

Here is the Timber Sale example from Module 2, in its entirety. Remember that the non-italicized text is what would go in your NEPA document. The italicized text is merely explanation.

The proposed action is to commercially thin a 100-acre stand of 40-year-old timber adjacent to Warm Creek. The BLM is considering two action alternatives: a heavier thinning (Alternative 1), and a lighter thinning (Alternative 2).

Issues Analyzed in Detail (Chapter 1 of your NEPA document)

How would commercial thinning of the stand affect northern spotted owl dispersal habitat?

Geographic scope (*Chapter 1 or 3 of your NEPA document*)—The RMP EIS described the effective scale for evaluating northern spotted owl habitat as approximated by the 6th-field watershed. That description is incorporated here by reference (RMP EIS, Chapter 4, p. 5). As such, the geographic scope for the analysis of this issue is the Warm Creek 6th-field watershed.

Temporal scope (*Chapter 1 or 3 of your NEPA document*)—Within 15 years of treatment, stand growth would re-establish dispersal habitat conditions in the stand. As such, the timeframe for analysis of this issue is 15 years after harvest.

Affected Environment (Chapter 3 of your NEPA document)

Impact indicator: percentage of watershed in spotted owl dispersal habitat

This analysis is tiered to the RMP EIS, which analyzed the current condition of northern spotted owl dispersal habitat within the 6th-field watershed. That analysis concluded that 60% of the watershed is currently dispersal habitat, which provides for adequate dispersal conditions to allow movement of owls among blocks of nesting habitat (RMP EIS, Chapter 3, pp. 15-18). That analysis is incorporated here by reference. Dispersal conditions for owls in the watershed have not changed since the RMP EIS in a way that would alter the analytical conclusions in the RMP EIS.

Cumulative Effects Analysis (Chapter 4 of your NEPA document)

Past actions—The effects of past actions on northern spotted owl dispersal habitat in the Warm Creek watershed were analyzed in the description of the affected environment in the RMP EIS (Chapter 3, pp. 15-18). The RMP EIS analysis described that forests across the region historically would have provided approximately 80% dispersal habitat. Past clearcut timber harvest removed dispersal habitat, resulting in the current condition of 60% dispersal habitat. The current dispersal habitat within the watershed provides for adequate dispersal conditions to allow movement of owls among blocks of nesting habitat. That analysis is incorporated here by reference.

Present actions—There are no ongoing actions that are affecting northern spotted owl dispersal habitat in the Warm Creek watershed.

Reasonably foreseeable actions—The RMP EIS analyzed reasonably foreseeable actions that would affect northern spotted owl dispersal habitat within the Warm Creek watershed. That analysis described reasonably foreseeable timber harvest that is highly probable to occur on BLM-administered land, Forest Service land, and private land. The harvest would result in loss of dispersal habitat, while forest growth would result in increase in dispersal habitat. That analysis concluded that forest growth within the watershed would result in a net increase in the amount of dispersal habitat of 5% of the watershed over the next 15 years. Therefore, future dispersal conditions in the Warm Creek watershed, which already provides adequate dispersal habitat, would improve (RMP EIS, Chapter 4, pp. 81-83). That analysis is incorporated here by reference.

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Direct and indirect effects of the proposed action and alternatives—Alternative 1 would reduce the stand density below the 40% canopy closure threshold for dispersal habitat, resulting in the removal of 100 acres of dispersal habitat until stand growth reestablishes 40% canopy closure in 15 years. This 100-acre loss represents 1% of the current dispersal habitat within the watershed.

Alternative 2 would maintain more than 40% canopy closure in the thinned stand, resulting in no removal of dispersal habitat.

Combine the effects—

Impact indicator: Percentage of watershed in dispersal habitat

It might be helpful to have a graphic similar to Figure 6.3 in the BLM NEPA Handbook to depict this information.

No Action

Baseline = 80%

Baseline + past actions (timber harvest) = 60%

Baseline + past actions + present actions (none) = 60%

Baseline + past actions + present actions + future actions (BLM, USFS, and private timber harvest) = 65%

Action Alt 1

Baseline = 80%

Baseline + past actions (timber harvest) = 60%

Baseline + past actions + present actions (none) = 60%

Baseline + past actions + present actions + future actions (BLM, FS, and private timber harvest) = 65%

Baseline + past actions + present actions + future actions + proposed action (heavier commercial thinning) = 64%

Action Alt 2

Baseline = 80%

Baseline + past actions (timber harvest) = 60%

Baseline + past actions + present actions (none) = 60%

Baseline + past actions + present actions + future actions (BLM, FS, and private timber harvest) = 65%

Baseline + past actions + present actions + future actions + proposed action (lighter commercial thinning) = 65%

Describe the relationship of the cumulative effects to any thresholds—As described in the RMP EIS, watersheds with more than 50% dispersal habitat are considered adequate to allow movement of owls among blocks of nesting habitat (RMP EIS, Chapter 3, p. 15). That analysis is incorporated here by reference.

The watershed currently provides adequate dispersal conditions and dispersal conditions will improve in the future under both Alternative 1 and Alternative 2.

The loss of dispersal habitat that would result from Alternative 1 would not lower the amount of dispersal habitat below the 50% threshold; in fact, forest growth would result in an overall net increase in dispersal habitat under Alternative 1.

Issues Analyzed in Detail (Chapter 1 of your NEPA document)

How would commercial thinning of the stand affect water temperature in Warm Creek?

Geographic scope (*Chapter 1 or 3 of your NEPA document*)—*at what point downstream is there no measurable temperature change resulting from the proposed action or alternatives?* There would be no measurable temperature change from the commercial thinning where Warm Creek meets the Cold River. As such, the geographic scope for analysis of this issue is the watershed for Warm Creek.

Temporal scope (*Chapter 1 or 3 of your NEPA document*)—*how long would a temperature change resulting from the proposed action or alternatives be detected?* Short-term effects of the proposed action on stream temperature would be greatest during the first year following harvest because the stand would provide the least stream shading. Therefore, the short-term timeframe for analysis is 1 year after harvest. Within 5 years of treatment, stream shading would return to pre-treatment levels. At that time, the proposed action or alternatives would no longer have any effect on temperatures in Warm Creek. As such, the long-term timeframe for analysis of this issue is 5 years after harvest.

Affected Environment (Chapter 3 of your NEPA document)

Impact indicator: stream temperature (degrees Fahrenheit)

Current 7-day maximum water temperatures in Warm Creek average 58.0 degrees Fahrenheit, based on water monitoring conducted by the BLM. Past clearcut timber harvest and road construction removed stream shading, raising water temperature in Warm Creek. Prior to past timber harvest and road construction, the water temperature in Warm Creek was estimated to be approximately 56.0 degrees, based on a comparison to reference streams of similar size in nearby watersheds that have experienced no timber harvest or road construction. Warm Creek is not listed under 303(d) of the Clean Water Act for water temperature (RMP EIS, Chapter 3, p. 42).

Cumulative Effects Analysis (Chapter 4 of your NEPA document)

Past actions –The effects of past actions on water temperature in Warm Creek were analyzed in aggregate in the Affected Environment. Past clearcut timber harvest and road construction removed stream shading, thereby resulting in the current water temperature of 58.0 degrees Fahrenheit. Prior to past clearcut timber harvest and road construction water temperature in Warm Creek was estimated to be approximately 56.0 degrees, based on comparison to reference streams of similar size in nearby watersheds that have experienced no timber harvest or road construction.

(If past actions affecting temperatures in Warm Creek had included commercial thinning similar to the proposed action, a project-specific analysis of how individual past thinning actions had affected temperatures may have been useful in predicting the effects of the proposed action.)

Present actions—Upstream of the proposed project area, private land is currently being cleared for pasture. After clearing, the riparian area along 500 feet of Warm Creek will be maintained in an open condition with

no stream shading, resulting in a 1.0 degree Fahrenheit increase in stream temperature at the mouth of Warm Creek based on temperature modeling.

Reasonably foreseeable actions—The BLM proposed a wildlife habitat restoration project that would create snags in a riparian stand along Warm Creek. Downstream from BLM-administered land, a stand of industry-owned timber is approaching 60 years old. The company recently began road work in the area. Based on this investment, the timber market, and industry practices in the region, the BLM concludes it is highly probable that the company will clearcut the stand in the next few years. The clearcut harvest would result in an increase in stream temperature of 0.5 degrees Fahrenheit at the mouth of Warm Creek based on monitoring results of similar clearcuts described in the RMP EIS (p. 316), which is incorporated here by reference.

Direct and indirect effects of the proposed action and alternatives—Immediately after harvest under Alternative 1, reduction in stream shading would result in a 0.2 degree Fahrenheit temperature increase in Warm Creek.

Immediately after harvest under Alternative 2, a lighter thinning prescription, reduction in stream shading would result in a 0.1 degree Fahrenheit temperature increase in Warm Creek. There would be no measurable temperature change where Warm Creek meets the Cold River. Within 5 years of treatment, stream shading would return to pre-treatment levels, resulting in no further effect on stream temperature.

Combine the effects—

Impact indicator: Stream temperature (degrees Fahrenheit)

No Action

56.0=baseline

58.0=baseline + past actions (clearcut + roads)

59.0=baseline + past actions + present action (pasture conversion)

59.5=baseline + past actions + present action + future action (industry clearcut)

Action Alt 1

56.0=baseline

58.0=baseline + past actions (clearcut + roads)

59.0=baseline + past actions + present actions (pasture conversion)

59.5=baseline + past actions + present actions + future action (industry clearcut)

59.7=baseline + past actions + present actions + future action + proposed action (heavier commercial thinning)

Action Alt 2

56.0=baseline

58.0=baseline + past actions (clearcut + roads)

59.0=baseline + past actions + present actions (pasture conversion)

59.5=baseline + past actions + present actions + future actions (industry clearcut)

59.6= baseline + past actions + present actions + future action + proposed action (lighter commercial thinning)

*Describe the relationship of the cumulative effects to any thresholds—*In evaluating the significance of the proposed commercial thinning, only the effects of the BLM proposed action (i.e., a 0.2 or 0.1 degree increase in water temperature) count towards significance. If that 0.2 or 0.1 degree increase in water

temperature would increase water temperature above a regulatory or biological threshold, there would be a potential for a significant impact.

There are no connected or cumulative actions with effects that can be prevented or modified by BLM decision making. The present action of land-clearing for pasture is not connected with the BLM action, because it is not interdependent with the BLM action. The reasonably foreseeable timber harvest on industry land is not currently proposed and, even if it were, it is not interdependent with the BLM action. As such, the harvest is neither a connected nor a cumulative action.

Warm Creek is not currently 303(d) listed for temperature. Warm Creek provides habitat for resident trout, which experience sub-lethal adverse effects in water temperatures above 60.0 degrees Fahrenheit. Because the cumulative effects of past, present, and reasonably foreseeable actions would not result in temperatures above 60.0 degrees Fahrenheit, there would be no adverse effects to trout in Warm Creek.

(In this example, these analytical conclusions would provide the foundation for a finding of no significant impact with regards to these issues).

Issues Analyzed in Detail (Chapter 1 of your NEPA document)

How would haul of timber affect sediment input to Warm Creek?

Affected Environment (Chapter 3 of your NEPA document)

Impact indicator: stream substrate sediment percentage

Warm Creek currently has a sediment level of approximately 18%, based on the State Department of Fish and Wildlife aquatic habitat surveys (State DFW 2008, p. 54). The State DFW considers substrates with less than 20% fines, sands, or sediment as high quality habitat; therefore, Warm Creek currently is high quality habitat with regards to sediment.

Past timber harvest and road construction within the riparian area resulted in some sediment input to Warm Creek, but there is no basis for determining how much sediment resulted from past actions. Existing roads are not resulting in measurable sediment inputs to Warm Creek, because the few roads within the riparian zone are paved, which reduces sediment input from road surfaces, and culverts are properly sized and functional (RMP, Chapter 3, p. 45). Warm Creek is not listed under 303(d) of the Clean Water Act for sediment (RMP EIS, Chapter 3, p. 42).

Remember, there are no other reasonably foreseeable actions that would potentially result in sediment input to Warm Creek, and the effect of past actions has been described in aggregate in the Affected Environment. Therefore, this issue does not require cumulative effects analysis and is not carried forward through the steps of the cumulative effects process.