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Comments:

As stated in the "Swan Mountain Project Notice of Proposed Action," the primary objective of the project appears to be reducing the amount of forested acreage to reduce fire hazard and to encourage growth of young lodgepole pine and forbs and grasses.

The inferred rationale for forest elimination seems to be that approximately 50% of mature lodgepoles were killed by pine beetles and therefor a fire hazard. But the area of the project is described as being mostly small-diameter lodgepoles. Small-diameter lodgepole are not likely to be mature or beetle-killed or a fire hazard.

Denuding forests as fire breaks and fire-fighting staging areas makes sense immediately adjacent to urban development, but not miles away. It is not stated in the proposal, but all of the proposed clearcutting appears to be 2-4 miles or more from any development. Whatever beetle-killed trees are in the area are actually less of a fire hazard because they no longer have any foliage to burn or to spread fire. The grasses and weeds (invasive as well as local) and subsequent doghair lodgepole thickets that are likely to grow in clearcut areas, on the other hand, are far more likely to be areas where fires could start than any forest-live or dead.

The objective of encouraging young lodgepole is directly counter to the interests of natural ecology, wildlife, forest resiliency, fire safety and recreational use. It also suggests an astounding lack of understanding and appreciation of the alpine ecology of Summit County by this plan. Nowhere does the plan seek any actions to encourage or protect spruce-fir forest. I didn't even notice any mention of spruce, fir, succession or climax vegetation. The natural climax vegetation of Summit County's alpine ecosystems is a mix of Englemann spruce and subalpine fir. These are beautiful forests of mixed age and mixed species with a forest floor abundant in flora and fauna. They are self-sustaining, moisture retaining and widely spaced to provide wonderful recreational opportunity.

Lodgepole pine are by definition a weed in alpine spruce-fir (or most other) ecosystems, growing only in disturbed, full sun areas. They exist only where the natural forest has been destroyed by fire (not normally or at least until recently a large factor in Summit County) or clearcutting. Lodgepole forests are everything (mostly wrong) that climax spruce-fir are not. Dense, shallow rooted, single-species and single-age monocultures, lodgepole forests have sterile understories; they are highly prone to insect infestation, disease, and windfall; and with foliage all in the canopy, they burn as canopy fires that can spread rapidly to surrounding areas.

While lodgepole forest have their own beauty, their best attribute may be that they eventually provide the proper conditions for reestablishment of spruce-fir forests. Beetle-kill of mature lodgepole is a key part of the natural succession process, providing sufficient openings in the forest canopy and on the forest floor for spruce and fir seedlings to take hold (no spruce, fir, or lodgepole seedlings can start under dense young lodgepoles) and eventually take over from the sun-loving lodgepoles. Clear-cutting the older lodgepole forests at this point sets back the natural succession process by a hundred years or more, compounding the original affront to nature of previous forest destruction.

The proposed Swan Mountain Project also totally ignores what are pretty clearly the two most critical challenges to forest management--and perhaps mankind-today: climate change and the greenhouse gas imbalance that is causing it. With Colorado's climate getting dramatically warmer and drier, we-and the Forest Service-should cherish every acre of forest, especially existing and potential climax spruce-fir. In the changing climate, forests are likely to take far longer than their historic very long natural process to regrow. And they may not at all. With

continually warmer and drier conditions, denuded forest could end up as sagebrush. The plan makes no calculation of this very real potential impact.

Clear-cutting more than 1700 acres also needlessly removes 1700 acres of nature's and mankind's most effective carbon sequestration machinery. Destroying the trees also kills the extensive fungal networks surrounding the tree roots, networks that may sequester even more carbon than the trees themselves. The plan makes no calculation of the planned impact on greenhouse-gas imbalance from the loss of trees or from the cutting, hauling and burning of those trees.

Drought and consequent impact on water supply is also a very serious issue in Colorado aggravated by climate change. Forest cover retains snow and moisture. In clearcut areas, sublimation of snow directly to water vapor would dramatically increase with subsequent reduction of water supply.

The plan also makes no calculation of impact on recreation. Clearcuts dramatically damage hiking, cross-country skiing and other forest use. Aside from being horrendously ugly, they expose recreationists to summer heat, lightning threat and storms. Winter recreationists are especially hard-hit. Wind exposure poses dangerous conditions and obscures the trail; sun exposure ruins snow conditions for skiing.

The plan does call for trail rerouting, which would not be necessary, if the forest were left intact. It also calls for "treatment" to improve the scenic quality within 250 feet of the Continental Divide Trail. It acknowledges that this is necessary because of the horribly misguided cutting down of dead trees and subsequent blowdown of live trees within 100 feet of the trail under a previous project. This acknowledgement should be taken as a warning that carrying out this new proposed Swan Mountain Project would also undoubtedly be acknowledged in the future as having been horribly misguided. A more appropriate policy for this and any other project proposals would be that there should not be any clear-cutting or other significant disturbance other than keeping the actual trail clear within 250 or preferably 1000 feet of any recreational trails.

The proposed Swan Mountain Project should not proceed at all, certainly not any of the proposed clear-cutting. If any portions of the plan were to proceed, a full environmental impact statement would clearly be needed. It would need to reexamine the basic objectives of the proposal, the importance of ecological succession and climax vegetation, climate-change considerations and impacts on greenhouse gas imbalance.

The proposed clear-cutting would certainly have substantial negative impacts. It is not significantly beneficial for fire-hazard reduction or any other purpose and certainly has no merit to justify clearcuts larger than 60 acres.

The notice of proposed action does not provide enough information for me to comment on the proposed stream alterations but they obviously would have significant water quality impacts that should be fully assessed. I do not know much about sagebrush ecology, but would like to see an assessment of whether the proposed "treatment" would reduce prospects for forest regeneration in those areas. Brush fires can spread very rapidly, so any prescribed burning should be fully assessed for potential undue risk.

The proposed extensive and large continuous-area clear-cutting, road building, heavy equipment use, prescribed "broadcast" burning and pile burning of the project proposal all pose highly significant impact on carbon sequestration, greenhouse-gas generation, ecosystem change, water quality, water supply, sedimentation, air quality, wildlife, endangered species (including proposed wolf reintroduction as well as lynx) and summer and winter recreation. The best course of action is to drop the proposed action, but if there is to be any consideration of further consideration, a full environmental impact assessment is clearly necessary.