud our understanding of the latter. Therefore, we agree that this species does not merit sensitive species status due to insufficient information.

FINAL RECOMMENDATION: Insufficient information

Botrychium ascendens – Inconsistent responses from four NFs. Bighorn NF agrees with sensitive status, but GMUG/PSICC and BLKH disagree. GMUG/PSICC says that "insufficient info" is available; we don't know the number of populations and their sizes in R2, and since the plant is hard to see it may be more abundant than currently known. BLKH asserts that ALL *Botrychium* species should be considered "insufficient info" citing feedback from SDNHP that specimens collected there need to be checked for proper identification; they also cite comments from a national moonwort expert (Dr. Johnson-Groh) about shortfalls in scientific understanding of these species. SHO is ambivalent, recommending either "sensitive" or "insufficient info". Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- This species has a wide distribution but individual populations are all small and widely scattered (G2G3). Region 2 populations are disjunct, known only from the Big Horn and Absaroka ranges in WY. This species is difficult to identify and easily overlooked, but it appears to be restricted to hummocky banks of coldwater streams or montane willow communities on soils derived from granitic or volcanic

alluvium. The evaluator felt that under current management in WY, threats to the species are fairly low. It should be considered for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Botrychium campestre – Related responses from three NFs. NENF correctly points out that the rationale doesn't even fit the recommendation as sensitive; the rationale says there is insufficient info. GMUG/PSICC says the species should be in the insufficient info category "because we don't know number of populations, population sizes, and distribution in R2." BLKH asserts that ALL *Botrychium* species should be considered "insufficient info" citing feedback from SDNHP that specimens collected there need to be checked for proper identification; they also cite comments from a national moonwort expert (Dr. Johnson-Groh) about shortfalls in scientific understanding of these species. But BLKH adds specific comments about the lack of available info for the species on their Forest, and questions whether or not a viable population really exists there. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- Region 2 is at the southern periphery of the range of this species. It is reported from very few locations in Region 2: 1 (possibly 3) in CO, 1 in NE, 1 in SD, and possibly 1 in WY (the latter may be an incorrect identification). Although it has a broad geographic range, its distribution is many small disjunct populations separated by large areas of unsuitable habitat. It is listed as a sensitive species in Regions 6 and 9. A draft assessment prepared as part of the Species Conservation Project states that this plant is restricted to native prairie habitats, commonly associated with loess soils, and usually in tall to midgrass prairie systems. The primary threat to habitat has been conversion of prairie to agriculture. Burning combined with drought and erosion can be harmful. The habitat specificity, limited availability of habitat, rarity, and downward declines in neighboring populations suggest that it is quite vulnerable to extirpation locally or even regionally, and therefore this species merits **sensitive** status. We agree with the Nebraska NF that the draft recommendation did not match the rationale, and have updated that information.

FINAL RECOMMENDATION: Sensitive

Botrychium echo – Inconsistent responses from six NFs. SANJ agrees with sensitive status. RIOG indicates sensitive status is questionable because the evaluation did not use the most recent data and didn't consult the local state expert (Peter Root). GMUG/PSICC, BLKH, and WHR disagree with sensitive status, saying that it should be considered "insufficient info". The WHR recites their standard paragraph, but adds that recent surveys on the Forest have found more populations than previously realized, and may indicate a tolerance for disturbance. GMUG/PSICC gives much the same argument as for *B. campestre* but adds comments about recently discovered populations, and concludes insufficient info is warranted "because we don't know number of populations, population sizes, and distribution in R2." MBR recommends "insufficient info" because the plant is probably under-collected.

RESPONSE - Current information from CNHP indicates that there are more known occurrences than reflected in the evaluation. Peter Root (a respected authority on moonworts in Colorado) had expressed his opinion that this may be one of the most

common species of moonwort in the state (personal communication to A.Kratz 1998). Total distribution and populations sizes are unknown, but we believe there is sufficient information to conclude that the risk to this plant is low enough not to warrant sensitive species status and is not of concern at this time.

FINAL RECOMMENDATION: Not of concern

Botrychium hesperium – The original recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - Widely distributed but nowhere abundant (G3N2), there are 8 known occurrences of this species in CO. It occurs in grassy meadows, snowfields, roadside ditches with willows, and sand dunes. Habitat and population trends are unknown and no clear threats were identified, since it occurs in both natural and disturbed sites. At this time, there is **insufficient information** available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Botrychium lineare – Some inconsistency from four responding NFs. ARP only comments that the distribution table needs to include the historic report from their Forest. GMUG/PSICC and BLKH disagree with sensitive status. BLKH asserts that ALL *Botrychium* species should be considered "insufficient info" (see above), and says that if the only reason it was recommended for sensitive status is its Candidate status, then definitions and directions for sensitive species status need to be changed. GMUG/PSICC cites much of the same info as for the other moonwort species, and argues that it doesn't merit Candidate status due to the lack of info. MBR agrees with SS status because it's a federal Candidate.

RESPONSE- Best available information indicates that this species is extremely rare, with fewer than 200 individuals in the United States. Only two of the nine known occurrences are in Region 2 (on the PSICC). The species is a Candidate for federal listing under the ESA. Based on extreme rarity, there is a regional viability concern. We also have a February 9, 1994, letter from the Chief directing Regional Foresters to revise their sensitive species designations to include Candidates. Therefore, we recommend sensitive species status.

FINAL RECOMMENDATION: Sensitive

Botrychium multifidum – The original recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species has a wide circumboreal distribution (G5). There are 4 known occurrences in CO, 11 in WY (9 of which are outside of R2), and 3 historical occurrences in the Black Hills of SD. Inhabits montane meadows and streamsides. One evaluator (Walt Fertig) indicates that populations appear to be in decline in SD and may be in decline in CO (medium confidence), and that its habitat may be threatened by logging, grazing, habitat conversion, and recreational activities. The small number of occurrences, apparent downward population trends, and potential impacts of management actions indicate that sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Botrychium pinnatum – The original recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species is distributed across western U.S. and Canada but uncommon to rare throughout its range (G4?). In R2, it is known only from CO (S1); previous reports from WY are now believed to be false. It is found on grassy slopes, streambanks, and mossy woods on wet soils. No information was available on habitat or population trends or threats to the species. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Botrychium simplex – The original recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species has a bimodal distribution in North America, with eastern and western populations. Although widely distributed (G5), it is uncommon throughout much of its range. Wagner suggested that the western montane populations are distinctive and may warrant subspecies or species status. There are 3 known occurrences in northwestern CO, 8 in western WY, and a single historical record in the Black Hills of SD. It is found in a variety of habitats, including dry fields, bogs, swamps, roadside ditches, montane meadows, pastures, gravelly slopes, and open woods. No specific threats are known, and habitat and population trends are not known. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Braya glabella – Two NFs specifically responding agreed with sensitive status (GMUG/PSICC and WHR).

FINAL RECOMMENDATION: Sensitive

Calochortus flexuosus – One NF specifically responding agreed with sensitive status (GMUG/PSICC).

FINAL RECOMMENDATION: Sensitive

Carex alopecoidea – Two NFs specifically responding agreed with sensitive status (BLKH & GMUG/PSICC).

FINAL RECOMMENDATION: Sensitive

Carex diandra – Inconsistent responses from three NFs. MBR recommends "insufficient info" because of inadequate inventory for the species. GMUG/PSICC argues that there is insufficient info because we don't have data on the population sizes of Colorado occurrences. SHO is ambivalent, recommending either "sensitive" or "other emphasis". Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - This species has a wide distribution in North America (G5), but there are about 10 known occurrences in WY (S2), about 8 in CO (S1) and about 12 in NE (S2). It occurs in wetlands habitats such as fens, willow carrs, and marshes. Populations appear to be stable to declining (medium confidence). Population declines

have been observed and habitat declines can be inferred, and therefore **sensitive** status is warranted.

FINAL RECOMMENDATION: Sensitive

Carex leptalea –The original recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A boreal/subarctic species (G5), there are 4 known occurrence in CO, 11 extant occurrences in WY, and 8 extant occurrences in the Black Hills of SD. This species is on the sensitive species list in Region 1. This species is restricted to fens and swamps at 5,000-10,000 ft. in Reg1ion 2. Eight of the known populations in WY occur in wilderness or other protected areas while 3 occur on lands managed for multiple uses on the Shoshone NF. Evaluators indicate a probable downward trend in habitat due to hydrologic modification, road construction, recreation, etc. Because of its specialized habitat, historical and potential downward trends in habitat, and sensitive status in an adjoining Region, **sensitive** status is warranted.

FINAL RECOMMENDATION: Sensitive

Carex limosa – Inconsistent responses from six NFs., mostly disagreeing with SS status. BIGH recommended "insufficient info" based on the "low conservation priority" rating by Fertig (WYNDD), and that the evaluation form showed four of eight criteria with "D" ranks. WHR repeats their standard complaints, adding that there are too many "maybe's" and not enough documentation, so the species should be "insufficient info". GMUG/PSICC says "This species should be rated 'Insufficient Information Available to make a recommendation,' because population numbers and sizes are poorly known (especially in Colorado)." MBR recommends "insufficient info" because of inadequate inventory for the species. SHO is ambivalent, recommending either "sensitive" or "other emphasis". RIOG doesn't seem to disagree with SS status, but simply offers a correction to the distribution table. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- A circumboreal species (G5), it occurs on the Bighorn, Medicine Bow, and Shoshone NFs in WY (S2) and the Arapaho-Roosevelt, Rio Grande, and White River in CO (S2). It is found in fens, marls, wet meadows, along banks, and on hummocks. Populations may be locally abundant but are restricted to small areas of specialized habitat. An evaluation of WY occurrences indicated that populations may be stable at present, but there may have been historical declines due to loss or degradation of habitat. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Carex livida – Inconsistent responses from four NFs. WHR repeats their usual list, and points out that the "evaluator" says much of the info for the species is missing; they recommend "insufficient info". GMUG/PSICC quotes one of the evaluators about the species being "poorly known", and indicates that the reviewers did not make a recommendation. [Actually, the process allowed reviewers to check a box to indicate their recommendation, and did not require them to state use the word "sensitive" in their rationale.] GMUG/PSICC recommends "insufficient info". SHO is ambivalent,

recommending either “sensitive” or “other emphasis”. MBR agrees with “sensitive” status. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- This species is interruptedly circumboreal (G5). It is disjunct in CO (S1) and WY (S1), and is considered sensitive in Region 1 and by BLM in Colorado. It is found on floating mats in fens, bogs, and marls, often on wet hummocks. Populations are thought to be stable in WY (high confidence). In WY, the single occurrence on the Shoshone NF is in the Swamp Lake Botanical area, and the other occurrences are in Yellowstone National Park. The five occurrences in CO are vulnerable to activities such as road construction, trail use, etc. and habitats may be declining (low confidence). Calcareous fens and bogs are vulnerable to almost any kind of continual use. Because of its rarity, specialized habitat, and historical and potential downward trends in habitat, **sensitive** status is warranted.

FINAL RECOMMENDATION: Sensitive

Carex luzulina var atropurpurea – One specific response disagreeing with SS status. SHO recommends “other emphasis” but provides no discussion. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - This is a regional endemic of eastern ID, southwestern MT and western WY. In R2, it is known only from the Shoshone NF in Region 2, and it is a sensitive species in R4. All known occurrences are in wilderness areas on the B-T and Shoshone NFs. It is found in moist subalpine sedge or willow dominated meadows and riparian areas. Although potential threats could include sheep grazing and other habitat disturbance, population and habitat trends are not known. There is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Carex magellanica var. irrigua – Consistent responses from four NFs that SS status is not warranted, but somewhat inconsistent in their recommendations. WHR makes the same statements that they did for *Carex limosa* and recommends “insufficient info”. GMUG/PSICC says “Should be ‘Insufficient Information Available to make a recommendation,’ because population numbers and sizes are poorly known (especially in Colorado) and the reviewers did not make a recommendation.” Barry points out that the species is small and easily overlooked, and that we don’t know much about it in Colorado because it isn’t tracked [by CNHP]. MBR recommends “insufficient info” because of inadequate inventory for the species. SHO recommends “other emphasis” without elaboration. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- Boreal species with widespread distribution in North America (G5) but disjunct in the southern Rocky Mountains in CO and WY. An obscure plant that can easily be overlooked; surveys are very incomplete. Found in wet sphagnum bogs or other wetlands. Populations appear to be stable (low confidence), although its wetland habitats are vulnerable to development. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Carex microglochin – Inconsistent responses from four NFs. The RIOG agreed with SS status, but both WHR and GMUG/PSICC suggest "insufficient info", while SHO recommends "other emphasis". WHR makes the same statements that they did for *Carex limosa* and *Carex magellanica*. GMUG/PSICC says "Should be ranked 'Insufficient Information Available to make a recommendation,' since number of Colorado populations is unknown and complete distribution is not known." Barry also argues that the species is easily overlooked, and we don't know its response to disturbance. SHO recommends "other emphasis" without any discussion. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- Widespread distribution in North America (G5?), this species may be common on limited habitat in CO, and there are 5 occurrences in WY. Found on floating mats in willow and sedge meadows, wet or saturated soils. Populations appear to be stable (low confidence) although its wetland habitats are vulnerable to development. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Carex rosea – Consistent responses from two NFs that it doesn't merit SS status, plus a comment from WYNDD about the lack of data for SD. BLKH says there is insufficient info citing "lack of information on abundance, distribution, trend and reproduction." They say that habitat specificity on the Black Hills is not well known, and some of its habitats are common in the Black Hills but rarely surveyed. GMUG/PSICC say "Should be ranked 'Insufficient Information Available to make a recommendation,' since number of populations, distribution in R2, and response(s) to disturbance are all unknown" and objects to the bias on one of the evaluators evidenced by the statement that the species is "assumed" to be sensitive to disturbance.

RESPONSE- Review of the evaluations, recommendation rationale, and comments from the Forests raises questions about the rarity and potential threats to the species on a regionwide basis. The species is disjunct in R2, and few occurrences are known on NFS lands, but there is reason to believe that it may be more common in the Black Hills than reported and threats may not be significant. We agree that there is insufficient information to determine whether or not this plant merits sensitive species status.

FINAL RECOMMENDATION: Insufficient information

Carex tenuiflora – One NF responding disagreed with SS status. GMUG/PSICC says "Should be ranked 'Insufficient Information Available to make a recommendation,' since number of populations and distribution in R2 are unknown, so it is impossible to assess whether there is any decline in populations or habitat." Apparently the species is known from a single collection within R2 [where it is highly disjunct in Colorado, though it is common in Canada and is globally ranked G5]. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - Widespread across Canada and Siberia (G5), but distribution in R2 limited to one disjunct site in central CO. This occurrence is in a wilderness area and the

site has remained stable (low confidence). There is a trail is at a distance from the fen although use is increasing. This species has not been adequately surveyed in R2. Habitat is rich quaking fens. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Chenopodium cycloides – No specific response.

FINAL RECOMMENDATION: Sensitive

Cirsium perplexans – Two NFs specifically responding agreed with sensitive status (WHR, GMUG/PSICC).

FINAL RECOMMENDATION: Sensitive

Comarum palustre – Inconsistent responses from five NFs responding. ARP only suggested it needs to be added to the distribution table for their Forest, and WYNDD simply commented that they don't track it. WHR made the same statements that they did for *Carex microglochin* to support their recommendation for "insufficient info". GMUG/PSICC says it may warrant SS status, but needs to be re-evaluated with data from Colorado. [The species is ranked S1 in CO, WY, and UT; it doesn't occur in SD, NE, or KS.] MBR recommends "other emphasis" because it is more common off NFS lands in Yellowstone NP. SHO is ambivalent about it, and says it should be either "sensitive" or "insufficient info".

RESPONSE- Security of the species in Yellowstone NP or other areas outside of R2 does not relieve us of concern for regional viability, but we agree that we do need to better understand the species within Colorado. The draft recommendation rationale relied more on the threats to peatland habitats, which apparently are only one of the habitats that the species can occupy. Review of the evaluation, recommendation rationale, and comments from the Forests leads us to agree that there was insufficient information to determine whether or not this plant warrants sensitive species status.

FINAL RECOMMENDATION: Insufficient information

Cryptantha longiflora – Consistent responses from two NFs disagreeing with SS status and recommending "insufficient info". WHR recites their standard paragraph. GMUG/PSICC says the evaluation should be rejected because of factual errors, and the species should be "insufficient info".

RESPONSE- Occurrences on other public lands do not necessarily remove the concern for viability at the regional level. Current records from CNHP indicate only two documented occurrences on NFS lands here, one last seen in 1938 and the other in 1920. Additional surveys need to be conducted to determine the status of this species on NFS lands. We agree with the Forests that we have insufficient information at this time to determine whether or not this plant warrants sensitive status.

FINAL RECOMMENDATION: Insufficient information

Cypripedium fasciculatum – Inconsistent responses from three NF. MBR agrees with SS status. GMUG/PSICC and WHR cite info from recent efforts on the White River NF, with GMUG/PSICC giving additional arguments. They recommend "other emphasis".

RESPONSE- Review of the evaluations, recommendation rationale, and comments from the Forests indicates that the species is more common than one of the evaluations indicated, and that it is at least moderately tolerant of the disturbance. Timber management may represent the greatest threat to the species, but we believe that impacts to this plant can be reduced to acceptable levels. We conclude that this plant does not warrant sensitive species status, but should be considered for other emphasis lists.

FINAL RECOMMENDATION: Other emphasis

Cypripedium montanum – Inconsistent responses from three NFs. MBR agrees with SS status, saying "Clear threats, low FS numbers, disjunct." BIGH recommends "no concern" saying the species is more widespread on their Forest than previously believed, and occurs in areas where timber harvest is not planned. They also point out that there were some "C" and "D" ranks for some of the evaluation criteria. SHO is ambivalent, recommending either "sensitive" or "other emphasis".

RESPONSE- The species is disjunct in R2, occurring only on the Bighorn NF. Although additional occurrences have been found there recently, the total number is still small. The original recommendation rationale may have overstated the threat from timber sales, but the plant is still subject to management actions on NFS lands that could be detrimental. We conclude that there is a regional viability concern, and recommend sensitive species status.

FINAL RECOMMENDATION: Sensitive

Cypripedium parviflorum – Inconsistent responses from five NFs. BIGH agrees with SS status. BLKH disagrees with SS status, and raises taxonomic questions [see the message they got from Dr. Charles Sheviak, an orchid expert]; they argue for "insufficient info". GMUG/PSICC and WHR also argue for "insufficient info", with GMUG/PSICC raising taxonomic issues and WHR quoting their standard paragraph but also stating that the recommendation for SS status is based on "anecdotal information". SHO recommends "insufficient info" but does not provide their rationale. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - Populations of three intergrading varieties are patchily distributed in North America. Our review of the available information has convinced us that there are relatively few populations of this orchid, regardless of which varieties they may be. Occupies a wide array of habitats, but appears to be relatively rare on NFS lands in Region 2. Seedling establishment is dependent on mycorrhizal fungi and may be a limiting factor. The species is potentially threatened by management activities and over-collection, and its habitat appears to have a downward trend across its range (medium confidence). There is a regional concern for viability of the species as a whole in R2, and we recommend that the entire species be designated as sensitive. As the taxonomic issues are resolved, we can be more precise in the designation of intraspecific taxa.

FINAL RECOMMENDATION: Sensitive

Cystopteris montana – One NF responding says there is "insufficient info" for this species. GMUG/PSICC says "This species should be rated 'Insufficient Information

Available to make a recommendation,' because we don't know number of populations, population sizes, and distribution in R2." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - This species is circumboreal but nowhere abundant. In R2, it is disjunct by hundreds of miles from the nearest population, with 8 known locations (2 revisited and confirmed as extant) in CO. It is found in moist Engelmann spruce forests with northern aspect and mossy streambanks. Populations are small and isolated. One population in R2 was nearly lost due to logging in the 1940s. Habitat trends unknown but may be stable after historical declines (medium confidence). However, at this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Descurainia torulosa – One NF specifically responding agreed with sensitive status (SHO).

FINAL RECOMMENDATION: Sensitive

Draba borealis – Consistent responses from three NFs that the species does not merit SS status, but inconsistent in their recommendations. WHR quotes their standard paragraph and recommends "insufficient info". GMUG/PSICC says "The reviewers have given a short summary of Colorado occurrences, but we have no indication at all of abundance or effects by management or humans in Colorado" and potential habitat in Colorado has not been searched; therefore they recommend "insufficient info". SHO recommends "other emphasis" but does not provide their rationale. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A circumboreal species (G4), populations are disjunct in CO and WY. In Region 4 this is a sensitive species. Occurs on north-facing slopes, cliffs and riparian areas. Population trend is not known but probably stable (medium confidence). Habitat trend not known, but threats are low in cliff habitat and somewhat higher in riparian habitat. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Draba exunguiculata – Inconsistent responses from three NFs, RIOG apparently agreeing with SS status but offering only a correction for the distribution table, while two disagree with SS status and recommend "insufficient info". WHR quotes their standard paragraph. GMUG/PSICC dismisses the evaluators' and reviewers' concerns about disturbance, and says the habitat is resilient to very resilient. They recommend "insufficient info" rather than "not of concern". Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - Endemic to northern and central CO with 13 known occurrences (G2). Patchy distribution in alpine tundra habitat. Trampling by hikers has been documented in several areas by Colorado Natural Heritage Program. Mining has likely impacted populations in the past. Population trends are not known, but downward habitat trends can be inferred. This species merits sensitive species status.

FINAL RECOMMENDATION: Sensitive

Draba graminea – Inconsistent responses from two NFs, one agreeing with SS status and the other not. RIOG agrees with SS status. GMUG/PSICC discounts the evaluators concern over habitat vulnerability, believes inventory is inadequate, and recommends "insufficient info".

RESPONSE- Review of the evaluation, draft recommendation rationale, and comments from the Forests indicates that our evaluator failed to reveal current records from CNHP. There are apparently 28 occurrences for this endemic plant, at least 25 of which are on NFS lands on the GMUG, SANJ, and RIOG forests; though some of the records are very old (e.g., 1901) and may not represent extant populations. Though there are undoubtedly threats to at least some of the occurrences, the draft recommendation rationale overstates the level of risk at the regional level. We recommend that the plant does not warrant sensitive species status, but should be considered for other emphasis lists at the local level.

FINAL RECOMMENDATION: Other emphasis

Draba grayana – This endemic plant is restricted to Colorado, and is ranked G2. It was supposed to have been evaluated in our process, but was not. It has been documented on four of our National Forests (ARNF, PSICC, RIOG, WHR) where it occurs on gravely slopes and knolls in the alpine. We recommended sensitive status for this endemic species because it of its global rarity, and the risk of inadvertent impacts associated with management actions. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - Endemic to the mountains of central CO (G2). Considered sensitive by the National Park Service. An evaluation was not done for this species, but a draft species assessment recently prepared as part of the Species Conservation Project provides information regarding status, trends, and threats. This species has been reported from approximately 28 locations, most within 4 miles of Gray's Peak, the type location. Population size is typically small (10-30 plants, with each plant growing in a clump with several stems). Although quantitative data are not available, anecdotal evidence suggests that some populations have declined in abundance. Specific threats have been identified, including impacts of recreation (hiking and mountain biking), and mountain goats. Its ability to tolerate competition from non-native plants is speculated to be low. This species merits sensitive species status.

FINAL RECOMMENDATION: Sensitive

Draba paysonii* var. *paysonii – One NF with a specific response disagrees with SS status and recommends "other emphasis" but does not provide their rationale (SHO). Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - Regional endemic (G5) of western MT and western WY (S2). Six of 8 occurrences are on the Shoshone NF. All or part of 5 populations occur within wilderness areas or RNAs. Habitats and populations are presumed to be stable (low confidence) due to lack of threats and rugged habitat. Because of its rarity in R2, the Shoshone NF should consider this species for other Emphasis Species lists

FINAL RECOMMENDATION: Other Emphasis

Draba porsildii* var. *brevicula – Varied responses. ARP questions why the distribution table shows the plant present on their Forest. WYNDD questions the taxonomy based on the treatment by the primary authority for Wyoming, and suggests "insufficient info". GMUG/PSICC also point out taxonomic issues, says that records from Colorado have not been segregated at the varietal level, and recommends "insufficient info". SHO recommends "other emphasis" but does not provide their rationale. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - In addition to the evaluation, a draft species assessment prepared as part of the Species Conservation Project provides information regarding status, trends, and threats. A regional endemic, variety *brevicula* is currently designated SU (unrankable due to conflicting or insufficient information) in WY (former ranking as S1 was revised in 2002). It is known to occur in the Beartooth Mountains at the WY-MT border, and may have been observed in the Wind River Range. This variety intergrades with variety *porsildii*, which has a much wider distribution including CO (S1), WY (S2), MT (S1), Alaska (S1S2) and Canada but is also rare. This plant occurs in the alpine tundra zone at 10,000-11,500 ft on limestone and dolomite outcrops and scree/talus slopes. Highway improvement and associated recreational uses and mining were identified as possible threats, although the population in the Beartooth Mountains is encompassed within the proposed Beartooth Butte Research Natural Area. Because of incomplete inventory, uncertainty as to the extent of its range, lack of monitoring information, and poor understanding of response to disturbance, there is insufficient information available to determine whether the species merits sensitive status. (Note: *Draba porsildii* var. *porsildii* has been recommended for "other emphasis".)

FINAL RECOMMENDATION: Insufficient information

Draba smithii – Inconsistent responses from three NFs. RIOG and SANJ agree with SS status. GMUG/PSICC argues that the habitat is stable and resilient, so the species merits "other emphasis" rather than sensitive.

RESPONSE- Review of the evaluation, recommendation rationale, and comments from the Forests indicates that there are few known populations, some of which are subject to adverse impacts from management actions. We conclude that based on available information, there is a regional concern for viability. Therefore, we recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Draba weberi –The recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A CO endemic known only from a single population of perhaps 100 individuals amid rocks along streamlets near timberline. However, the site in question is not on NFS lands. Weber and Wittmann quote Price as saying that the pollen is non-functional. The hybrid origin is admitted by the authors of the species, and the putative parents occur nearby and above the population. Surveys are very incomplete and there is no indication of threats or trends in population or habitat. Therefore, at this time,

there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Drosera anglica – Inconsistent responses from two NFs. GMUG/PSICC supports SS status. SHO is ambivalent, recommending either "sensitive" or "other emphasis". Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- A circumboreal species (G5), in R2 it occurs only on the Shoshone NF. The species is S2 in WY and is on the Region 1 sensitive species list. Population trend is not known. This species occurs in peatlands, which have been lost in the past and are vulnerable to hydrological change. This species merits **sensitive** status.

FINAL RECOMMENDATION: Sensitive

Drosera rotundifolia – Consistent responses from two NFs supporting SS status (GMUG/PSICC and MBR).

FINAL RECOMMENDATION: Sensitive

Eleocharis elliptica – One specific response from a NF disagreeing with SS status and recommending "insufficient info". BLKH says "Population trend and habitat trend were given D ranks, and impacts, although given a B, indicate nothing specific to known populations it just indicates being managed for multiple use but does not specify what is occurring at known populations."

RESPONSE- Review of the evaluation, recommendation rationale, and comments from the Forests indicates that currently there is a single known population in R2, and the species occupies habitats that may be negatively affected by management actions. We conclude that based on available information, there is a regional concern for viability. Therefore, we recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Epilobium palustre* var. *palustre – Consistent responses from four NFs that SS status is not merited, and should be "insufficient info". WHR quotes their standard paragraph. GMUG/PSICC says the rationale for SS status is "nearly incomprehensible" and "Should be 'Insufficient Information Available to make a recommendation,' because nothing is known about distribution, number of occurrences, or population sizes in South Dakota and Colorado; Colorado occurrences have not been evaluated." MBR and SHO both recommend "insufficient info" but don't provide rationale.

RESPONSE- We agree with comments from the Forests that the rationale is poorly worded, and that there is insufficient information to determine whether or not this plant merits sensitive species status.

FINAL RECOMMENDATION: Insufficient information

Epipactis gigantea – Consistent agreement for SS status from four NFs responding specifically on this species (BLKH, GMUG/PSICC, SANJ, WHR).

FINAL RECOMMENDATION: Sensitive

Equisetum fluviatile – One ambivalent response recommending either "sensitive" or "other emphasis" (SHO). Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A circumboreal species (G5), Region 2 represents the southcentral periphery of its distribution. Known from 2 occurrences in R2, one on the Shoshone NF and one in Yellowstone National Park. Not known to occur on NFS lands in SD or NE. This species grows on muddy shores of swamps and in shallow ponds at 6400-8150 ft. Population and habitat trends are unknown, with no information regarding threats specific to FS management. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Eriogonum brandegeei – GMUG/PSICC wants this designated "insufficient info" until they can see an evaluation and recommendation rationale. [APPARENTLY NO EVALUATION WAS COMPLETED, BUT SOMEHOW A MOSTLY BLANK WEB PAGE WAS INCLUDED INDICATING THE SPECIES IS SENSITIVE. The species was on Paula Durkin's list as a "priority 2" because it is ranked "G1G2" but Paula never did any of the second priority species. Need to provide documentation and/or update web pages as needed.]

RESPONSE- This endemic plant is restricted to Colorado, and is ranked G1G2. It was supposed to have been evaluated in our process, but was not. It occurs near NFS lands, and is likely to occur on the PSICC. We recommend sensitive status for this endemic species because of its global rarity and the risk of adverse management actions. It will need to be evaluated more fully in the near future.

FINAL RECOMMENDATION: Sensitive

Eriogonum exilifolium – Inconsistent responses from three NFs. ARP simply corrected the distribution table. MBR agrees with SS status, saying "It's a narrow endemic with few FS pop[ulations]… with documented, but not well-understood, impacts from grazing, recreation, and road building." The only other specific response disagreed with SS status and recommends "insufficient info". GMUG/PSICC says "Should be 'Insufficient Information Available to make a recommendation,' because the Colorado populations and their distribution are unknown, and the reviewers did not make a recommendation."

RESPONSE- This endemic plant is restricted to Wyoming and Colorado, and is ranked G3 (but curiously ranked "N2?"). There are seven known occurrences in WY, only two of which occur on NFS lands. We need better information on the distribution in CO, but there are only six specimens in the CU herbarium, and distribution on NFS lands in CO is unknown. The best available information indicates that there are very few occurrences of this endemic plant on NFS lands, and while we have information indicating that it tolerates a moderate level of disturbance, the occurrences on NFS lands are at risk to a variety of management actions. We conclude (based on best available information) that there is a regional viability concern, and recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Eriogonum visheri – One NF specifically responding agrees with SS status (MBR).

FINAL RECOMMENDATION: Sensitive

Eriophorum altaicum* var. *neogaeum – Inconsistent responses from four NFs and WYNDD. WYNDD says recent work in Colorado by a UWYO student raises questions about whether or not the taxon really occurs in the state, or has been misidentified. After lengthy taxonomic discussion stating that *Eriophorum altaicum* var. *neogaeum* and *Eriophorum scheuchzeri* are the same organism, GMUG/PSICC agrees with SS status (and recommends use of this varietal name instead of *Eriophorum scheuchzeri*). WHR agrees with SS status, and that it is a synonym for *Eriophorum scheuchzeri*, and the SANJ agrees with SS status but doesn't comment on the taxonomic issue. RIOG seems to question SS status because of the lack of consistency among the evaluations, and while preferring the more thorough evaluation of Ladyman, doesn't agree with her assessment of the level of threat to the habitat. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- *Eriophorum altaicum var. neogaeum* – This species is under taxonomic scrutiny, but our corporate authority ("Plants" database) recognizes it as a separate entity. Therefore it is restricted to CO with a ranking of S3. It occurs in fens and marshes at high elevations; population sizes vary but it is considered uncommon overall. The evaluator indicated that there are "still stable amounts of suitable or potential habitat" but described habitat as very vulnerable to modification from most activities (e.g., mining, livestock grazing, water development and outdoor recreation). There is a regional viability concern for this species due to threats associated with management activities on NFS lands, and therefore **sensitive** status is warranted.

FINAL RECOMMENDATION: Sensitive

Eriophorum callitrix* var. *callitrix – One NF specifically responding recommends "other emphasis" but no rationale provided (SHO). Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- A circumpolar species (G5), sheathed cotton-grass is a disjunct species in WY where it is at the southern edge of its range. Within R2, it occurs only in WY, and is known from 1 historical and 4 extant populations on the Shoshone NF. This taxon is found along subalpine and alpine streambanks, in bogs, and in short willow and sedge meadows on wet, mossy soils often influenced by limestone at 10,000-11,250 ft. Three of the 5 occurrences in WY are on lands managed as wilderness. Population and habitat trends are unknown. Individual colonies could be impacted by grazing, trampling and recreation to a limited extent. The Shoshone NF should consider this species for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Eriophorum chamissonis – Inconsistent responses from four NFs. BIGH disagrees with SS status and recommends "insufficient info" based on WYNDD (Fertig) rating as "low conservation priority" and the number of "D" ranks in the evaluation. SHO recommends "other emphasis" but does not provide rationale. WHR and GMUG/PSICC agree with SS status (GMUG also says the taxonomy needs resolution). Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A circumboreal species (G5), russet cotton-grass occurs at the southern edge of its range in WY and CO. It is known from 4 extant and 5 historical records in the Absaroka and Big Horn ranges and on the Yellowstone Plateau. In CO, there are 6 records at CNHP from federal public lands, and there have been four preliminary estimates of 100 to >1,000 individuals. It is found in montane swamps and bogs at 7,350 – 8,320 ft. Population trend is uncertain but the WY evaluator inferred a possible downward trend because 5 historical occurrences have not been re-confirmed. Vulnerability of its wetland habitats is considered moderate. This species merits Sensitive Species status.

FINAL RECOMMENDATION: Sensitive

Eriophorum gracile – Inconsistent responses from four NFs, and corrections to distribution table from two more. MBR, WHR and GMUG/PSICC agree with SS status. NENF and RIOG offer corrections for the distribution table. SHO recommends "other emphasis" but does not provide rationale. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A circumboreal species (G5), this species is known from a few occurrences in CO (6 recent and 5 historical), and single occurrences in SD, NE, and WY. A very visible plant in flower, it would easily be seen in floristic surveys. It is found in fens, peatlands, and other open, saturated wetlands with organic substrates. Its habitat is vulnerable to hydrologic modification, mining, water development, road construction, etc. At least one historic site in SD and apparently two sites in CO have been destroyed. Sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Eriophorum scheuchzeri – Inconsistent response from three NFs. WHR and GMUG/PSICC both agree that it merits SS status, but say that it is a synonym for *Eriophorum altaicum* var. *neogaeum* [they disagree with the PLANTS database]. SHO disagrees with SS status, and recommends "other emphasis" but does not provide a rationale. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - This species is circumboreal (G5), extending into scattered locations in the Rocky Mountains of MT, WY and UT. In WY, it is known from 2 extant and one historical occurrences in the Wind River and Absaroka ranges. It is found in bogs, wet streambanks, and willow thickets in the lower alpine zone at 9,500-11,000 ft. Habitat and population trends are not known, but the species could be impacted by high recreation use or alteration of alpine wetland habitats. Of the two records on the Shoshone NF, one is on lands managed for wilderness and one is on lands managed for other multiple uses. The Shoshone NF should consider this species for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Eriophorum viridicarinatum – Inconsistent responses from thjree NFs. GMUG/PSICC and WHR agree with SS status. SHO disagrees and recommends "other emphasis" but doesn't provide any rationale. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - This species has a patchy widespread distribution in North America (especially eastern), and is considered secure in Canada. In WY (S1), it is known from 4 occurrences but it is not tracked in CO. It is found in boggy woods and wet meadows at 6,280-7,350 ft. in WY. Populations may be locally abundant but are limited to small mocrosites. Habitat and population trends are not known. The known population on the Shoshone NF occurs in a Botanical Area. The Shoshone NF should consider this species for other Emphasis Species lists.nclude that there is a regional concern for viability, and recommend sensitive status.

FINAL RECOMMENDATION: Other Emphasis

Eritrichium howardii – Inconsistent responses from two NFs. BIGH disagrees with SS status, and recommends "insufficient info". They say the one known R2 occurrence is in an RNA and that most sites for the plant are on limestone outcrops where it is not threatened by grazing, motorized travel, or timber harvest. They also point out that four of eight criteria were ranked "D". SHO is ambivalent, recommending either "sensitive" or "other emphasis". Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A regional endemic of WY, MT and ID (G4), there are 6 extant and 1 historical occurrences in WY. Census data are lacking but most populations appear to be small and restricted to specialized microsites. Its habitat is patchy and discontinuous within dry, open, often rocky foothills and montane cushion plant communities at 7,600-9,000 ft., often on level slopes and ridgetops. Population and habitat trends are not known. The population on the Bighorn is within a RNA, but elsewhere it is not in protected areas. Threats are unknown although the evaluator suggests that its habitat could be vulnerable to road development or off-road travel. The Bighorn and Shoshone NFs should consider this species for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Festuca campestris – No specific response.

FINAL RECOMMENDATION: Sensitive

Festuca hallii – Consistent responses from three NFs supporting SS status (BIGH, MBR, SHO).

FINAL RECOMMENDATION: Sensitive

Frasera coloradensis – One specific NF response disagreeing with SS status, and recommending "other emphasis". GMUG/PSICC says it can't be designated sensitive because the reviewers said the species seems stable in populations and habitat. Also says the reviewers did not recommend sensitive status [meaning that they didn't use the words in their rationale].

RESPONSE- Based on review of the evaluation, recommendation rationale, and comments from the GMUG, we agree that available information indicates the species is stable and does not merit sensitive status, but should be considered for other emphasis lists on the Comanche NG.

FINAL RECOMMENDATION: Other emphasis

Gayophytum humile – One specific NF response recommending "other emphasis" but not providing rationale (SHO), also WYNDD offered additional data (known recent occurrences should be 10 instead of 6).

RESPONSE- Best available information indicates that this species is quite rare in Wyoming, with six of ten known occurrences on the Shoshone NF, but it is presumably more common in adjacent states. It is apparently restricted within R2 to very specific habitats, which occupy very limited area. We are concerned that management actions could negatively impact the species here, but indications are that the level of risk is reasonably low. We conclude that this species does not merit sensitive status, but should be considered carefully by the SHO for other emphasis.

FINAL RECOMMENDATION: Other emphasis

Gentianella propinqua – One specific response recommending "other emphasis" but not providing rationale (SHO). Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - This species is known from Alaska to B.C. and Alberta, south to OR, ID (S2), MT (S3), and WY (S1). It is a sensitive species in Region 4. It is known from only one occurrence in WY, on the Shoshone NF, last observed in 1980. Across its range, this plant is found in meadows, slopes, and streambanks in the mountains, often at high elevations (9,700 ft in WY). The single occurrence on the Shoshone NF is on land managed as wilderness. Population and habitat trends are unknown, as are threats. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Gilia sedifolia – This species has a global rank of G1 and should have been evaluated, but was apparently overlooked. It is an extremely rare endemic in CO, documented in the high alpine zone on the GMUG and San Juan NFs. CNHP and the San Juan NF recommended that it be included as a sensitive species in R2.

RESPONSE - A draft species assessment recently was prepared as part of the Species Conservation Project, which supplies available information regarding the status, trends, and threats to the species. This plant is known from only 2 occurrences, one of which may have been extirpated. Survey efforts suggest the species is very rare, but additional inventory is recommended. Both collections were made in sites at or above treeline on dry, rocky or gravelly talus of tuffaceous sandstone. Threats to this habitat specialist include recreation (hiking and off-road vehicles), roads and trails (direct impacts of construction, as sources of erosion, avenues for nonnative invasive species, and as barriers to pollinators), and mining. As a biennial (unusual for an alpine plant), this species is more vulnerable to environmental stochasticity than perennial species. The species merits **sensitive** status.

FINAL RECOMMENDATION: Sensitive

Helictotrichon mortonianum – Inconsistent responses from four NFs. ARP simply offered a correction for the distribution table. WHR repeats their standard paragraph and recommends "insufficient info". GMUG/PSICC recommends "not of concern" or

"insufficient info" because we don't have adequate census data. SHO is ambivalent, recommending "sensitive" or "other emphasis".

RESPONSE- Based on review of the evaluation, recommendation rationale, and comments from the Forests, we conclude that there is not enough information available to determine whether or not this species warrants sensitive status. It is known from a single occurrence in Wyoming on the SHO, and the ARP reports a known occurrence on the Fraser Experimental Forest. We particularly need to know more about the species distribution and abundance in Colorado, where it is ranked "SR" and not tracked by CNHP.

FINAL RECOMMENDATION: Insufficient information

Ipomopsis aggregata* ssp. *weberi – Apparently consistent responses from three NFs agreeing with SS status (ARP, GMUG/PSICC, MBR). Also received a corrected evaluation form from WYNDD. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - This taxon is a regional endemic of southcentral WY (S1) and north-central CO (S2), and perhaps northern ID. Habitat is patchy, generally in brushy openings in coniferous forests. In WY, it is found on south-facing slopes and ridges dominated by sagebrush or other shrubs. Significant downward trends were documented between 1989 and 1994, attributed to past management actions including herbicide spraying to control serviceberry and big sage. Threats were identified from other land management activities as well. Sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Ipomopsis globularis – Consistent responses from two NFs disagreeing with SS status and recommending "other emphasis". WHR recites their standard paragraph. GMUG/PSICC says the rationale is "shallow" and no decline in the populations or habitat has been shown. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- A narrow endemic, this plant is found only in CO. It is known from 25-30 occurrences in the Mosquito/Ten Mile ranges. This alpine plant is found on gravelly to rocky soils derived from limestone, at or above timberline. Surveys may be incomplete. Numbers vary, but populations often described as "common" or "abundant" in its habitat. Populations appear to be stable and habitats are thought to be stable and resilient. A few populations could be exposed to off-road vehicle use and trampling from human foot traffic. The White River and Pike and San Isabel NFs should consider this species for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Ipomopsis polyantha – Inconsistent responses from two NFs. SANJ agrees with SS status. GMUG/PSICC points out that we did not post an evaluation on the web site, so there is no basis for SS status.

RESPONSE- This regional endemic is ranked G1, and was supposed to have been evaluated in our process, but it was not. In Colorado, the number of individual plants is low and they appear to be at risk to management actions. We recommend sensitive status

for this endemic species because it of its global rarity and the associated risks of adverse management actions. It will need to be evaluated more fully in the near future.

FINAL RECOMMENDATION: Sensitive

Ipomopsis spicata* ssp. *robruthiorum – One NF responding was ambivalent about recommending "sensitive" or "other emphasis" (SHO). Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A narrow endemic to the Absaroka Mountains of WY (S2), known from only 16 occurrences, all on the Shoshone NF. It is found on montane, sandy to rocky volcanic scree, rocky slopes, alpine tundra and meadows, turf mats, and open Douglas-fir forests from 7,200-13,000 ft. Population and habitat trends are unknown. Threats presumed to be minimal due to its rugged habitat, except perhaps for grazing or trampling by sheep. Because it is rare but threats appear to be low, the Shoshone NF should consider this species for **other Emphasis Species** lists.

FINAL RECOMMENDATION: Other emphasis

Juncus filiformis – Consistent responses from three NFs disagreeing with SS status and recommending "insufficient info". WHR recites their standard paragraph. GMUG/PSICC says the species "should be ranked 'Insufficient Information Available to make a recommendation,' because we have no information on number of populations or their sizes, and we do not know the distribution of this plant in Colorado or Nebraska, or in the Region as a whole." MBR says it is under-collected and not habitat-limited.

RESPONSE- We agree with comments from the Forests that there is insufficient information to determine whether or not this plant merits sensitive species status.

FINAL RECOMMENDATION: Insufficient information

Juncus vaseyi – Consistent responses from four NFs disagreeing with SS status, though differing in recommendations, with most saying "insufficient info". WHR recites their standard paragraph, but adds "Lots of 'may be's' but no documentation.". GMUG/PSICC argues that the plant has not been adequately surveyed, and concludes that it "Should be ranked 'Insufficient Information Available to make a recommendation,' because we have no information on number of populations or their sizes, and we do not know the distribution of this plant in Colorado or Wyoming, or in the Region as a whole." MBR says "insufficient info" but refers to it as a habitat specialist with threat from grazing. SHO recommends "other emphasis" but offers no rationale. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE- Distributed from B.C. to Quebec, south to ID, CO, MN, IL, and NY; S1 in CO and WY. A wetland species, it occurs in moist sandy beaches along glacial lakes in the Wind River Range; in hummocky wet meadows with rich organic soils in the Laramie Range; and in wet meadows, bog margins, and depressions along sandy lake shores in CO. One evaluator states that it is thought to be secure in its primary range in Canada, but may be declining in vulnerable disjunct populations; another evaluator states that trends are suspected to be stable in WY based on resurvey of 2 known populations. Habitat appears to be stable, although threats include hydrological

modification, grazing and recreation impacts. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Kobresia simpliciuscula – Inconsistent responses from two NFs. GMUG/PSICC agrees with SS status. SHO says "insufficient info" but offers no rationale. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - Patchy and somewhat disjunct distribution in R2, much more widely distributed across arctic Canada and central Siberia. Known from a single occurrence in WY, on the Shoshone NF, with about 15 occurrences in CO. Habitat is marl wetlands and calcareous fens. The site in WY is in a Botanical Area, but the sites in CO are not protected. Population trend is not known. Habitat is vulnerable to a number of ongoing land management activities. Sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Koenigia islandica – Inconsistent responses from three NFs disagreeing with SS status. WHR recites their standard paragraph and recommends "insufficient info. GMUG/PSICC (Barry Johnston) says "I fail to see that 'disjunct populations and habitats' is a suitable rationale for sensitive status, and I don't believe such a thing is mentioned or alluded to in National or Regional definitions and policies" and that the species invades disturbed areas. GMUG/PSICC recommends either "insufficient info" or "other emphasis". SHO recommends either "sensitive" or "other emphasis" but provides no rationale. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - This species has a circumpolar distribution (G4), extending south in North America to scattered alpine summits as far south as CO where it is disjunct. The tiny annual plants often grow in moss and therefore may be easily overlooked. It is found in wet nival basins, stream banks, lakeshores, and areas of patterned ground at 10,000–12,500 ft. May be locally abundant within its specialized habitat. One evaluator states that population trend is unknown, while the other speculates it may be stable or possibly even increasing. Grazing does not appear to have negative effects. Habitat appears to be fairly stable, with few threats identified. The Shoshone, Arapaho-Roosevelt, and Pike-San Isabel NFs should consider this species for **other Emphasis Species** lists.

FINAL RECOMMENDATION: Other emphasis

Lemna minuta – Inconsistent responses from two NFs. BLKH agrees with SS status. GMUG/PSICC says "we do not have the vaguest idea of how many populations there are, or their sizes. Neither do we have any inkling of management effects" and the species should be ranked "insufficient info".

RESPONSE- After considering the available information and the comments from the Forests, we conclude that there is insufficient information to determine if this plant warrants sensitive species status.

FINAL RECOMMENDATION: Insufficient information

Leptodactylon watsonii – Consistent responses from three NFs disagreeing with SS status and recommending "insufficient info". BIGH seems concerned about the number of "D" ranks in the evaluations [they refer to this species as "*Linanthus watsonii*"]. WHR repeats their standard paragraph. GMUG/PSICC says the evaluation we posted (presumably by Beth Burkhart) does not assess the situation in Colorado where the species is not tracked by the Natural Heritage Program, and "since neither the evaluators nor the reviewers (nor I) know abundance or trend in Colorado, the species cannot be assessed at this time." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - This species is known from ID to north-central WY, south to NV, UT and CO. It is ranked S1 in WY, S2 in CO, S3 in UT, with no occurrence data reported for ID and NV. Watson's prickly-phlox is found on lava beds, dry ledges and in crevices in steep sandstone, limestone or dolomite cliffs at 4,600-6,100 ft. Known populations are very small (often fewer than 10 plants) and restricted to specialized microsites. Population and habitat trends are not known but may be stable, with minimal threats. Therefore this species should be considered for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Lesquerella fremontii – Inconsistent responses from two NFs. SHO agrees with SS status. GMUG/PSICC disagrees, saying "The reviewers do not make any claim of sensitive status for this species; neither do they provide any rationale. So it should not be recommended for sensitive." [The reviewers did not use the term "sensitive species" in their rationale, and apparently GMUG did not find the rationale clear and compelling.]

RESPONSE- Review of the evaluations, recommendation rationale, and comments from the Forests reveals that this species is a narrow endemic that occurs on limestone habitats. Only nine occurrences are known in the world from about 200 acres, and five of those occurrences are on the Shoshone NF. We conclude that there is a regional viability concern due to the small number of individuals, very limited habitat, and the risks associated with management actions. Therefore, we recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Lesquerella parvula – Somewhat consistent response from three NFs that the species does not merit SS status and two of the three say it should be considered "insufficient info". BLKH says endemism alone is not enough to merit SS status, and point out that the evaluation has 7 of 8 criteria ranked "D" as evidence for "insufficient info". WHR recites their standard paragraph, and recommends "insufficient info". GMUG/PSICC says "The reviewers do not make any claim of sensitive status for this species; neither do they provide any rationale. So it should not be recommended for sensitive." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A regional endemic of northcentral CO, northeastern UT and southwestern WY. There are 8-10 occurrences in WY (one on the Medicine Bow NF) and about 20 occurrences in CO. Found in cushion plant or sagebrush and juniper grassland communities on windblown ridges, gravelly hills, rocky knolls, or clay hillsides at 6,500-8,700 ft. Population and habitat trends are unknown. Habitat is subject to

ongoing activities such as off-road vehicle use, road building, and other surface disturbance, but response of this species to these activities is unknown. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Lesquerella pruinosa – Inconsistent responses from two NFs. SANJ agrees with SS status. The official response from GMUG says "Data in the evaluation and the justification are incomplete. Insufficient information available to make a recommendation." But Barry Johnston's document says "The species seems to merit sensitive status, but the data in the evaluation and the justification are incomplete."

RESPONSE- Review of the available information and comments from the Forests indicates that there is a regional concern for the viability of this rare endemic, so we recommend sensitive species status. We believe the indication in the summary table produced by the GMUG was in error, and that they support the recommendation Barry Johnston provided in his detailed documentation (which they attached as support for their summary table). We have revised the written rationale for recommending sensitive status for this species, because we also agree with Barry Johnston that the single original sentence in the draft rationale was not adequate.

FINAL RECOMMENDATION: Sensitive

Liparis loeselii – No specific response.

FINAL RECOMMENDATION: Sensitive

Listera borealis – Inconsistent responses from five NFs, and a comment from WYNDD. BIGH agrees with SS status. GMUG/PSICC and WHR disagree and recommend "insufficient info". WHR recites their standard paragraph. GMUG says "we don't know number of populations, population sizes, distribution within R2, and 'little information is available regarding its abundance, trends, or threats to the species' (reviewers)." MBR recommends "other emphasis" because it is common in R6. SHO also recommends "other emphasis" but provides no rationale. WYNDD simply comments that they do not track the species. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - Distributed from Alaska to Hudson Bay, extending south to OR (S1), UT (S1), and CO (S2). In WY, it is found in wet rich soils under Douglas-fir forests and spruce-pine swamp forests as well as shady streambanks at 6,300-10,200 ft. In CO, it is found in moist spruce forests at 8,700-10,800 ft. Its moist habitats are patchily distributed. Population and habitat trends are not known. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Listera convallarioides – Inconsistent responses from four NFs. BLKH agrees with SS status. BIGH and GMUG/PSICC disagree, and recommend "insufficient info". BIGH bases its argument on the frequent "D" ranks in the evaluations. GMUG says "we don't know number of populations, population sizes, and distribution within R2." MBR

recommends “other emphasis” because it is common in R6. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - This species is broadly distributed across North America (G5), but is never abundant, with rankings of S1 or S2 across much of its range. It is found in mesic microhabitats in spruce forest, streambanks, and grassy areas under aspen and alder. There are few occurrences in R2 (4-6 in WY, 2 in SD, >12 in CO). Population and habitat trends are unknown, but one evaluator cites threats from highway construction in SD as well as hydrologic modification, mining, grazing, and logging. However, at this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Lomatium bicolor* var. *bicolor – Inconsistent responses from three NFs disagreeing with SS status. MBR agrees with SS status. WHR recites their standard paragraph and recommends “insufficient info”. GMUG/PSICC says “The reviewers do not make any claim of sensitive status for this species; neither do they provide any rationale why it might be sensitive. So it should not be recommended for sensitive.” [The team’s rationale did not specifically state that they had checked the box indicating their recommendation for SS status.]

RESPONSE- The known occurrences of this taxon in WY are all in R4, and nobody seems to argue that it is likely (or unlikely) to occur on NFS lands in R2. There is an historical record (1938) from the GMUG, but at this point it is unclear whether or not the specimen is variety *bicolor* (NatureServe indicates that it is, but one of our evaluations indicates that it may be variety *leptocrpum*). It appears that it is rare at best in CO and WY, but it unclear whether or not it occurs on NFS lands in R2. We conclude that the available information for this species is insufficient to determine whether or not it warrants sensitive species status.

FINAL RECOMMENDATION: Insufficient information

Lycopodium complanatum – One NF specifically responding agrees with SS status (BLKH).

FINAL RECOMMENDATION: Sensitive

Machaeranthera coloradoensis – Inconsistent responses from six NFs, some agreeing with SS status but others not. SANJ and MBR specifically agree with SS status; RIOG apparently agrees with SS status but simply comments on needed corrections to the evaluations; and the GMUG/PSICC official response agrees (Barry Johnston says “Seems to merit sensitive status, based on observed declines from several factors in several populations; however, we need to continue monitoring efforts and search for new populations.”), but a separate message from Gay Austin disagrees because new populations were discovered during 2000-2001 on her District and the plant does not seem to be affected by cattle grazing. WHR disagrees with SS status and repeats their standard paragraph, but adds comments about a possible tolerance for disturbance and recent documentation of more populations “on several forests”. Subsequently, the

recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A regional endemic of central CO (S2) and southeast WY (S1), currently on the Region 2 sensitive species list. Its distribution is clumped, with 24 occurrences in CO and 4 extant occurrences in WY. Existing survey information is likely incomplete. It is found in sparsely vegetated alpine and subalpine environments on limestone, dolomite, shale or other calcareous substrates. A draft assessment prepared as part of the Species Conservation Project suggests that there has not been sufficient monitoring or studies of this species to determine population trend, but its long-term persistence may rely on adequate management to reduce potential threats. The primary threat is motorized recreation and road construction and maintenance, since there are known populations located near roadsides and two-tracks. Surface-disturbing activities such as construction of pipelines, ditches, and towers also are possible threats. Fire may play a role in maintaining its habitat in suitable condition. Sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Malaxis brachypoda – One NF responding agrees with SS status (GMUG/PSICC).

FINAL RECOMMENDATION: Sensitive

Menyanthes trifoliata – Inconsistent responses from five NFs, plus new info from WYNDD. BIGH agrees with SS status. WHR recites their standard paragraph and recommends "insufficient info". GMUG/PSICC says "The evaluation on the web site only discusses the South Dakota situation; so details about Wyoming and Colorado occurrence locations and sizes are unknown. Should be 'Insufficient Information Available to make a recommendation.'" MBR recommends "other emphasis" because it is more common in Yellowstone NP. SHO also recommends "other emphasis" but provides no rationale. WYNDD provided info on the number and general locations of occurrences, plus its habitat, in Wyoming, and says that it is ranked S2S3 and is not tracked.

RESPONSE- A review of the evaluations, recommendation rationale, and comments received from WYNDD and the Forests, we find that the species is more common in Wyoming than our team originally realized. However, the habitats in which it occurs are easily altered and often at risk due to local management actions. We conclude that there is no regional viability concern, but recommend that it be considered for other emphasis.

FINAL RECOMMENDATION: Other emphasis

Mertensia alpina – Inconsistent responses from three NFs and one Natural Heritage Program. BIGH agrees with SS status. SHO recommends "no concern" but provides no rationale. GMUG/PSICC provides discussion about taxonomic issues and other matters, then concludes "Should be 'Not R2 SS, but should be considered for other Emphasis Species Lists,' because apparently secure in Wyoming and we know very little about the Colorado populations." WYNDD provides additional info not included in their original evaluation indicating that the species is more widespread and abundant in Wyoming than may have been implied earlier, and they say that it may more appropriately be "other emphasis".

RESPONSE – Review of the available information, particularly the new facts from WYNDD documenting a large number of occurrences on NFS lands in Wyoming, leads us to conclude that there is no regional concern for the species viability. However, it may be at higher risk at a local level, and should be considered for other emphasis.

FINAL RECOMMENDATION: Other emphasis

Mimulus eastwoodiae – Somewhat inconsistent responses from two NFs. ARP doesn't object to SS status, but has a question about the distribution table. GMUG/PSICC argues that it is "not of concern" because it is not known to occur on NFS lands despite searches for it by "a number of people".

RESPONSE- The available information indicates uncertainty about whether or not this species is likely to occur on NFS lands in R2. We apparently have at least some potential habitat where it might occur. Some level of searching has already been done, but this species has not been found on R2 administered lands. If the species were known to occur on one of our Forests, we would recommend sensitive status. If we could determine that it is "likely" to occur on NFS lands here, we would also recommend sensitive status. However, it is not clear to us whether or not this species is "likely" on R2 lands. This must be a professional judgment, but we have insufficient information at this time to make that determination.

FINAL RECOMMENDATION: Insufficient information

Mimulus gemmiparus – One NF specifically responding agrees with SS status (GMUG/PSICC).

FINAL RECOMMENDATION: Sensitive

Neoparrya lithophila – Inconsistent responses from two NFs. RIOG agrees with SS status, but GMUG/PSICC says "Should be 'Not R2 SS, but should be considered for other Emphasis Species Lists,' or at least re-evaluate it based on Dave Anderson's recent assessment." Barry says the evaluator didn't have all the available info, and the "total might be 30-40 populations and perhaps 80,000 individuals"; also the habitat is resilient.

RESPONSE- Review of the available information, including the evaluation, recommendation rationale, comments from the Forests, and the draft Species Assessment by Dave Anderson, we find that this species is an endemic to the southern Rocky Mountains with a very restricted range. It is currently known from 24 occurrences/sub-occurrences, though additional surveys may discover a few more. Populations are apparently naturally isolated, and have been estimated at 60 to 8,000 individuals. Threats appear to be relatively low at present, though exotic species invasion and weed control should be considered. The very limited range, and comparatively few occurrences, raise concerns about local impacts; but we conclude that there is no regional viability concern. We recommend consideration by the RIOG and PSICC for other emphasis.

FINAL RECOMMENDATION: Other emphasis

Oenothera harringtonii **–** No specific response.

FINAL RECOMMENDATION: Sensitive

Oonopsis foliosa var monocephala – Inconsistent responses from two NFs. GMUG/PSICC disagrees with SS status and questions the taxonomy of this plant, saying (among other things) that because it is tolerant of disturbance and not known to occur on NFS lands anyway, it should be "no concern" or "insufficient info". SHO is ambivalent and recommends either "sensitive" or "insufficient info".

RESPONSE – In reviewing the evaluation, recommendation rationale, and comments from the Forests, we find that the available information is insufficient to determine whether or not there is a regional viability concern. We also discovered that the NatureServe Explorer website lists the entire species as G2G3, which indicates that we should have evaluated the entire species (but did not). Given that some evidence indicates that the species may be tolerant of some disturbances, that there may be legitimate taxonomic issues at the varietal level, and that we failed to evaluate the entire species, we find that we do not have sufficient information to determine whether or not there is a regional viability concern.

FINAL RECOMMENDATION: Insufficient information

Pedicularis oederi – One NF response, which is ambivalent about SS status. SHO says it should either be sensitive or other emphasis. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species is distributed across northern Eurasia to Alaska and B.C., with disjunct populations in southern Alberta and MT-WY. It can be found in peatlands, willow thickets, depressions below late snowfields, on moist sites on slopes and alpine plateaus. In R2, it is known from a single large occurrence along the MT-WY border covering over 150 acres. This colony has been known since 1938 and is thought to be stable. Individual plants could be threatened by trampling and sheep grazing, but the entire WY occurrence is within a proposed RNA on the Shoshone NF. The Shoshone NF should consider this species for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Penstemon absarokensis – One NF specifically responding agrees with SS status (SHO).

FINAL RECOMMENDATION: Sensitive

Penstemon caryi – One NF specifically responding agrees with SS status (BIGH).

FINAL RECOMMENDATION: Sensitive

Penstemon degeneri – One NF specifically responding agrees with SS status (GMUG).

FINAL RECOMMENDATION: Sensitive

Penstemon harringtonii – Inconsistent responses from four NFs specifically commenting on this species. MBR agrees with SS status, saying "Sound rationale". ARP only commented on the distribution table, but did not specifically agree or disagree with SS status. WHR presented a reduced version of their standard paragraph, and recommends "no concern". GMUG/PSICC says the evaluation was inaccurate, and didn't consider the info developed for the White River NF plan revision; and that the species should not be sensitive just because it is peripheral on NFS lands (recommending equal treatment to that for *Cryptantha cana* and *Agoseris lackschewitzii*). GMUG/PSICC concludes that the

species should be re-evaluated. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species is a CO endemic (G3S3). We reviewed the evaluation, recommendation rationale, comments from the Forests, and the Biological Evaluation for the White River plan revision. This endemic plant has a very limited distribution, though some populations seem to be robust. It is found in open sagebrush communities on moderate slopes, on federal, state, and private ownerships. Population sizes seem to have declined since the early 1980s. Development pressures are high in its habitat due to development in mountain ski towns. Threats include recent proposals for land exchanges and chemical spraying. **Sensitive** status is warranted.

FINAL RECOMMENDATION: Sensitive

Penstemon jamesii – No specific response.

FINAL RECOMMENDATION: Sensitive

Penstemon laricifolius* ssp. *exilifolius – One NF specifically responding seems to agree with SS status, but primarily provides info for the distribution table (ARP).

FINAL RECOMMENDATION: Sensitive

Penstemon retrorsus – One NF specifically responding disagrees with adequacy of evaluation to determine SS status. GMUG/PSICC critiques the evaluation and rationale, then concludes "This species may merit sensitive status, but the incompleteness of the evaluation make the rest of the evaluation questionable. Please re-evaluate this species."

RESPONSE – The evaluation that formed the basis for the draft recommendation was incomplete, omitting significant information from CNHP. Based on review of available information, including the comments from the GMUG, we think there is sufficient information to indicate that this species does not warrant sensitive status. We conclude that there is not a regional concern for viability, but there may be local concerns for this narrow endemic. We recommend "not sensitive, but consider for other emphasis."

FINAL RECOMMENDATION: Other emphasis

Petasites sagittatus – Inconsistent responses from three NFs. BLKH agrees with SS status, but SHO and GMUG/PSICC disagree. SHO recommends "other emphasis", while GMUG/PSICC recommends "insufficient info" because WY and CO data were not evaluated (only SD was) and we don't know how it responds to disturbance.

RESPONSE – We reviewed the evaluation, recommendation rationale, and comments from the Forests, and agree with the GMUG that we have insufficient information to determine whether or not this species warrants sensitive status.

FINAL RECOMMENDATION: Insufficient information

Phacelia scopulina* var. *submutica – Consistent responses from two NFs agreeing with SS status (WHR and GMUG/PSICC).

FINAL RECOMMENDATION: Sensitive

Phippsia algida – Inconsistent responses from three NFs. SHO is ambivalent and recommends either "sensitive" or "other emphasis". WHR recites their standard paragraph, with the occasionally used addition "Lots of 'may be's' but no documentation" recommending "insufficient info". After quoting from Barry's evaluation about the difficulty of inventorying for these plants, GMUG/PSICC also recommends "insufficient info" because "we don't know number of populations, population sizes, and distribution within R2." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – A circumpolar species that is disjunct in WY-MT and disjunct in central CO. Known from about 5-6 occurrences in WY, about 12 in CO and 3-5 in MT. Inventory is likely incomplete because the plants are small, often act as annuals, and their habitat is remote. Populations are typically small but trends are unknown. Habitat is likely fairly stable. Recreational use, off-road vehicles, or sheep grazing could be potential threats, although in the arctic this species invades disturbed sites. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Phlox caryophylla – Somewhat consistent responses from three NFs disagreeing with SS status. BLKH says that though there may be risks, the "compelling argument" would come from trend (which appears stable), so they argue that it doesn't warrant SS status. GMUG/PSICC is not persuaded by the argument about risk, saying "at least some observations of effects of development or management on the species or its habitat" are needed, and concludes by recommending the species be re-evaluated. SANJ provides info indicating that it is tolerant of disturbance, and feels that it is not of concern at this time.

RESPONSE – Review of the available information and comments from the Forests indicates that the threats have been overstated in the original recommendation rationale. We find that there may be localized threats to this endemic, but not a regional viability concern. We recommend that the species be considered for other emphasis.

FINAL RECOMMENDATION: Other emphasis

Physaria alpina – Consistent responses from two NFs disagreeing with SS status and recommending "other emphasis". WHR recites their standard paragraph, but inserts "No documented threats to indicate that populations or habitat is declining". GMUG/PSICC also disagrees that we have sufficient reason to think there are threats to the species, and recommends re-evaluation of the species consistent with our approach for *Stellaria irrigua* (which was recommended by our panel as "not of concern"). Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – Endemic to CO (S2); about 12-15 known occurrences with patchy distribution. Surveys are likely incomplete since it has only recently been described. Counts of five populations range from 500 to over 3,000 individuals. Habitat is open tundra, ridge crests, limestone substrates, slopes where soil is sloughing, and road cuts. Informal population estimates show no apparent declines, and the species seems to be tolerant of moderate disturbance, although exact relationships are not known. At this

time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Physaria didymocarpa* var. *lanata – Consistent responses from two NFs disagreeing with SS status and recommending "other emphasis". BIGH says it occurs in roadcuts and in habitats with low management risk due to inaccessibility and low grazing potential. They conclude that "With its concentration in the Bighorn range and little known about the species, this species would be more accurately designated a species of local concern." SHO says it should be "other emphasis" (but provides no documentation of their thought process, as is the case with all their species specific feedback). Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – A regional endemic of northcentral WY and adjacent southcentral MT. There are 14 known occurrences in WY from the foothills of the Big Horn Range and the Powder River Basin. This plant is one of ten listed as highest priority for conservation within the Bighorn landscape. Most populations are not protected. Population and habitat trend are not known, but ongoing activities including livestock grazing, recreational use, and mining may threaten the species. Sensitive species status is warranted.

FINAL RECOMMENDATION: Sensitive

Physaria saximontana* var. *saximontana – Consistent responses from two NFs disagreeing with SS status and recommending "insufficient info". BLKH says the six "D" ranks and being endemic to the Wind River Range is insufficient to "compel" SS status. SHO provides no documentation for their recommendation of "insufficient info." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This taxon is endemic to a few counties in WY. Nine of 21 populations have been discovered or relocated since 1990, with 2 occurrences on NFS lands. Habitat is sparsely vegetated slopes on sandy, gravelly soils or talus of limestone, red sandstone, or clay at 5,200-8,300 ft. Populations may be small to locally abundant. Population trends are not known, but may be stable. Habitat trend is not known, but threats could include road and pipeline construction or off-road vehicle use. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Platanthera orbiculata – One NF specifically responding agrees with SS status (BLKH).

FINAL RECOMMENDATION: Sensitive

Potamogeton robbinsii – Inconsistent responses from two NFs. MBR agrees with SS status, but SHO recommends "insufficient info". Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – Broadly distributed from B.C. to Labrador, south to CA, UT, MT, CO, IN and PN. It has rare, threatened, or endangered status in 8 states. Because it

occurs in deeper water and fruits rarely, it may be somewhat overlooked in surveys. In WY, it is known from the Wind River Range and the Yellowstone Plateau. An aquatic perennial, this species occurs in deep to shallow, quiet, often muddy waters of lakes, ponds and slow-moving streams. Population trend is unknown. One evaluator thought it may be tolerant of moderate eutrophication, while another thought it may be sensitive to changes in water quality. Habitat trend unknown but probably stable. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Potentilla ambigens – Somewhat consistent responses from three NFs disagreeing with SS status. RIOG doesn't specifically say it disagrees with SS status, but points out that it occurs in a disturbed roadside near Creede. BLKH and GMUG/PSICC recommend "insufficient info". BLKH points to the 7 "D" ranks and doesn't see how rarity "compels" SS status. GMUG/PSICC says "we do not know this species distribution, number of occurrences, size of population, habitat, or responses to management." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE The distribution of this species is restricted to WY, CO and NM (G2). Of these three states, NM contains the highest abundance. It occurs in dry, open shrub lands or grasslands at mid elevations in the mountains. In WY, it is known from only 1 historical occurrence which has not be relocated since 1900; that population was found in a sandy draw in montane foothills at 6,000 ft., well below NFS lands. In CO, there are 6 occurrences. One evaluator suggests that it has not been adequately surveyed. No information is available on population trend, habitat trend, or threats. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Potentilla nana – One NF specifically responding disagrees with SS status and recommends "other emphasis" (SHO). Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species has a circumpolar distribution, disjunct in WY (S1). It is known from only 3 extant occurrences in the Wind River Range, all discovered since 1988. Two of the occurrences are on the Shoshone NF. Habitat is alpine meadows and fellfields at 11,720-12,300 ft. Habitat and population trends are unknown. No threats were identified due to its rugged habitat, which is managed as wilderness by the Shoshone and Brider-Teton NFs. The Shoshone NF should consider this species for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Potentilla rupincola – One NF specifically responding disagrees with SS status and recommends "other emphasis" or possibly "insufficient info". GMUG/PSICC says the evaluation is "incomplete and misleading". They argue that only a fraction of the potential habitat has been surveyed for this species, and that its habitat "is mostly resilient

and stable, with very little predicted management effects." Barry also disagrees with the taxonomy.

RESPONSE – Review of the evaluation, recommendation rationale, comments from the GMUG, and the 2002 CNHP data distribution records reveals that there are several historical records (late 1800's to 1930's) from NFS lands and ten recent records (one on the PSICC, and nine on the ARP). The species apparently occurs in some relatively inaccessible sites, and is also found in ponderosa pine and juniper communities. CNHP is working under contract to produce a detailed Species Assessment for us, which should provide a more comprehensive understanding of the species. Based on the available information, we find that there are few known occurrences of this plant on NFS lands, and while some may be relatively inaccessible, others may be subject to adverse impacts from management actions on the Front Range. We conclude that there is a regional viability concern at this point in time, and recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Primula egaliksensis – Inconsistent responses from two NFs. GMUG/PSICC says the data were interpreted correctly and the species merits "sensitive" status. SHO is ambivalent, recommending either "sensitive" or "other emphasis" without explanation. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – A circumboreal distribution, within R2 this species is severely disjunct in two distinct areas. In WY (S1), only 2 element occurrences are documented within the Shoshone and Bridger-Teton NFs; the total state population is estimated at 10,000-14,000 plants and is restricted to about 100 acres of habitat. In CO, only 6 occurrences are reported in calcareous fens in South Park on the Pike-San Isabel NFs; total state population is almost certainly less than 5,000 and may be less than 1,000 individuals. The species has no mechanisms for medium or long-distance dispersal. Population trend appears to be stable currently, but has declined historically due to loss of habitat to peat mining, a practice that is continuing. One of the mined areas was reclaimed, but after 10 years has not been reoccupied by Greenland primrose. In CO, habitat of at least one population is degraded by heavy grazing. **Sensitive** status is warranted.

FINAL RECOMMENDATION: Sensitive

Prunus gracilis – One NF specifically responding disagrees with SS status and recommends "not of concern" or possibly "insufficient info". GMUG/PSICC says the evaluation was apparently based on state floras and herbarium specimens, but we don't know for certain if the species has been documented on NFS lands. The rationale doesn't speak to the Comanche and Cimarron NGs, but rather addresses the range-wide or state-wide condition (habitat loss and fragmentation).

RESPONSE – In reconsidering the evaluation, recommendation rationale, and comments from the GMUG, we find that there are very few known occurrences in R2 and that it has been documented on the Cimarron NG (three herbarium specimens cited). It is considered likely to occur on the Comanche NG too. With very few occurrences in the Region, there is a concern over the potential to adversely impact the species. However, we find that the species is at the contiguous northern periphery of its range here, and that

it is apparently secure to the south of R2 (G4G5). Therefore, we conclude that there is not a regional viability concern, but recommend that the species be considered for other emphasis.

FINAL RECOMMENDATION: Other emphasis

Ptilagrostis porteri – Consistent responses from two NFs agreeing with SS status (WHR and GMUG/PSICC).

FINAL RECOMMENDATION: Sensitive

Pyrrocoma carthamoides* var. *subsquarrosa – One NF responding is ambivalent about status. SHO recommends "sensitive" or "other emphasis" without specific discussion. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This variety is a regional endemic in northwest WY (S2) and sw MT (S2). Eleven of the 13 occurrences in WY are on the Shoshone NF. Colonies are often locally abundant. Population trend data are mostly lacking, but the species is presumed to be stable. However, some areas are known to have been disturbed by highway construction and competition with weeds. Sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Pyrrocoma clementis* var. *villosa – Inconsistent responses from two NFs. BIGH agrees with SS status. GMUG/PSICC recommends "insufficient info" because the historical records are vague, and apparently nobody has searched for the plant. Furthermore, we don't know abundance, trend, or the effects of management, and there may be some taxonomic uncertainty [though it is recognized in the PLANTS database]. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – In reviewing the evaluations, recommendation rationale, and comments from the Forests, we find that this is a very restricted variety which is a regional endemic in the Big Horn Range of WY (S1). There are only two current records and four vague historical reports. The type variety occurs in CO but is not of concern (T3T4). There may be some level of threat from collection by rock gardeners, but inadvertent impacts from management actions may be a more common risk. Population trends are unknown, but probably stable following an historic decline. Its grassland habitat has been altered by livestock grazing and invasion by exotic plant species. Since variety villosa is very rare, restricted in global in global distribution to the Big Horn Mountains, and there are threats from management actions, **sensitive** status is warranted.

FINAL RECOMMENDATION: Sensitive

Pyrrocoma integrifolia – One NF specifically responding apparently disagrees with SS status and recommends "other emphasis" (SHO).

RESPONSE – This is a regional endemic that is known in R2 only from the Wind River Range. There are 4 occurrences in Wyoming, only one of which is apparently extant (in Yellowstone NP). There is a 1961 record from the Shoshone NF. This extreme rarity, coupled with the likelihood that it occurs on NFS lands in R2, raises concerns over the risk of adverse impacts from management actions. We conclude that

there is a regional (indeed, global) viability concern for this species, and recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Rubus arcticus ssp. acaulis –The original recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - A boreal species known from Alaska to Newfoundland, south to B.C. and MN, and in the Rocky Mountains from MT to CO. In R2, known from the Bighorn NF in WY and 3-4 populations on the Arapaho-Roosevelt and Pike-San Isabel NFs in CO. Also known from the Yellowstone Plateau in WY. It is found in the understory of spruce and willow dominated communities, boggy woods, and mountain meadows at 7,000-9,000 ft. Population and habitat trend unknown, with one evaluator indicating it may be stable in the short term but declining over the long term due to climate change. Extant populations and riparian habitats may be impacted by recreation (one site adjacent to campground), highway maintenance, and other multiple use management. Sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Ranunculus karelinii – Consistent responses from two NFs agreeing with SS status (WHR and Barry Johnston). However, official response from GMUG makes no comment on this species. Presumably this is an error, since they attached Barry's write-up. Note also that while Barry agrees that SS status is probably warranted, he points out that we still know very little about the species, and it will be difficult to assess indirect and cumulative effects for BEs.

RESPONSE – In reconsidering the evaluation, recommendation rationale, and comments from the Forests, we find that the available information indicates the species is highly disjunct in R2, very few occurrences are known, and there are credible threats. We conclude that there is a regional viability concern, and recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Salix arizonica – Apparently consistent responses from three NFs agreeing with SS status. RIOG only offered a comment that the known R2 site has been fenced to exclude cattle grazing, so the only grazing by large herbivores now is from native wildlife. GMUG/PSICC says that it must be "sensitive" because of the interagency agreement. SANJ simply agrees with SS status without comment.

FINAL RECOMMENDATION: Sensitive

Salix barrattiana – One NF specifically responding agrees with SS status (SHO).

FINAL RECOMMENDATION: Sensitive

Salix calcicola – Consistent responses from two NFs disagreeing with SS status and recommending "insufficient info". WHR recites their standard paragraph. GMUG/PSICC says, "No data is available on number of plants at the two known locations, and apparently no one has searched for more. So at the moment, we cannot show any current or projected decline in species or habitat, and its recommendation is on

shaky grounds." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – Only two known occurrences in CO; known from nowhere else in the U.S., although it has a larger distribution in Canada around Hudson Bay. It is found in alpine riparian sites on limestone substrate. There are no indications of changes in the habitat at either known site, one of which is in a wilderness area. Population and habitat trends are unknown, and there is no information on what the response of the species might be to disturbance on management actions. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Salix candida – Inconsistent responses from three NFs. BLKH and GMUG/PSICC agree with SS status, and SHO is ambivalent recommending either "sensitive" or "other emphasis". Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species is known from Labrador to Alaska and south to the Great Lakes states, SD, CO and ID. It is found on floating mats and in bogs, fens, and willow thickets around ponds on wet to saturated soils, sometimes influenced by limestone, at elevations of 6,600-9,200 ft. Known populations are mostly very small and restricted to specialized wetland habitats. Population trends are not known, but there have been some historical declines in habitat. The population in the Black Hills is located in a Botanical Area where measures are being taken to restore the habitat. In WY, populations are known from a Botanical Area, a Wildlife Refuge, Yellowstone National Park and FS lands managed for multiple use. This species is included on Region 4's sensitive species list. Sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Salix farriae – One NF responding is ambivalent about status. SHO recommends either "sensitive" or "other emphasis" without specific discussion. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species is distributed from B.C. and Alberta south to OR, ID, MT and northwestern WY (S2). It is uncommon in abundance, although it can be locally abundant in the understory of willow thickets. Most sites are small in area, and it may be restricted to specialized microsites. Population trend data are not available but it is thought to be stable (high confidence). Threats overall are probably low (medium confidence). Shoshone NF should consider this species for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Salix myrtillifolia* var. *myrtillifolia – Apparently consistent responses from two NFs agreeing with SS status. SHO agrees without comment. Official response from GMUG makes no comment on this species in their compilation. Presumably this is an error, since they attached Barry's write-up, in which he agrees with SS status.

FINAL RECOMMENDATION: Sensitive

Salix serissima – Apparently consistent responses from three NFs disagreeing with SS status and recommending "insufficient info". BLKH questions the rationale for SS status, and points out that the trend for the species is unknown (they only have three years of monitoring data). WHR recites their standard paragraph. GCMUG/PSICC recommends "insufficient info" because of "very incomplete data about Colorado occurrences and the lack of an evaluation for Colorado." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – Widely scattered but uncommon in northern states, and more common in Canada. It is disjunct in SD, WY and CO. In WY, only a single location is known, from the Medicine Bow NF; there are 2 locations in SD and 4 in CO. It is found in montane swamps, bogs, and calcareous fens. Population trend is unknown. Habitat appears to have been lost by ditching, extirpation of beaver in the Black Hills, fire suppression resulting in decreased groundwater flow, and road paving. This species merits sensitive status.

FINAL RECOMMENDATION: Sensitive

Sanguinaria canadensis – One NF specifically responding disagrees with SS status and recommends "insufficient info". BLKH seemingly makes a number of statements supporting SS status, but wants the species to be placed in the "insufficient info" category "so that more data can be gathered for trend of the species and habitat." Apparently they feel that insufficient info on trend outweighs the other information they present.

RESPONSE – The draft recommendation for sensitive status was based on information and professional opinion provided by Black Hills botanists/biologists, and the evaluation they performed for their Phase II Amendment process. Nonetheless, we reviewed the evaluation and rationale supporting listing. We found that the species is disjunct in the Black Hills from the main part of its range, it has restricted habitat within the Hills, there are documented declines, and a number of threats exist to population health. We conclude that there is a regional concern for viability, and recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Schoenoplectus hallii – One NF specifically responding disagrees with SS status, while another simply offers a correction to the distribution table. SHO recommends "other emphasis" without any discussion. NE says, "We are unaware of any information suggesting a confirmed observation on or near NNF (forest), so we recommend the species be shown in the table as a "4" classification for NNF (forest)." Subsequently, it was nominated for final review by the RLT panel.

RESPONSE – Known from fewer than 75 populations, discontinuously distributed and widely scattered throughout the eastern U.S. It is found in the sandhills regions of northcentral NE and central KS. It is characterized as an early successional species, occupying seasonally-wet habitats, usually with sandy substrates. It is suspected to have a considerable seed bank and populations may fluctuate in size from year to year. The species appears to be very sensitive to environmental conditions throughout the growing season, and habitat trend is thought to be downward (medium confidence).

Threats include hydrologic modification, road development, conversion to cropland, invasive plant species, herbicides, etc. The species merits sensitive status.

FINAL RECOMMENDATION: Sensitive

Selaginella selaginoides – Consistent responses from two NFs disagreeing with SS status and recommending "insufficient info". MBR seems to consider the single historical record from the Routt NF to be insufficient. GCMUG/PSIC says that because the single collection on NFS lands in R2 was not preserved and it could not be relocated in the field when searched for by the original collector, "we don't know that this species occurs on NFS lands in R2, and we don't know number of populations, population sizes, and distribution in R2."

RESPONSE – Review of the available information indicates that this species was collected relatively recently (1978) on the Routt NF. Though no specimen was retained, and the original collector could not relocate it in the field, we conclude that there is credible evidence that the species is likely to occur in available habitats on NFS lands in R2. Available information indicates that the species is likely to be quite rare, and that its habitat is subject to adverse impacts from management actions. Therefore, there is a regional viability concern, and we recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Selaginella watsonii – One NF specifically responding disagrees with SS status and instead recommends either "other emphasis" or "insufficient info" but provides no discussion (SHO). Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – Known from CA and OR, east to MT, UT, NV, and AZ (G4). In R2, known from only a single occurrence on the Shoshone NF. Habitat is described as granitic cliffs and rocky slopes at 9,950-10,600 ft. Population trend is not known since it was last observed in 1985. Habitat trend is not known. Threats are probably low, although the site in WY receives heavy recreation use. There is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Shoshonea pulvinata – One NF specifically responding agrees with SS status (SHO).

FINAL RECOMMENDATION: Sensitive

Silene kingii – Consistent responses from three NFs disagreeing with SS status and recommending "insufficient info". BIGH focuses primarily on the number of "D" ranks in the evaluations. WHR repeats their standard paragraph. GMUG/PSICC cites various deficiencies in our knowledge of the species, including the lack of census and demographic data, coupled with an indication that the habitat is stable. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species is known from 7 locations in WY on the Shoshone NF: 5 are in wilderness areas, one in the Carter Mountain ACEC, and another in a potential RNA. The 3 occurrences in CO are on the White River and GMUG NFs. These occurrences are disjunct from the core population in Alaska. Some authorities

believe the Alaska population is a different entity than that found in the lower 48 states. Habitat is high elevation, loose talus slopes and rock outcrops in mountain meadows (12,000-14,000 ft) or limestone ridges in spruce-fir forest in subalpine zones (10,200-11,600 ft). Population and habitat trend are unknown, but may be stable. Threats are probably low. It should be considered for other Emphasis Species lists.

FINAL RECOMMENDATION: Other emphasis

Sparganium natans – Inconsistent responses from four NFs, mostly disagreeing with sensitive species status. MBR agrees with "sensitive" status, saying that there is one historic record on their Forest, and one discovered this year [there is also an extant occurrence on the SHO]. SHO recommends "other emphasis" without explanation. WHR recites their standard paragraph, and recommends "insufficient info". GMUG/PSICC says it apparently hasn't been searched for adequately in Colorado and Wyoming, and merits "insufficient info" because "we don't know number of populations, population sizes, and distribution within R2."

RESPONSE – Review of the evaluations, recommendation rationale, and comments from the Forests leads us to agree that we have insufficient information to determine whether or not there is a regional concern for viability.

FINAL RECOMMENDATION: Insufficient information

Stephanomeria fluminea – One NF responding is ambivalent about status. SHO recommends either "sensitive" or "insufficient info" without specific discussion. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This plant is endemic to WY, occurring in the Absaroka, Wind River and Gros Ventre Ranges (G2). There are 11 occurrences in WY, with only one known occurrence on the Shoshone NF in the Washakie Wilderness. It is found along major rivers and streams where it occurs on gravel bars and cobble beds, in young cottonwood groves and dry stream channels at 6,400-7,300 ft. Population and habitat trends are not known. Threats potentially may include water diversions, gravel quarrying, invasion by nonnative plant species (e.g., knapweed), and hydrologic changes that reduce scouring. There is insufficient information available at this time to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Thalictrum heliophilum – Apparently consistent responses from two NFs disagreeing with SS status. WHR recites their standard paragraph and recommends "insufficient info". GMUG/PSICC says that the population estimates are fairly large, and even though they are somewhat isolated on NFS lands, apparently no one has searched for additional populations (most of which would likely occur in the new Battlement Mesa RNA); there may be some threat from oil shale exploration, and the species should be re-evaluated, because the current evaluation is incomplete and has some errors. Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species was first collected in 1977 and recognized as a species in 1983. It is endemic to the Eocene Parachute Creek member of the Green River

Formation in the arid basins and mesas of western CO. There are 13 occurrences on BLM land, 14 on private oil company land, 2 in state Natural Areas, 1 on Dept. of Energy land, and one on the GMUG NF. It is considered likely to occur on the White River NF. It is considered a pioneer species with the ability to colonize unstable, environmentally severe sites. Population trend is unknown but the species is restricted to unique shale formations. Habitat trend may be declining (low confidence) and it is vulnerable to mineral development. Sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Townsendia condensata* var. *anomala – Inconsistent responses from two NFs. SHO agrees with SS status. GMUG/PSICC says it doesn't merit SS status because "The reviewers do not make any claim of sensitive status for this species; neither do they provide any rationale why it might be sensitive." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This plant is a narrow endemic of the Absaroka Range. It is known from 21 occurrences in WY, almost all on the Shoshone NF. Populations are typically very small. It is found on open, sparsely vegetated montane forests, meadows, and ridges, often on sandy volcanic soil or talus. Habitat is patchy is discontinuous on the landscape. Population and habitat trends are not known, but threats include changes in hydrology, competition from exotics, trampling, etc. The Shoshone NF requested that it be designated as sensitive, and sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Townsendia glabella – The recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE - Endemic to the mountains of CO (G2?). It has been documented on the San Juan NF, and one herbarium record exists for the GMUG NF. Its habitat is openings in ponderosa pine forest and steeply sloping shale slopes at lower elevations. However, an evaluation was not done for this species, and therefore no information is available regarding population or habitat trends, or threats to the species other than its rarity. Therefore, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Trichophorum pumilum – Consistent responses from two NFs disagreeing with SS status and recommending "other emphasis". SHO provides no discussion. GMUG/PSICC is convinced that more occurrences could be found if we searched for it, so it should be regarded as "insufficient info" because "we don't know number of populations, population sizes, and distribution within R2." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – Circumboreal distribution, patchy and uncommon (G3). Most occurrences have been found recently, with 7-10 in CO (S2) and 3-5 in WY (S1). It is found in hummocks in calcareous fens or margins of willow-dominated wetlands at 9,300-11,000 ft. May be locally abundant but limited to specialized and restricted habitats. The plants are inconspicuous and surveys are likely incomplete. Population

trend is thought to be stable but there are no monitoring data. Habitats may be stable but with historical declines, and vulnerable to a number of activities including recreation use, off-road vehicles, road and trail building and maintenance, grazing, and peat mining. At this time, there is insufficient information available to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Trifolium kingii – One NF specifically responding disagrees with SS status and recommends "insufficient info". GMUG/PSICC says this is appropriate "because of lack of complete distribution, lack of accurate population and habitat information, and taxonomic difficulties." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – Distribution outside R2 includes AZ, ID, and UT where it is reported to occur in moist sites in coniferous forests (G4). In R2, it is reported from plateaus on the western slope of CO (S1). It is found in wet spruce forests, along streambanks, along lakeshores, and other vernaly moist places. It may be locally abundant but populations are few. No information is available on habitat or population trends, or potential threats. There is insufficient information available at this time to determine whether the species merits sensitive status.

FINAL RECOMMENDATION: Insufficient information

Trillium ovatum – Somewhat consistent responses from two NFs disagreeing with SS status. MBR recommends "insufficient info" because it is common in R6 and "S3" in Colorado where it is not tracked [by CNHP]. GMUG/PSICC recommends "other emphasis" because of its abundance in R2, pointing out the lack of an evaluation form for Colorado and asserting that "CNHP has documented many recent occurrences, and feels that it is fairly secure in Colorado." They say our team based it's recommendation on only the info from Wyoming.

RESPONSE – The information available on our FSWeb site did not include the evaluation we obtained for Colorado, nor was it available to the team that made the draft recommendation. That second evaluation provided additional details, but also raised some questions due to apparent conflicting information compared to NatureServe and comments from the GMUG. We checked with CNHP (David Anderson, pers. comm. 12/16/02), who indicated that the species has nearly 40 known occurrences in Routt, Jackson, and Grand counties; and that they have moved it to their "watch list". Andrew Kratz has observed the plant in the Clear Creek Wilderness. Though the species is disjunct in R2 from the main part of the species range, we conclude that there is no apparent regional viability concern. But we do think there may be risks to the species at a more local level, and recommend that it be considered for "other emphasis" lists.

FINAL RECOMMENDATION: Other emphasis

Triteleia grandiflora – One NF specifically responding agrees with SS status (GMUG/PSICC).

FINAL RECOMMENDATION: Sensitive

Utricularia minor – Inconsistent responses from four NFs. MBR agrees with SS status. SHO recommends "other emphasis" without discussion. BIGH recommends "insufficient info" because many of the criteria were ranked "D" and they feel that it is under-collected because it isn't easily seen. GMUG/PSICC also recommends "insufficient info" because it is under-collected and "because of lack of knowledge of distribution in R2 and lack of evaluation of Colorado occurrences." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species is circumboreal but rare across its range. It is restricted to specific habitats that are patchy and discontinuous. It is found submerged in fens, shallow ponds, lakes and slow-moving streams. In R2, it occurs on the 3 national forests in WY, the Samuel R. McKelvie NF in NE, and the Arapaho-Roosevelt NF in CO. Weber reports this species is expected on the western slope of CO. It is rare and local, but clearly under-collected because it is inconspicuous and difficult to locate when not in flower. Population trend is unknown, but it may be threatened by loss or degradation of wetland habitats especially in the Great Plains. One evaluator indicated downward habitat trend (medium confidence). Sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

Vernonia marginata – One NF specifically responding disagrees with SS status and recommends "insufficient info" because of "lack of details about number of populations and their sizes in R2, and lack of information about responses to disturbance."

RESPONSE – After review of the evaluation provided for this species, we are agree that available information is too sparse to make an informed decision on sensitive species status at this time. Its R2 distribution is on the northern periphery of its range, and it appears to be somewhat rare here. The preliminary decision to list was based on this comparative rarity and its wet-mesic site habitats that can be sensitive to alteration. Although comparatively rare, given its peripheral range status the evaluator does not provide information that indicates that the viability of the species is at risk in R2. In fact, he speculates that the habitat of the species "is largely stable in R2". Because of the basis used in the draft recommendation rationale, we continue to be concerned about potential threats to populations in R2 given its apparent rarity here. Sensitive species status may indeed prove warranted. However, at this time, we can't be sufficiently confident of a viability risk to recommend sensitive status.

FINAL RECOMMENDATION: Insufficient information

Viburnum opulus* var. *americanum – Consistent responses from two NFs disagreeing with SS status and recommending "insufficient info". BLKH points to the 7 "D" ranks for 8 evaluation criteria. GMUG/PSICC bases their recommendation on "lack of information about populations in South Dakota or Nebraska." Subsequently, the recommendation for sensitive species status was nominated for final review by the RLT panel.

RESPONSE – This species has wide distribution but the population in the Black Hills is disjunct. May be vulnerable to disturbance due to low population size and limited habitat. It inhabits wet, often shaded sites along streams, canyon bottoms, springs, and forested slopes. In the Black Hills, it is found in rare birch-hazelnut communities.

Population trend is unknown, but habitat trend may be downward. Threats include road construction, livestock trampling, altered hydrology, and other disturbances of riparian areas. Sensitive status is warranted.

FINAL RECOMMENDATION: Sensitive

2. FEEDBACK EXPRESSING **DISAGREEMENT** WITH DRAFT NON-SENSITIVE
(omitting feedback in agreement with draft status, and comments simply supplying info)

Asplenium trichomanes* ssp. *trichomanes – One NF (SANJ) wants more research on this species to see if it actually does merit SS status, instead of "other emphasis".

RESPONSE – This species occurs from WY and SD, south through the Rocky Mountains and into Mexico. It is apparently fairly rare within Region 2, based on the known occurrences, and there is reason for concern for its small and isolated populations. Yet, its occurrence in crevices, ledges and cliffs seems to indicate some level of protection due to limited accessibility. Our evaluators indicated that the habitat trends are probably stable, and threats are relatively low. We conclude that the species does not warrant sensitive status at this time, but that it should be considered for other emphasis lists at the local level.

FINAL RECOMMENDATION: Other emphasis

Botrychim simplex – CNHP disagrees with the draft recommendation as "not of concern" and says it should be designated as sensitive. They say it is uncommon in Colorado, and say, "This may be a product of limited species inventory work, difficulties in identification, and difficulties in finding them in the field. However, until data is available to suggest otherwise it is recommended that these species be considered for inclusion on the Region 2 Sensitive Species List."

RESPONSE – Review of the available information indicates that the species is rare throughout much of its range, and there are very few known occurrences in Region 2. Furthermore, according to the Flora of North America, the species has a bimodal distribution in North America, but the western montane populations may prove to warrant recognition as a separate species or subspecies. With so few known occurrences on NFS lands, there is a risk of inadvertent extirpation or other negative impacts due to management actions. We conclude that there is a regional viability concern, and the plant does warrant sensitive species status.

FINAL RECOMMENDATION: Sensitive

Botrychium hesperium – CNHP disagrees with the draft recommendation as "other emphasis" and says it should be designated as sensitive. They point out that of the 26,000 moonworts estimated to occur in Summit County by Kolb and Spribille only about 2% (567) are *B. hesperium* which is the least abundant species (about half the number of estimated *B. echo* individuals). Furthermore, the argue that a forthcoming publication will split the species into two, both of which occur in Colorado – so each will be even more rare than *B. hesperium sensu lato*. They are not persuaded that occurrences in anthropogenically disturbed areas conveys long term viability. They also recommend that we designate the unpublished ***Botrychium 'michiganense'*** as sensitive.

RESPONSE – The information presented by CNHP convinces us that this species (*Botrychium hesperium*) is much less abundant than we thought, and that it merits sensitive species status based primarily on the extremely low number of known and

estimated occurrences, and the risks of adverse management actions posed by such rarity. Furthermore, there is credible information to suggest that the species as currently described will be re-classified as two separate species, which means there may be even fewer occurrences of this particular taxon. We conclude that there is a regional viability concern for the species, and recommend sensitive status. However, we do not agree that we should also designate *Botrychium 'michiganense'* as sensitive, but will consider it when it is published.

FINAL RECOMMENDATION: Sensitive

Botrychium minganense – CNHP disagrees with the draft recommendation as "other emphasis" and says it should be designated as sensitive. I couldn't find supporting arguments in their documentation or other attachments.

RESPONSE – Review of the evaluations, recommendation rationale, comments from CNHP and checking CNHP 2002 data distribution records, we found that our original evaluations under-represented the number of occurrences in Colorado. Given that the species is at the periphery of its range in Region 2, and that there are more known occurrences than our evaluation indicated, we conclude that there does not appear to be a regional viability concern. However, there may be local viability concerns, so we recommend that it be considered for other emphasis lists.

FINAL RECOMMENDATION: Other emphasis

Botrychium multifidum – CNHP disagrees with the draft recommendation as "insufficient info" and says it should be designated as sensitive. As for *B. simplex*, they say it is uncommon in Colorado, and say, "This may be a product of limited species inventory work, difficulties in identification, and difficulties in finding them in the field. However, until data is available to suggest otherwise it is recommended that these species be considered for inclusion on the Region 2 Sensitive Species List."

RESPONSE – We reviewed the evaluations, recommendation rationale, and comments, and find that best available information indicates there is a low number of known occurrences NFS lands in Region 2, and the habitats are at some risk due to adverse management actions. We conclude that there is a regional viability concern, and the species does warrant sensitive species status.

FINAL RECOMMENDATION: Sensitive

Botrychium pallidum – Fairly consistent responses from three NFs and one Natural Heritage Program recommending SS status instead of "other emphasis". CNHP disagrees with the draft recommendation and says it should be designated (retained) as "sensitive". ARP seems to favor SS status, and says that it's hard to justify designating some as sensitive but not others. RIOG recommends "sensitive" based on the evaluation forms, which seem to be more complete for this species than for *B. echo* which was recommended for SS status. SANJ also recommends "sensitive" (especially if *B. echo* is).

RESPONSE – Review of the available information, including CNHP 2002 data distribution records, indicates that this species is known from 25-30 occurrences on NFS lands in Colorado. The "populations" that have been counted range from 5 to 50, which may indicate a high risk of local extirpation. But the evaluation indicates substantial

evidence of tolerance to a wide variety of disturbances, which may indicate a lower risk of local extirpation. Taking all the available information into consideration, we conclude that there is not a regional viability concern, but there may be at a local level. We recommend that the species does not warrant sensitive status, but should be considered for other emphasis.

FINAL RECOMMENDATION: Other emphasis

Botrychium pinnatum – CNHP disagrees with the draft recommendation as "insufficient info" and says it should be designated as sensitive. As for *B. simplex*, they say it is uncommon in Colorado, and say, "This may be a product of limited species inventory work, difficulties in identification, and difficulties in finding them in the field. However, until data is available to suggest otherwise it is recommended that these species be considered for inclusion on the Region 2 Sensitive Species List."

RESPONSE – After review of the evaluations, recommendation rationale, and comments, we find that available information indicates there are very few known occurrences on NFS lands in Region 2. With so few known occurrences, there is a risk of inadvertent extirpation due to management actions. We conclude that there is a regional viability concern, and the species does warrant sensitive species status.

FINAL RECOMMENDATION: Sensitive

Carex concinna – One NF specifically responding disagrees with the draft recommendation as "other emphasis" and says it should be "insufficient info". BLKH says "Ode [SDNHP botanist] says it has never been considered as anything but rare in the Black Hills" but they recommend "insufficient info" status because of all the "D" ranks on the evaluation forms

RESPONSE – This species appears to be rather rare in Region 2, based on the known occurrences. The available information is insufficient to justify the draft recommendation that the species is not of regional viability concern, but should be considered for other emphasis lists. Additional information should be collected and the species should be reconsidered for sensitive status.

FINAL RECOMMENDATION: Insufficient information

Carex leptalea – One NF specifically responding disagrees with the draft recommendation as "other emphasis" and says it should be "sensitive" because of "downward habitat trend and vulnerability risks to the habitat." BLKH also provides info they want included in the rationale supporting SS status.

RESPONSE – Review of the evaluations, the extremely brief recommendation rationale, and the comments from the BLKH, leads us to the conclusion that the recommendation for "other emphasis" was not supported by the information. The species is S2 in SD and WY, and S1 in CO. It occurs in wetland/riparian and swamp habitats that have been negatively impacted historically, and may still be subject to adverse impacts from management actions. Therefore, we recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Castilleja puberula – CNHP says this species should be designated as sensitive. They say it is an endemic, with only 16 specimens at the CU herbarium representing only four

counties. Over half the specimens were collected prior to 1962, and they have only one occurrence in their database, representing 200-300 plants on the Pike NF which occur along old mining roads that are now subject to off-road vehicle use, and erosion threatens the species.

RESPONSE – This species should have been evaluated in our process because it is ranked G2G3 by CNHP, but apparently was not. The information provided by CNHP certainly raises our concern that this species may warrant sensitive status. They present information on the single occurrence in their database and indicate the location is subject to off-road vehicle use; but they cite 16 specimens in the CU herbarium, which seems to indicate that several more occurrences have been documented in the past. But given its G2G3 global rank, there must be more information than has been presented to us. We conclude that we do not have sufficient information to determine whether or not sensitive species status is warranted.

FINAL RECOMMENDATION: Insufficient information

Celtis occidentalis – One NF specifically responding disagrees with the draft recommendation as "not of concern". GMUG/PSICC says that this species should be "other emphasis" because there is only one occurrence known on NFS lands and it may be at risk. Barry argues that if we don't think this species warrants SS status, then we can't justify recommending SS status for *Astragalus anisus* and *Penstemon harringtonii*.

RESPONSE – Information from the evaluations indicates that this species has probably increased its range since European settlement, and that in some parts of its range within the broader confines of Region 2 it may increase under disturbance and fire suppression. However, it is reported from a single occurrence on NFS lands in R2 (Bighorn NF), and may be vulnerable there. We recommend that the species does not warrant sensitive status, but should be considered for other emphasis at the local level.

FINAL RECOMMENDATION: Other emphasis.

Circaea lutetiana* ssp. *canadensis – One NF specifically responding disagrees with the draft recommendation as "not of concern". GMUG/PSICC recommends "insufficient info" saying, "This species is apparently rare on NFS lands in R2, although the evaluators have not really checked this out, especially since the habitat seems to be riparian. It is a species peripheral to NFS lands in R2."

RESPONSE – This species is at the far western edge of its range in Region 2, where few occurrences have been documented on NFS lands. We do not feel that there is a regional viability concern, yet there may be concerns at the local level given that it appears to be infrequent here and occurs in habitats that may be adversely impacted by management actions. We recommend it be considered for other emphasis.

FINAL RECOMMENDATION: Other emphasis

Cirsium foliosum – One NF specifically responding disagrees with the draft recommendation as "not of concern". GMUG/PSICC recommends "insufficient info" saying, "Since there are only two sites in R2, this should have been checked more closely."

RESPONSE – This species is at the southern edge of its range in R2, where it is peripheral to its main range. Generally these circumstances do not lead to a regional

viability concern. However, this species is only known from a single occurrence in R2 on the Bighorn NF (and one elsewhere in Wyoming), which was last observed in 1971. Given that the species' habitat is moist areas along roadsides, meadows, and slopes at 8000 feet, which are areas subject to a variety of management actions (including the use of herbicides), and given the historically low regard for thistles, there is reason to be concerned for this species. However, there is insufficient information at this time to determine whether there is a regional viability concern for the species, or the species should be considered for local emphasis.

FINAL RECOMMENDATION: Insufficient information

Corallorrhiza trifida – One NF specifically responding disagrees with the draft recommendation as "other emphasis". BLKH recommends "insufficient info" based on statements from Dave Ode (SDNHP) that include it being "the rarest coral-root in the Black Hills" and "There are but a handful of recently observed occurrences plus five or six historical occurrences scattered over higher elevations in the Black Hills. It is unlikely that all of the 22 occurrences reported by the FS are correctly identified, and most (if not all) of them are not vouchered by herbarium specimens to positively ascertain identity."

RESPONSE – This species appears to be more common in WY and CO than it is in SD. The Rocky Mountain Herbarium documents over 20 occurrences in WY (see http://www.esb.utexas.edu/tchumley/wyomap/ORC/cortri.pdf), including the Shoshone, Bighorn, and Medicine Bow/Routt National Forests. Weber and Wittmann (Colorado Flora, third edition) indicate simply that the species occurs in "subalpine forests". Review of the available information indicates that while there may still be many "unknowns" about this species, we do not find that there is a regional viability concern. We recommend that it be considered for other emphasis at the local level.

FINAL RECOMMENDATION: Other emphasis

Cryptantha cana – One NF specifically responding agrees with the draft recommendation of "not of concern" but wants us to apply the same rationale to *Astragalus anisus* (GMUG).

RESPONSE – We will retain our recommendation for this species as "not of concern". (See elsewhere in this document for our response regarding *Astragalus anisus* which we recommend be considered for other emphasis at the local level.)

FINAL RECOMMENDATION: Not of concern

Cryptogramma stelleri – One NF wants more research on this species to see if it actually does merit SS status, instead of "other emphasis" (SANJ).

RESPONSE – Review of the evaluations and recommendation indicate that while this species is rare within Region 2, it is apparently widespread enough in habitats which have a low enough risk due to management actions that we do not believe there is a regional viability concern. We do recognize that with single known occurrences on the Bighorn and a single occurrence on the Shoshone, there may be concerns on these forests (and perhaps others), so we recommend that the species be considered for other emphasis at the local level.

FINAL RECOMMENDATION: Other emphasis

Datura quercifolia – One NF specifically responding recommends "insufficient info" and questions the reviewers' claim that it is introduced (GMUG/PSICC).

RESPONSE – The USDA "Integrated Taxonomic Information System" (see http://www.itis.usda.gov/index.html), as well as the NRCS "PLANTS" database, both report this species as introduced in North America. It is also considered to be invasive by the Southern Weed Science Society, according to the PLANTS database. Based on these authorities, we conclude that the species does not warrant sensitive status and is not of concern.

FINAL RECOMMENDATION: Not of concern

Equisetum sylvaticum – One NF specifically responding recommends "insufficient info" saying, "It may be more appropriate to place this species in the category of 'insufficient data', rather than on the other emphasis list." (BLKH).

RESPONSE – This species is disjunct in Region 2 from its northern circumpolar distribution. It is only known from three occurrences in WY, but apparently is more common within the Black Hills of SD. Habitat degradation or hydrologic alterations appear to be the most likely threats; otherwise, the species is apparently resilient due to deeply buried rhizomes. There is sufficient information to conclude that there is not a regional viability concern for the species, but it should be considered for other emphasis on a local basis.

FINAL RECOMMENDATION: Other emphasis

Eriogonum coloradense – CNHP recommended "sensitive" based primarily on endemism and rarity. They provide fairly extensive discussion.

RESPONSE – Review of the evaluation, recommendation rationale, and new information from CNHP, indicates that this species is a narrow endemic that is restricted to the mountains of central Colorado. The center of distribution appears to be in and around the Maroon Bells/Snowmass Wilderness, where 18 of the 24 known occurrences are found. Other occurrences are separated by 30-50 miles. Only three "population" estimates have been made, with totals of 200, 800, and 1000 plants. Other indications run from "scarce" to "most abundant species on the slope." The primary threats identified are recreational impacts and livestock grazing, though apparently *Eriogonum* species "are often tolerant of some level of grazing." We agree that there are concerns for the persistence of this narrow endemic on NFS lands, but still find the available information to be insufficient for understanding the relative risk to this species under our management, and cannot recommend sensitive status at this time.

FINAL RECOMMENDATION: Insufficient information

Eriogonum lachnogynum – One NF specifically responding recommends "insufficient info" because there are few occurrences on NFS lands (GMUG/PSICC).

RESPONSE – Review of the evaluation and recommendation rationale indicates that there is enough information to indicate that there is not a regional viability concern for this species. We conclude that the recommendation rationale for "not of concern" is appropriate at this time. That does not preclude any Forest or Grassland from placing special emphasis on the species, or developing special management direction to ensure

that they meet their obligations under NFMA to maintain biodiversity if there is a local concern for this species.

FINAL RECOMMENDATION: Not of concern

Euthamia graminifolia* var. *graminifolia – One NF specifically responding recommends "insufficient info" saying, "The reviewers probably made the correct call, but that is not really supported by the evaluation – especially considering its riparian habitat." (GMUG/PSICC).

RESPONSE – We agree that the documentation for this taxon does not support the recommendation rationale. Additional information should be gathered to determine whether or not it warrants sensitive species status. It may indeed be of no concern, due to relative abundance and perhaps tolerance for disturbance; but at present we lack sufficient documentation.

FINAL RECOMMENDATION: Insufficient information

Gilia sedifolia – One NF and one Natural Heritage Program specifically responding recommend "sensitive status". SANJ says "According to Bill Weber it is an extremely rare endemic. It was thought to be extinct, but Sue Komeric (a local expert) found it on the San Juan a few years ago." CNHP confirms this and adds, "Both of these locations are on land managed by the USDA Forest Service, and are not included in Wilderness or other protected areas." They add that there have been several attempts to find populations.

RESPONSE – This species has a global rank of G1 and should have been evaluated in our process, but was apparently overlooked. It is an extremely rare endemic, and this fact alone raises concerns that it could be inadvertently extirpated or otherwise threatened by management actions. We conclude that there is a regional viability concern, and that it warrants sensitive status.

FINAL RECOMMENDATION: Sensitive

Helianthus nuttallii – One NF specifically responding recommends that we re-evaluate this species (GMUG/PSICC). Barry says, "Apparently few populations on NFS lands in R2, and the habitat is riparian areas and wetlands. The discussion of habitat vulnerability in Evaluation #1 is interesting, and surely should stimulate more interest. This species should be re-evaluated."

RESPONSE – We reviewed the available information and found that the species is widespread; R2 is at the southwestern edge of its range; none of the states in our area track it; and the discussion of habitat vulnerability by Caleb Morse seems to focus on private lands, and is followed by the caveat that the "species is reported as common in the NE Sandhills, despite its apparent preference for wet-mesic soils. It may be essentially an early successional species, like many of its congeners, benefitting from moderate amounts of disturbance." We believe the species is not of concern at this time.

FINAL RECOMMENDATION: Not of concern

Illiamna grandiflora – CNHP recommends "sensitive" status, saying, "Most Colorado occurrences are very small. Only one has over 100 plants, one has 53 plants, and 7 others have fewer than 10 individuals. There is no abundance information for the remaining

four occurrences." They point out that it occurs in all of the Four Corner states, but that is sporadic and population sizes are small.

RESPONSE – CNHP presents information on extremely small "population" sizes that clearly raises a concern about the species viability in Region 2. Our evaluation from Barry Johnston indicates that all but one reported occurrence are from prior to 1955, and relatively little other information is available. We conclude that the species may in fact warrant sensitive status, but we still do not have sufficient information to make that determination. By categorizing the species as "insufficient information" we are saying that we need to collect additional information to enable us to make a final determination.

FINAL RECOMMENDATION: Insufficient information

Lechea intermedia – One NF specifically responding recommends "insufficient info" saying, "In R2, only in the Black Hills, where there are few sites, and stated to be disjunct there. This sounds like it should have been investigated further." (GMUG/PSICC)

RESPONSE – We agree that we have insufficient information to determine whether or not this plant warrants sensitive species status. It is apparently disjunct in the Black Hills at the western edge of its range, though it is common in parts of the midwestern and eastern United States and parts of Canada. Apparently it was last collected in the Black Hills in 1986. We need to gather additional information about this taxon to determine whether or not it warrants sensitive status.

FINAL RECOMMENDATION: Insufficient information

Lesquerella montana – One NF specifically responding indicated that this species had been inappropriately recommended for "sensitive status" (GMUG).

RESPONSE – We discovered an error in our web page, in which the wrong rationale had been pasted into the pages displaying both species evaluations. We have corrected our files, and the web site now correctly reflects the original team's recommendation of "not of concern".

FINAL RECOMMENDATION: Not of concern

Leucophysalis grandiflora – One NF specifically responding points out that it has been extirpated from NFS lands in R2 (GMUG/PSICC).

RESPONSE – Apparently this species has been extirpated from the state of South Dakota, and therefore doesn't warrant sensitive species status.

FINAL RECOMMENDATION: Not of concern

Lycopodium annotinum – One NF specifically responding points out that there are two conflicting recommendations (GMUG/PSICC).

RESPONSE – This was true based on the "Fern and Fern Allies" index page, but the link to the second recommendation (for "Stiff Clubmoss" in the "insufficient info" section) actually linked to *Thelypteris palustris*. The error on our web site index page for "Ferns and Fern Allies" which has been corrected. Our recommendation for this species is "other emphasis" for the reasons described in the rationale.

FINAL RECOMMENDATION: Other emphasis

Mentzelia pumila – One NF specifically responding says "The evaluators do not definitely state whether the species is found on NFS lands in R2." (GMUG/PSICC)

RESPONSE – The evaluation from WYNDD indicates that this species may occur on the Thunder Basin National Grassland, but the available information supports the recommendation that the species is not of concern.

FINAL RECOMMENDATION: Not of concern

Microseris nutans – One NF specifically responding says the rationale is too short (GMUG/PSICC).

RESPONSE – We agree that the original rationale was too terse in saying only, "common and widespread". The rationale has been revised to more fully support the recommendation of "not of concern".

FINAL RECOMMENDATION: Not of concern

Oxytropis parryi – One NF specifically responding says, "The reviewers say, 'Appears to be fairly rare within R2 but fairly common outside the region, and there are no imminent or obvious threats to its high elevation, rocky habitats,' which should have resulted in a more careful look." GMUG/PSICC recommends "insufficient info" and says an evaluation should be done for Colorado.

RESPONSE – We review the evaluation, recommendation rationale, and information on the internet from Rocky Mountain Herbarium (University of Wyoming), plus element occurrence records from the Colorado Natural Heritage Program (2002 data distribution CD-ROM). We found that there are four occurrences in the Region 2 portion of Wyoming, and four occurrences on NFS lands in Colorado. Only one of the occurrences from Colorado has been observed within the past 30 years. This level of apparent rarity raises concern, but the evaluation indicates that the habitat is resilient. We need to better understand the level of risk to this species from management actions. We agree with the GMUG/PSICC, and conclude that our information is insufficient to determine whether or not there is a regional viability concern.

FINAL RECOMMENDATION: Insufficient information

Parnassia kotzebuei – One NF specifically responding says the species should be re-evaluated. GMUG/PSICC points to the work by Barry Johnston for the White River NF plan revision where the species was considered to be of viability concern based on small population sizes and habitat vulnerability. They point out that "The reviewers say, 'Although there is little information, there is no indication of downward trends or specific threats to this species or its habitats,' which is highly inconsistent with the reviews of other Alpine wetland species."

RESPONSE – After review of the evaluation, recommendation rationale, and comments from the GMUG, we find that there are very few known occurrences of this species in R2, the few "populations" that have been counted are small, and the vulnerability of the habitat is higher than reflected in the original rationale. In reconsidering this species, we conclude that there is a regional concern for viability, and recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Parthenium alpinum – One NF specifically responding points out that we have two conflicting recommendations under two slightly different names, *P. alpinum* and *P. alpina* (GMUG/PSICC)

RESPONSE – There has been an error in our web site, with a link for *Parthenium alpinum* that leads to an evaluation for *Parthenium tertraneuris* among the "not of concern" taxa. The correct link is shown above in the web site in the group of "other emphasis" species, but an incorrect scientific name is used – "*Parthenium alpina*" should be *Parthenium alpinum*. The recommendation for this species is "other concern" for the reasons provided in the rationale. Some of the confusion has resulted from the use of common names, and from confusion over the proper scientific name (the species was evaluated as *Bolophyta alpina*).

FINAL RECOMMENDATION: Other emphasis

Penstemon debilis – One NF specifically responding points out that the evaluation page is blank (GMUG/PSICC).

RESPONSE – This species is not known or likely to occur on NFS lands, and was not evaluated in our process for that reason. A shell for the web page was apparently produced because the species was on an initial draft list for consideration due to its status as a Candidate for federal listing. We will remove this web page and clean up the index to prevent confusion.

FINAL RECOMMENDATION: None

Physalis virginiana – One NF specifically responding agrees with the recommendation, but points out that the rationale is "unacceptably short." (GMUG/PSICC).

RESPONSE – We agree that the recommendation rationale was unacceptably brief, saying only "Western limit of range". The rationale has been expanded, but the recommendation remains "not of concern".

FINAL RECOMMENDATION: Not of concern

Picradeniopsis oppositifolia – One NF specifically responding didn't like the rationale, and said it "should have been suppressed, at least in part." (GMUG/PSICC**).**

RESPONSE – We agree that the rationale for the draft recommendation was inappropriately worded, and have rewritten it while retaining the same recommendation as "not of concern".

FINAL RECOMMENDATION: Not of concern

Polystichum lonchitis – BLKH says, "Twelve sites are currently known in the Black Hills, all with small population sizes. It is currently ranked S2 in Wyoming, S1 in South Dakota and reported to be infrequent in Colorado. While there are currently no specifically identified risks to the habitat, this species does not occupy all available habitat. This species is being considered for a "Species of Local Concern" in the recent process on the Black Hills. If the compelling habitat or population trend information is followed for the process, then this species should be categorized as a species of "Insufficient Data" for the Region. If rarity is added to the criteria and process to compel a species for the list, then R2 sensitive designation should also be considered."

RESPONSE – Review of the available information and comments from the BLKH indicates that the draft recommendation for "other emphasis" is appropriate. The species is disjunct in SD, where they know of 12 occurrences (indicating that perhaps it should be ranked S2). Elsewhere in R2, it is on the periphery of its range but more widespread. We conclude that there is no regional viability concern, but that the species should be considered for other emphasis (as the BLKH apparently is doing already).

FINAL RECOMMENDATION: Other emphasis

Pyrola picta – One NF specifically responding apparently agrees with our recommendation, but seemed to be suggesting "other emphasis" as if it would be a change in our recommendation (MBR).

RESPONSE – No modifications to the draft recommendation and rationale are needed at this time.

FINAL RECOMMENDATION: Other emphasis

Pyrrocoma crocea – One NF specifically responding recommends "insufficient info" after quoting from one of the evaluations (GMUG/PSICC).

RESPONSE – Some of the information for this species indicates that it may be well distributed in a variety of habitats, and it may tolerate some level of disturbance. But there is also reason to postulate historic downward trend in populations and habitats. Overall, we agree with the GMUG/PSICC that there is insufficient information for this species to determine whether or not there is a regional viability concern.

FINAL RECOMMENDATION: Insufficient information

Rubus arcticus* ssp. *acaulis – One NF and one Natural Heritage Program specifically responding seem to feel that the species merits "sensitive" status. The rationale from the Sulphur RD (ARP) seems to be based primarily on local threats. They do ask for a more thorough evaluation to include Colorado occurrences instead of the focus on Wyoming and the Bighorns. CNHP says, "Due to the sensitivity of its wetland habitat to human disturbances such as logging, grazing and recreation we recommend that it be retained on the Region 2 Sensitive Species List, as you have done with other wetland species which are globally common but rare in Region 2, such as *Salix candida*."

RESPONSE – Review of the evaluations, recommendation rationale, and the comments we received, we find that there are only 1-2 occurrences on the Bighorn, and 3-4 occurrences on the ARP and PSICC. There is evidence of threats due to management actions, and given the very few number of occurrences, this raises a regional viability concern. Therefore, we recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Sapindus saponaria* ssp. *drummondii – One NF specifically responding recommends "insufficient info" saying, "It probably is on the periphery of its range, but that does not speak to whether it should be sensitive." (GMUG/PSICC).

RESPONSE – Generally, we have not recommended sensitive status for species on the periphery of their range in Region 2 (unless there seemed to be a high risk to the species within our Region), because the regional boundary is geopolitical rather than ecological. In contrast, we have recommended sensitive status for some disjunct species

based on relative risk to adverse management actions, and the low likelihood of recolonization from the main part of the species' range. In this particular case, we do not see a high level of risk and a regional viability concern, but we do recommend that it be considered for other emphasis on the Comanche and Cimarron National Grasslands.

FINAL RECOMMENDATION: Other emphasis

Sausurrea weberi – CNHP recommends "sensitive" status, saying that their "data suggest that there are a total of 16 occurrences of this species in Colorado, rather than 25-30 occurrences as indicated on the USFS species evalulation." They also point out that "CNHP has observed and documented new off-road vehicle tracks carving paths through the habitat of *Saussurea weberi*. Currently, the only solid protection afforded *Saussurea weberi* in Colorado is the 1025-acre Hoosier Ridge Research Natural Area." They present other info too.

RESPONSE – Review of the available information, including the correction from CNHP on the number of known occurrences in Colorado and the documented ORV tracks, we still conclude that there is not a regional viability concern for this species due in part to the very large size of "populations" in Wyoming. We agree that recreational impacts and other Forest uses may pose a local threat, so we recommend that the species be considered for other emphasis at the Forest level.

FINAL RECOMMENDATION: Other emphasis

Saxifraga subapetala – One NF specifically responding recommends "insufficient info" saying, "The rationale statement does not discuss why this species was recommended to be dropped, in spite of no population count data and inferred potential threats mentioned by the evaluators." (GMUG/PSICC)

RESPONSE – This species was not recommended for sensitive status (nor considered to be of concern) because it occurs in a wide range of habitats, and there are 30 records from the R2 portion of Wyoming. The Wyoming Natural Diversity Database does not track it, and the potential threats they mention in the evaluation ("This taxon may be threatened by changes in hydrology, grazing, or exotics in at least the lower elevation segment of its distribution.") generally apply to a huge number of plant species.

FINAL RECOMMENDATION: Not of concern

Sphaeromeria simplex – Only response was from FWS-WY disagreeing with draft recommendation, and saying they thought it should remain "sensitive" or the list should be "adjusted" to conserve this species where it may occur on NFS lands in R2.

RESPONSE – WYNDD personnel have spent a lot of time looking for this species in and around the MBR and adjacent lands, and UWYO botany graduate students have also searched on the Forest for this species, all without success. It might be argued that the species is not likely to occur on NFS lands. Yet there is apparently a limited amount of potential habitat that has not been checked. In reviewing the available information, we conclude that it is insufficient to determine whether or not the species should be designated as sensitive.

FINAL RECOMMENDATION: Insufficient information

Stellaria irrigua – GMUG/PSICC agrees with draft recommendation, and says we should be consistent with this rationale for *Physaria alpina*.

RESPONSE – We agree with the "not of concern" recommendation for this species. The differences we see between *Stellaria irrigua* and *Physaria alpina* are that this disjunct species is somewhat more widespread, and is known from about "40-70 recorded occurrences in Colorado". In contrast, *Physaria alpina* is a rather narrow endemic species known from only "12-15 occurrences". While additional inventory may prove the latter to be more common than currently known, the risk of error is higher for *Physaria alpina* based on best available information. *Physaria alpina* is recommended for sensitive species status, and is addressed elsewhere in this document.

FINAL RECOMMENDATION: Not of concern

Thalictrum revolutum – GMUG/PSICC says, "Recommendation rationale should have been suppressed. Reviewers should have focused on taxonomic problems – that neither Colorado nor Wyoming floristic botanists accept the species in their states. This still leaves a possibility that the species occurs east of these states in R2, though; the taxonomy needs to be checked out more closely. Should be 'Insufficient Information Available to make a recommendation.'"

RESPONSE – Taxonomic arguments will always raise questions and present some difficulties for us as plant science evolves and as our knowledge of the Plant Kingdom improves. The corporate decision our agency made is to follow the taxonomy in the NRCS "PLANTS" database (available online at http://plants.usda.gov/), which in turn will follow the development of the Flora of North America as new volumes are published. The PLANTS database accepts both *Thalictrum revolutum* and *Thalictrum dasycarpum*, indicating that the former occurs in SD, WY and CO, while the latter occurs in all five states within R2. However, whether or not *Thalictrum revolutum* occurs in CO and WY, it is apparently at the edge of its range in R2, it is very broadly distributed, and no specific threats have been identified. We agree with the GMUG/PSICC that the wording in the draft recommendation rationale needed to be rewritten to be less colloquial. But in reviewing the available information, we conclude that regardless of the taxonomic issue, this species does not warrant sensitive status and is not of concern at this time.

FINAL RECOMMENDATION: Not of concern

Viola renifolia – GMUG/PSICC agrees with the recommendation, saying, "The reviewers did the correct thing with this species – rated it as "Not R2 SS and Not of Concern Now," in spite of the lack of complete evaluations (no evaluations of Colorado or South Dakota populations), and apparently few populations in R2 (only 4 occurrences in Wyoming, with two of those on NFS)."

RESPONSE – We agree too.

FINAL RECOMMENDATION: Not of concern

Viola selkirkii – BLKH and FWS-WY disagree with draft recommendation. BLKH says, "As stated above, consistency in using the process to compel sensitive species status is one of the Forest's main concerns. If trend is the compelling factor then this species should be categorized as "Insufficient Data". If rarity, and populations are no longer

persistent in Colorado, is added to compel sensitive status, then the Forest recommends that this species be placed on the R2 Sensitive Species list, rather than on the insufficient data list." FWS-WY says the species should remain "sensitive" (or "adjust" list so it is conserved on NFS lands in R2) because it has a very narrow geographic and ecological range in R2.

RESPONSE – In weighing the available information, including the comments we received, we find that there are very few known occurrences in R2 for this disjunct species. The few old records from Colorado remain unconfirmed, and there are only 16 occurrences in the Black Hills (some of which are in Custer State Park). Threats to the occurrences on the Black Hills NF appear to be relatively low, but the total number of plants is also relatively low. Occurrences in Colorado are apparently very rare, or non-existent. We conclude that there is a regional viability concern based primarily on the low number of occurrences, small total "population" size, and disjunct distribution. Therefore we recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

3. FEEDBACK ON TAXA NOT EVALUATED IN OUR PROCESS

Vascular Plants

Carex intumescens – FWS-WY expressed concern that this species was "removed from the R2 SS list without any accompanying descriptions of recommendations or evaluations."

RESPONSE – The basic assumption in revising our sensitive species list is that no species is assumed to warrant sensitive status unless a case can be made for it. It is not a matter of "removing" or "adding" species to a "list". This species did not meet our primary pre-screening criteria (Natural Heritage ranks of G1-G3, T1-T3, N1-N3, S1-S2, IUCN listing, etc.); but it should have been evaluated because it is on our 1994 R2 sensitive species list. The species is ranked S4 in SD, and is apparently absent from the other states in Region 2. To reconsider this species, we looked at an evaluation conducted by the Black Hills NF as part of their forest plan revision. Their species evaluation protocol was very similar to that used in our regional process. We found that the species is at the western edge of its range in SD, is locally frequent in the central Black Hills where inaccessible to livestock, habitat appears stable though potentially vulnerable to livestock grazing and timber removal. Based on this information, we conclude that there is no regional viability concern, but the species should be considered for other emphasis (as has been done by the Black Hills National Forest).

FINAL RECOMMENDATION: Other emphasis

Carex pedunculata – FWS-WY expressed concern that this species was "removed from the R2 SS list without any accompanying descriptions of recommendations or evaluations."

RESPONSE – The basic assumption in revising our sensitive species list is that no species is assumed to warrant sensitive status unless a case can be made for it. It is not a matter of "removing" or "adding" species to a "list". This species did not meet our primary pre-screening criteria (Natural Heritage ranks of G1-G3, T1-T3, N1-N3, S1-S2, IUCN listing, etc.); but it should have been evaluated because it is on our 1994 R2 sensitive species list. The species is ranked S4 in SD (according to the NatureServe Explorer website), and is apparently absent from the other states in Region 2. To reconsider this species, we looked at an evaluation conducted by the Black Hills NF as part of their forest plan revision. Their species evaluation protocol was very similar to that used in our regional process. We found that the species is at the edge of its range in SD, is locally frequent, and habitat trend may be declining due to logging. A distribution map produced on the Black Hills NF shows 45-50 known occurrences widely scattered across the northern end of the Forest, with a few occurrences along the east-central side. Based on this information, we conclude that there is no regional viability concern at this time, but the species should be considered for other emphasis (as has been done by the Black Hills National Forest).

FINAL RECOMMENDATION: Other emphasis

Draba weberi – CNHP recommended "sensitive" because it is "ranked **G1S1** by the Colorado Natural Heritage Program, is an extremely restricted endemic, known from one

population of approximately 100 individuals at the type locality…. Potential threats to this small population include direct human impacts from hiking, trampling, and other recreational uses."

RESPONSE – This species should have been evaluated in our process, but apparently was inadvertently omitted. We will need to complete a full evaluation, but due to the extreme rarity of this endemic plant, the very small population, and its occurrence on NFS, we conclude that there is sufficient regional concern for the viability of this species and recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Townsendia glabella – CNHP recommends "sensitive" status, indicating that it is only known from a few recent sightings, and nine historic records (over 20 years old).

RESPONSE – This species has a global rank of "G2?" and should have been evaluated in our process, but was apparently overlooked. It is a rare endemic, which occurs in openings in ponderosa pine forest. CNHP has ten records in their database, but nine are more than 20 years old. A recent survey documented an occurrence of 200 plants on the San Juan NF. Due to the species rarity, and the potential for adverse impacts from management actions, we conclude that there is a regional viability concern. We recommend sensitive status.

FINAL RECOMMENDATION: Sensitive

Non-vasculars

Cladina arbuscula – CNHP recommends this lichen for "sensitive" status, and provides documentation, as does the GMUG's official response.

RESPONSE – Our process for evaluating and recommending sensitive species did not examine non-vascular plants. Our "pre-screening" list was developed only for vascular plants, in part because non-vascular plant information is not available from all five of the state Natural Heritage Programs in Region 2. We are not able to evaluate non-vascular plants on a "level playing field" at this time. Furthermore, revision of the Planning Rule (35 CFR 219) is underway, and it is uncertain what our forthcoming direction will be for implementing the National Forest Management Act (NFMA) with respect to maintaining viability of non-vascular plants. Given current circumstances, we are not considering non-vascular plants for sensitive species at this time.

FINAL RECOMMENDATION: Insufficient information

Cladina rangiferina – CNHP recommends this lichen for "sensitive" status, and provides documentation, as does the GMUG's official response.

RESPONSE – Our process for evaluating and recommending sensitive species did not examine non-vascular plants. Our "pre-screening" list was developed only for vascular plants, in part because non-vascular plant information is not available from all five of the state Natural Heritage Programs in Region 2. We are not able to evaluate non-vascular plants on a "level playing field" at this time. Furthermore, revision of the Planning Rule (35 CFR 219) is underway, and it is uncertain what our forthcoming

direction will be for implementing the National Forest Management Act (NFMA) with respect to maintaining viability of non-vascular plants. Given current circumstances, we are not considering non-vascular plants for sensitive species at this time.

FINAL RECOMMENDATION: Insufficient information

Cladina stellaris – CNHP recommends this lichen for "sensitive" status, and provides documentation.

RESPONSE – Our process for evaluating and recommending sensitive species did not examine non-vascular plants. Our "pre-screening" list was developed only for vascular plants, in part because non-vascular plant information is not available from all five of the state Natural Heritage Programs in Region 2. We are not able to evaluate non-vascular plants on a "level playing field" at this time. Furthermore, revision of the Planning Rule (35 CFR 219) is underway, and it is uncertain what our forthcoming direction will be for implementing the National Forest Management Act (NFMA) with respect to maintaining viability of non-vascular plants. Given current circumstances, we are not considering non-vascular plants for sensitive species at this time.

FINAL RECOMMENDATION: Insufficient information

Jungermannia rubra – CNHP recommends this moss for "sensitive" status, and provides documentation, as does the GMUG's official response.

RESPONSE – Our process for evaluating and recommending sensitive species did not examine non-vascular plants. Our "pre-screening" list was developed only for vascular plants, in part because non-vascular plant information is not available from all five of the state Natural Heritage Programs in Region 2. We are not able to evaluate non-vascular plants on a "level playing field" at this time. Furthermore, revision of the Planning Rule (35 CFR 219) is underway, and it is uncertain what our forthcoming direction will be for implementing the National Forest Management Act (NFMA) with respect to maintaining viability of non-vascular plants. Given current circumstances, we are not considering non-vascular plants for sensitive species at this time.

FINAL RECOMMENDATION: Insufficient information

Sphagnum angustifolium – CNHP recommends this moss for "sensitive" status, and provides documentation, as does the GMUG's official response.

RESPONSE – Our process for evaluating and recommending sensitive species did not examine non-vascular plants. Our "pre-screening" list was developed only for vascular plants, in part because non-vascular plant information is not available from all five of the state Natural Heritage Programs in Region 2. We are not able to evaluate non-vascular plants on a "level playing field" at this time. Furthermore, revision of the Planning Rule (35 CFR 219) is underway, and it is uncertain what our forthcoming direction will be for implementing the National Forest Management Act (NFMA) with respect to maintaining viability of non-vascular plants. Given current circumstances, we are not considering non-vascular plants for sensitive species at this time.

FINAL RECOMMENDATION: Insufficient information

Sphagnum balticum – CNHP recommends this moss for "sensitive" status, and provides documentation, as does the GMUG's official response.

RESPONSE – Our process for evaluating and recommending sensitive species did not examine non-vascular plants. Our "pre-screening" list was developed only for vascular plants, in part because non-vascular plant information is not available from all five of the state Natural Heritage Programs in Region 2. We are not able to evaluate non-vascular plants on a "level playing field" at this time. Furthermore, revision of the Planning Rule (35 CFR 219) is underway, and it is uncertain what our forthcoming direction will be for implementing the National Forest Management Act (NFMA) with respect to maintaining viability of non-vascular plants. Given current circumstances, we are not considering non-vascular plants for sensitive species at this time.

FINAL RECOMMENDATION: Insufficient information

Sphagnum compactum – CNHP recommends this moss for "sensitive" status, and provides documentation, as does the GMUG's official response.

RESPONSE – Our process for evaluating and recommending sensitive species did not examine non-vascular plants. Our "pre-screening" list was developed only for vascular plants, in part because non-vascular plant information is not available from all five of the state Natural Heritage Programs in Region 2. We are not able to evaluate non-vascular plants on a "level playing field" at this time. Furthermore, revision of the Planning Rule (35 CFR 219) is underway, and it is uncertain what our forthcoming direction will be for implementing the National Forest Management Act (NFMA) with respect to maintaining viability of non-vascular plants. Given current circumstances, we are not considering non-vascular plants for sensitive species at this time.

FINAL RECOMMENDATION: Insufficient information