



File Code: 1950  
Date: June 30, 2015

DECISION NOTICE  
AND  
FINDING OF NO SIGNIFICANT IMPACT

Watson Hill Lower Long Cane Project - Timber Sale

USDA Forest Service – Region 8  
Sumter National Forest  
Long Cane Ranger District  
Abbeville, McCormick and Greenwood Counties, South Carolina

**Decision**

I have decided to implement alternative 2. This alternative including design criteria best meets the Purpose and Need as stated in the *Watson Hill Lower Long Cane Project (Timber Sale) Environmental Assessment (EA)*.

Alternative 2 is described below (maps are included in Appendix A):

***Seed Tree Regeneration (1,365 acres)***

This silvicultural method leaves 10 to 12 predominantly loblolly pine trees/acre as a seed source to regenerate the stand. Desirable hardwoods will be retained where possible. The seed trees will be removed in approximately three to five years once the understory is fully stocked with desirable tree seedlings.

***Thinnings (6,732 acres)***

First and intermediate thinnings will leave a residual basal area (BA) of 60-80 square feet per acre with a target of 70 BA preferred. Treatments will release desirable hard and soft mast species.

***Loblolly Pine Removal (19 acres)***

This treatment will remove most of the loblolly pine component to enhance the production of hard and soft mast species.

***Woodland Establishment (268 acres)***

Woodlands will be established by removing some of the loblolly pine trees and non-mast producers leaving an approximate basal area (BA) range of 30-40 square feet per acre on 110 acres and a BA of approximately 60 square feet per acre (with a range from 50-70 BA) on 158 acres.

Desirable hard mast species such as wildlife den trees, bird peck trees and healthy oaks/hickory and shortleaf pine will not be harvested in treatment areas in order to encourage the development of these species. Desirable soft mast trees that provide sustenance for different species of wildlife will not be harvested.



Conventional logging methods including fellers, rubber-tired skidders, chainsaws, log loaders and tractor trailers will be used to harvest trees and transport them to a processing facility. Only merchantable trees five inches and greater diameter at breast height (DBH) will be removed during a commercial timber sale. Branches/tops or other biomass not considered merchantable will be scattered across the treatment area.

Other cultural work will be accomplished or supervised by Forest and District personnel.

#### ***Herbicide Treatment of Seed Tree Regeneration Areas***

Chemical release of desired seedlings will occur in the first and third year after harvest. A foliar spray mixture containing 1/2 ounce of imazapyr herbicide; one ounce of water soluble dye spray pattern indicator and 1/2 ounce of limonene adjuvant or equivalent per gallon of water will be used. The mixture will be selectively applied by hand application methods to target vegetation by speckling the leaf surfaces during the period of mid-June through September of the second or third growing season. Estimated application rates will be 10 gallons of mix, including 5 ounces of Arsenal AC or equivalent (0.16 pounds of imazapyr per acre). There will be no broadcast application of herbicides.

The hack- and- squirt method will be used to treat targeted vegetation (greater than six feet tall) using imazapyr (Arsenal AC or equivalent) and triclopyr (Garlon 3A or equivalent) herbicide that is sprayed/injected into cuts made into the cambium layer with a manual cutting tool (such as an axe or sandvik). The herbicide mixture used will be 50 percent triclopyr, 50 percent water, plus 6 ounces of Arsenal AC per gallon of water. All treated areas will be monitored for further follow-up treatments after the initial treatment. All treated vegetation will be left on-site to decompose.

#### ***Herbicide Treatment of 60 BA Woodland Areas***

Following timber harvest, the 60 BA woodland stands will be treated with herbicide (chemical treatment) during the growing season to enhance grass development by targeting unwanted vegetation (such as sweet gum).

A foliar spray mixture containing 1/2 ounce of imazapyr herbicide; one ounce of water soluble dye spray pattern indicator, and 1/2 ounce of limonene adjuvant or equivalent per gallon of water would be used. The mixture would be selectively applied by hand application methods to target vegetation by speckling the leaf surfaces during the period of mid-June through September of the second or third growing season. Estimated application rate would be 10 gallons of mix, including 5 ounces of Arsenal AC or equivalent (0.16 pounds of imazapyr per acre). There would be no broadcast application of herbicides.

The hack-and-squirt method would be used to treat targeted vegetation (greater than six feet tall) using imazapyr (Arsenal AC or equivalent) and triclopyr (Garlon 3A or equivalent) herbicide that is sprayed/injected into cuts made into the cambium layer with a manual tool (such as an axe or sandvik). The herbicide mixture used would be 50 percent triclopyr, 50 percent water, plus 6 ounces of Arsenal AC per gallon of water. All treated areas would be monitored for further follow-up treatments after the initial treatment. All treated vegetation would be left on site to decompose.

**Table 1 Prescription Treatments by Compartment and Stand**

Compt/Stand	Acres	Treatment	Rx
201/01	43	Intermediate thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
201/04	36	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
201/10	27	Intermediate thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
201/11	16	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
201/15	34	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
201/16	48	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
201/17	25	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
201/26	05	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
204/03	74	Intermediate thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
204/04	47	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
204/06	47	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
204/13	72	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
204/15	28	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
204/16	33	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
204/18	32	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
204/19	90	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
204/21	78	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
204/22	50	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
205/03	36	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
205/04	51	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
205/07	80	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
205/11	78	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
205/14	83	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.

Compt/Stand	Acres	Treatment	Rx
205/16	83	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
205/18	49	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seedtree removal.
205/21	64	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
206/01	24	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
206/03	64	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
206/04	39	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
206/05	27	First thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/softmast species.
206/06	41	Woodland establishment	Thin to 50-70 BA/acre - target 60 sq. ft. BA/acre. Retain healthy shortleaf pine and hard/soft mast hardwoods. Herbicide treat - Burn 2-3 yr. cycle.
206/07	51	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
206/09	45	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
206/10	80	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
206/12	08	Woodland establishment	Thin to 50-70 BA/acre - target 60 sq. ft. BA/acre. Retain shortleaf pine and hard/soft mast hardwoods. Herbicide treat - Burn 2-3 yr. cycle.
206/15	30	First thin (Deferment)	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
207/02	31	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
207/04	68	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
207/06	22	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
207/07	91	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
207/09	45	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
207/10	49	Woodland establishment	Thin to 50-70 BA/acre - target 60 sq. ft. BA/acre. Retain healthy shortleaf pine and hard/soft mast hardwoods. Herbicide treat - Burn 2-3 yr. cycle.
207/11	60	Woodland establishment	Thin to 50-70 BA/acre - target 60 sq. ft. BA/acre. Retain healthy shortleaf pine and hard/soft mast hardwoods. Herbicide treat -Burn 2-3 yr. cycle.
207/13	45	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
207/16	43	Seed tree	Retain preferred hard/softmast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred

Compt/Stand	Acres	Treatment	Rx
			regeneration. Seedtree removal.
207/18	20	Intermediate thin	Thin to 60-80BA/acre with a 70 BA/acre target. Release hard/soft mast species
207/19	51	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
208/01	53	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
208/02	50	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
208/06	29	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
208/07	62	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
208/08	42	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
208/09	94	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
208/10	80	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
208/11	79	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
209/01	21	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
209/03	67	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
209/04	60	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
209/06	49	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
209/09	29	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
209/10	185	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
210/01	60	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
210/02	87	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
210/03	33	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/soft mast species
210/04	32	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
210/05	73	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
210/07	11	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
211/01	72	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
211/02	34	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.

Compt/Stand	Acres	Treatment	Rx
211/03	33	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/soft mast species.
211/04	44	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
211/05	72	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
211/07	49	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
211/10	76	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
222/01	11	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
222/02	28	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
222/04	13	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/soft mast species.
222/05	31	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
222/07	175	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
222/09	30	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
222/11	18	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
222/12	31	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
222/15	42	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
222/16	56	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
222/19	48	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
222/21	36	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
226/01	15	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
226/03	52	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/soft mast species.
226/04	52	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
226/06	65	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
226/07	28	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
227/01	38	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
227/03	70	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
227/06	47	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
227/14	09	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release

Compt/Stand	Acres	Treatment	Rx
			hard/softmast species.
227/16	54	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
227/17	20	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
228/01	79	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
228/02	55	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
228/03	33	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
228/05	27	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
228/06	44	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
228/07	65	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
228/09	48	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
228/10	28	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
228/12	63	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
228/17	18	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
228/18	52	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
229/01	52	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
229/07	68	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
229/10	31	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
229/13	59	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
229/16	38	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
229/17	19	Pine Removal	Remove most of the loblolly pine convert to a majority hardwood mast producing stand.
229/19	59	Seed tree	Retain preferred hard/soft mast hardwoods, shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
229/21	63	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
229/22	73	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
229/24	75	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
229/27	26	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.

Compt/Stand	Acres	Treatment	Rx
234/02	60	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
234/05	77	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
234/13	71	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
235/01	72	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
235/03	61	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
235/05	35	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
236/02	48	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
236/06	67	First thin	Thin to 60-80vBA/acre with a 70 BA/acre target. Release hard/softmast species.
236/08	54	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
236/11	34	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
236/12	69	Seed tree	Retain preferred hard/soft mast hardwoods, healthy shortleaf pine and w/l trees. Herbicide release preferred regeneration. Seed tree removal.
236/16	77	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
237/01	65	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
237/03	29	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
237/09	34	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
238/04	57	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
238/06	49	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
238/11	70	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
238/15	39	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
238/18	26	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
239/01	50	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
239/06	31	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
239/07	46	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
239/11	89	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
239/13	70	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
239/14	45	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
240/02	97	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release

Compt/Stand	Acres	Treatment	Rx
			hard/softmast species.
240/03	54	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
240/04	63	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/03	33	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/04	16	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/06	91	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/07	10	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/08	17	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/10	87	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/11	74	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/15	43	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/16	22	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/18	38	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
241/24	26	Intermediate thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
254/02	79	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
254/06	45	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
254/09	43	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
254/16	33	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
256/03	19	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
256/04	07	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
256/07	64	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
256/08	24	First thin	Thin to 60-80 BA/acre with a 70 BA/acre target. Release hard/softmast species.
256//10	40	Woodland Establishment	Thin to 30-40 sq. ft. BA/acre. Retain healthy shortleaf pine and hard/softmast hardwoods and den trees.
256/11	38	Woodland Establishment	Thin to 30-40 sq. ft. BA/acre. Retain healthy shortleaf pine and hard/softmast hardwoods and den trees.
256/12	32	Woodland Establishment	Thin to 30-40 sq. ft. BA/acre. Retain healthy shortleaf pine and hard/softmast hardwoods and den trees.

## Connected Actions

### Skidding, Decking and Hauling of Logs

Harvested trees will be skidded with heavy equipment to landings where they will be loaded onto log trucks then transported to processing plants. Existing skid trails and landings from previous timber harvest activities will be used during skidding and loading operations. Site-specific design criteria along with Forest Plan standards and guidelines will be used to limit soil impacts and protect streams from sedimentation. Typically, skid trails and landings are water-barred and re-vegetated to reduce soil erosion.

### Road Maintenance

System road maintenance activities such as but not limited to grading, spot surfacing with crushed stone, replacement of damaged and non-functional culverts and brush removal to enhance visibility may be necessary to ensure safety and prevent environmental degradation during vegetation management activities. Approximately 48 miles of national forest system roads will be maintained during timber harvest operations and 2.8 miles of temporary roads will be used.

### Erosion Control Measures

Design criteria will be used to reduce or prevent erosion during timber harvest operations. Surface drainage structures such as dips, water-bars and water lead-outs, seed/fertilizer will be utilized as needed to minimize erosion and delivery of sediment to stream channels from skid trails, temporary roads and log landings.

### Design Criteria

Forest wide standards found in the Revised Land and Resource Management Plan Sumter National Forest (Forest Plan); *South Carolina's Best Management Practices for Forestry* (BMPs) (SCFC, 2003) and National Best Management Practices for Water Quality Management on National Forest System Lands (2012); and *Soil and Water Conservation Practices Guide*, Southern Region, (U.S. Department of Agriculture 2002) will be followed in implementation of this project. In addition, the following site-specific design criteria will be included with the action alternative in order to reduce adverse resource impacts.

The following design criteria are also included:

1. Project activities will avoid effects to known historic properties and unevaluated archeological sites.
2. Identified PETS species location will be avoided during site disturbing activities associated with logging and follow-up cultural treatments.
3. Temporary roads and skid trails will be located in such a manner to roll with the terrain to avoid unnecessary water concentrations. Drainage dips and lead outs will be incorporated in construction of temporary roads to ensure that erosion from concentrated flow is minimized and does not reach streams.

4. Gully crossings will be avoided and surface drainage will be designed to avoid discharging directly into gullies.
5. Areas of exposed soil, such as skid trails and log decks, will be seeded, fertilized and mulched after operations are completed. Where practical, seed mixtures will include native grasses and legumes or other desired non-native species beneficial to wildlife.
6. Trees will not be harvested within gullies or on steep slopes adjacent to gullies unless needed to promote stabilization or recovery efforts.
7. Perennial and intermittent streams that could be affected by logging operations will be identified on sale area maps and protective measures will be specified in the timber sale contract.
8. Herbicide mix water will be carried to the site by contractors or workers.
9. Trucks containing herbicide or tank mixed herbicide will not be allowed to park within 200 feet of a stream or pond.
10. Hardwood inclusions to be protected within and adjacent to harvest units will be identified on the ground and on the sale area map of the timber sale contract.
11. Disturbed road cut and fill slopes will be re-vegetated to the extent possible to reduce adverse visual impacts.
12. Flowering and other visually attractive trees will be left in harvest units where possible.
13. When possible, harvesting activities will occur in the low use recreation season (generally from November through March).
14. To avoid adverse effects to Oglethorpe oak, contact the Zone Wildlife Biologist and/or the District Biological Technician before cutting card approval and prior to all ground operations in compartment 229, stand 22. Delineate the treatment area on-the-ground so that the potential habitat and the oaks themselves are excluded from the treatment unit. Avoid damaging the excluded areas during logging and cultural treatment operations. Monitoring is required after operations are complete.

### **Decision Rationale**

In making my decision, I considered how well alternative 2 will meet the Purpose and Need to improve forest health and increase vegetation and wildlife diversity on national forest system land.

My other reasons for selecting alternative 2 are:

- ✓ It will promote better distribution of early successional stage/age classes to benefit wildlife habitat and improve vegetative diversity.
- ✓ It will maintain or restore vegetative composition, structure, function and productivity over time of forest ecosystems and associated communities.

- ✓ It will increase biodiversity by opening closed canopy stands.
- ✓ It will provide a sustainable supply of wood products.

### **Other Alternatives Considered**

Following is the other alternative developed and analyzed in the EA.

#### **Alternative 1: No Action**

Under the no-action alternative, current management activities would continue in the project area. Ongoing management actions include: previous timber harvest decisions, road maintenance, southern pine beetle suppression, non-native species control, prescribed burning and wildlife opening maintenance.

I did not choose this alternative because it did not meet the purpose and need nor the desired condition for the 10.B. prescription as outlined in the *Revised Land and Resource Management Plan Sumter National Forest* (Forest Plan). This alternative would have fostered persistent slow growing stand conditions that would be at high risk to southern pine beetle attack and mortality.

#### **Public Involvement**

The proposal is listed in the Planning, Appeals and Litigation (PALS) data base project number 44366. The proposal was provided to the public and other agencies for comment during the scoping process. Scoping began June 9, 2014 and ended on July 9, 2014. One comment was received during the scoping period. The 30-day notice and comment period began on January 29, 2015 and one letter was received from the public. Responses to these comments are located in the project file.

#### **Findings Required by Other Laws and Regulations**

##### *Forest Plan Consistency*

The actions are consistent with the Forest Plan and the *Final Environmental Impact Statement* and the *EIS for the Suppression of the Southern Pine Beetle*, Southern Region. This decision is consistent with the forest wide direction (pages 2-1 thru 2-31) for riparian area management, water quality, aquatic habitats, soil and air, wildlife habitat, vegetation, forest health, wood products and special forest products, recreation, fire management and heritage resources. The projects are feasible and reasonable. The project meets the Forest Plans' overall goals and objectives which help to move closer to the forest's desired condition while protecting the environment.

##### *Forest and Rangeland Renewable Resources Planning Act of 1974, as amended by the National Forest Management Act (16 U.S.C. 1604)*

The actions for this project comply with the requirements of 16 U.S.C. 1604 (g)(3)(E) and 16 U.S.C. 1604 (g)(3)(F)(1-5). A Responsible Official may authorize site-specific projects and activities on NFS lands to harvest timber only where:

##### 16 U.S.C. 1604 (g)(3)(E)

- Soil, slope, or other watershed conditions will not be irreversibly damaged (EA

- pgs. 39-68 );
- Protection is provided for streams, stream-banks, shorelines, lakes, wetlands and other bodies of water from detrimental changes in water temperatures, blockages of water courses and deposits of sediment where harvests are likely to seriously and adversely affect water conditions or fish habitat (EA design criteria in Chapter 2 and Chapter 3 Environmental Consequences); and
- The harvesting system to be used is not selected primarily because it will give the greatest dollar return or the greatest output of timber (EA pgs. 5-7 and Chapter 3 of the EA).

#### 16 U.S.C. 1604 (g)(3)(F)(1-5)

- The interdisciplinary review has been completed and the potential environmental, biological, aesthetic, engineering and economic impacts on each advertised sale area have been assessed, as well as the consistency of the sale with the multiple use of the general area;
- Cut blocks, patches, or strips are shaped and blended to the extent practicable with the natural terrain;
- These cuts are carried out according to the maximum size limits for areas to be cut in one harvest operation as required by 16 U.S.C. 1604 (g)(3)(F)(iv);
- Timber cuts are carried out in a manner consistent with the protection of soil, watershed, fish, wildlife, recreation, and esthetic resources and the regeneration of the timber resource (EA Pgs. 8-38 and Chapter 3).

#### *Biological Assessment/Biological Evaluation (BA/BE)*

A BA/BE was completed for this environmental assessment. It concluded the proposed action is "NOT LIKELY TO ADVERSELY AFFECT" the federally threatened Wood Stork. The proposed action would have BENEFICIAL IMPACTS to sensitive species Bachman's sparrow, Migrant loggerhead shrike and Georgia aster. The proposed action will have "NO IMPACTS" to sensitive species, namely, Indigo bush, Piedmont aster and Sweet pinesap. The following determination was made for two sensitive species, Bald eagle and Oglethorpe oak, "MAY IMPACT INDIVIDUALS BUT NOT LIKELY TO CAUSE A TREND TOWARD FEDERAL LISTING OR A LOSS OF VIABILITY".

#### Heritage Resources

A cultural resources inventory was completed in the Area of Potential Effects (APE) for historic properties within the Watson Hill/Lower Long Cane analysis areas and consultation was initiated with the Tribal Historic Preservation Office, Eastern Band of Cherokee Indians (THPO) and the South Carolina Archives and History Center, State Historic Preservation officer (SHPO).

The inventory identified 37 sites that are possibly eligible for listing in the NHRP, but unevaluated. The remaining 464 sites were determined not eligible for the National Register. Six historic period cemeteries were found not eligible for the NRHP, but will be protected.

The SHPO and THPO have reviewed the cultural resource survey reports and documentation of previous cultural resource surveys. They have been consulted on this project including the determination of National Register eligibility of all sites in the APE. Letters concurring with

Forest Service eligibility determinations were received. There would be no effect on known historic properties.

The THPO determined in email responses dated July 23, 2012, October 12, 2012 and October 31, 2013 that the proposed project may proceed as planned.

#### Transportation System Analysis

The *Francis Marion and Sumter National Forest Transportation System Analysis Process (TAP) Report* was completed on September 11, 2014 and is consistent with Forest Service Manual 7712.4. The analysis completed in that report was used to inform decisions relative to road under the jurisdiction of the US Forest Service.

### **Finding of No Significant Impact (FONSI)**

I have determined that alternative 2 of the *Watson Hill Lower Long Cane Project (Timber Sale) Environmental Assessment (EA)* are not a major federal action having a significant effect on the quality of the human environment based on the significance criteria of both context and intensity as defined by the National Environmental Policy Act (NEPA) 40 CFR 1508.27. Thus an environmental impact statement will not be prepared. I base my findings on the following factors:

#### A. CONTEXT

The physical, biological and social effects are limited to the project area and immediate adjacent areas that have been analyzed in the EA. All actions are consistent with the *Revised Land and Resource Management Plan, Sumter National Forest Plan (Forest Plan)*, and all environmental effects are within the range disclosed in the *Final Environmental Impact Statement for the Revised Land and Resource Management Plan, Sumter National Forest*.

#### B. INTENSITY

Intensity is a measure of the severity, extent, or quantity of effects, and is based on information from the effects analysis of this EA and the references in the project record. The effects of this project have been appropriately and thoroughly considered with an analysis that is responsive to concerns and issues raised by the public. The agency has taken a hard look at the environmental effects using relevant scientific information and knowledge of site-specific conditions gained from field visits. My finding of no significant impact is based on the context of the project and intensity of effects using the ten factors identified in 40 CFR 1508.27(b).

1. Both adverse and beneficial impacts of the selected alternative are disclosed in the EA (EA pages 39 through 125).
2. Public health and safety will be minimally affected by the selected alternative (EA pages 116 thru 119 and Herbicide Risk Assessments).
3. The analysis identified no impacts to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas (EA pages 39 thru 125).

4. There are no highly controversial effects based on consultation with others, on past experiences with similar projects and on effects disclosed in the EA. The effects of the project are not likely to be a source of substantial scientific controversy (EA pages 39 thru 125).
5. This action is similar to many past actions, both in the treatment area and adjacent areas. Based on this past experience and the environmental analysis, there will not be any highly uncertain effects that involve unique or unknown risks (EA pages 39 thru 125).
6. This project does not set a precedent for future actions or represent a decision in principle about a future consideration. The decision made about activities within this project area does not commit me to actions on lands outside the project area (EA page 6).
7. There are no significant cumulative effects between this project area and other projects currently implemented or planned on the Long Cane Ranger District or adjacent areas. All known activities which are likely to occur in the reasonably foreseeable future have been identified in the EA. Direct, indirect and cumulative effects are disclosed in the EA (EA pages 39-125).
8. No significant impacts are foreseen on any proposed or listed National Historic places or any loss or destruction of any scientific, cultural or historic places (EA pages 112-113). The South Carolina State Historic Preservation Office (SHPO) concurs that no historic properties will be affected by the proposed undertaking (letter from the SHPO). Letter from the THPO determined in response letters sent to the Forest Service that no important cultural resources will be affected by the proposed project. Letters from SHPO and THPO are located in the project file.
9. No significant impacts on any endangered or threatened species or their habitat is foreseen. The Biological Assessment/Biological Evaluation (BA/BE) documented a "NOT LIKELY TO ADVERSELY AFFECT" for Wood stork. The proposed action would have BENEFICIAL IMPACTS to sensitive species Bachman's sparrow Migrant loggerhead shrike and Georgia aster. For other sensitive species a determination was made that there will be "NO IMPACTS" to Indigo bush, Piedmont aster and Sweet pinesap. The following determination was made for Bald eagle and Oglethorpe oak sensitive species, "MAY IMPACT INDIVIDUALS BUT NOT LIKELY TO CAUSE A TREND TOWARD FEDERAL LISTING OR A LOSS OF VIABILITY" (BA/BE - Project Folder).
10. The actions are consistent with the Forest Plan and thus do not violate Federal, State or local laws (EA pages 6 and 116-120 and (BA/BE).

#### **Administrative Review or Objection Opportunities**

There is no administrative review of this decision since no objections were filed during the objection filing period

#### **Implementation**

As per 36 CFR 218.12, if no objections is received within the legal objection period, this decision may be signed and implemented on, but not before, five business days from the

close of the objection filing period. If an objection is filed, this decision cannot be signed or implemented until the reviewing officer has responded in writing to all pending objections.

**Contact**

For further information on this decision, contact Dell Frost, 810 Buncombe Street, Edgefield, South Carolina 29824: (803) 637-5396; fax (803) 637-5247.

  
**John (JR) Kirkaldie**  
**Long Cane District Ranger**  
**Long Cane Ranger District**

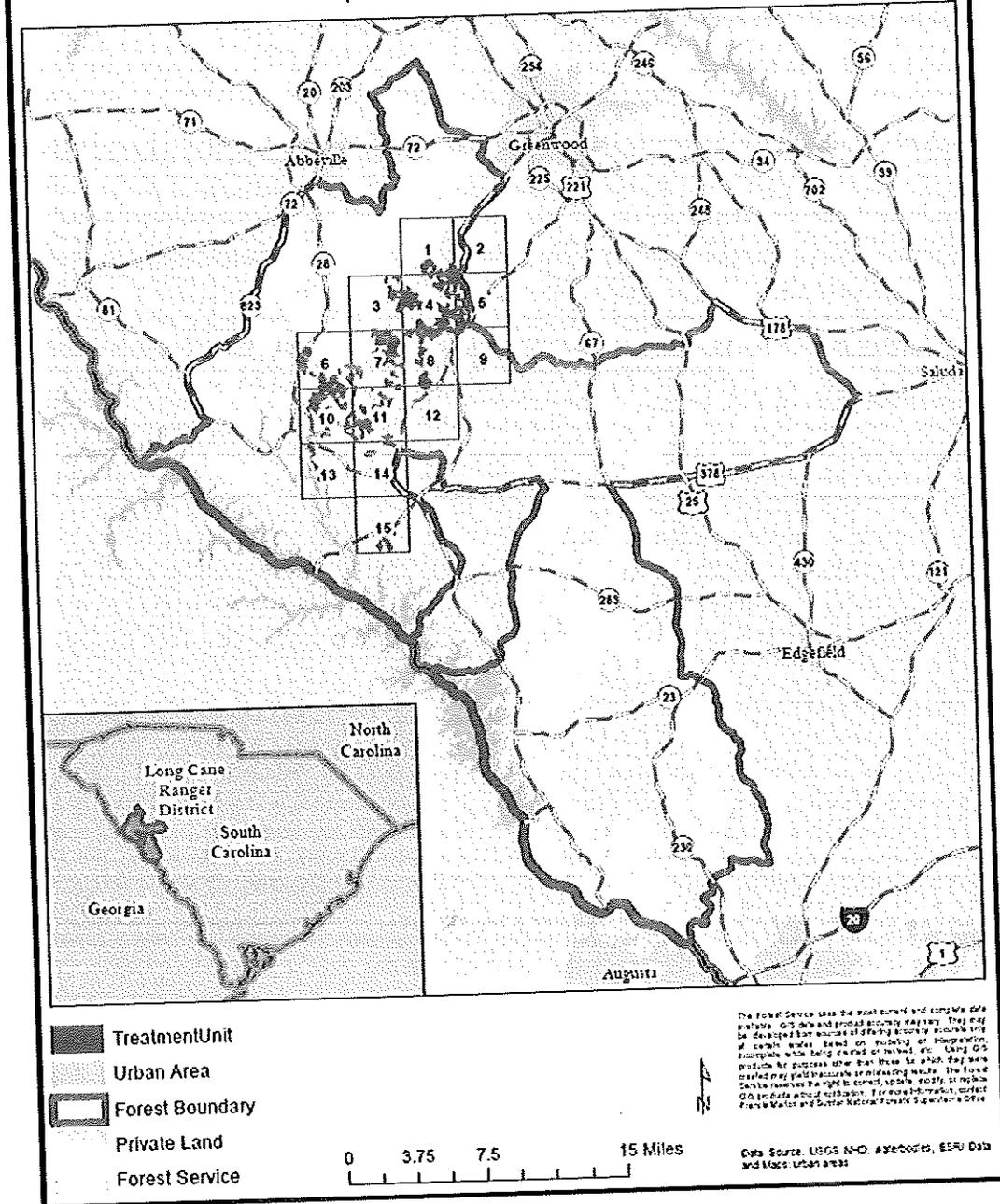
June 30, 2015  
**Date**

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TTD).

**Appendix A-Maps**

# Watson Hill Project

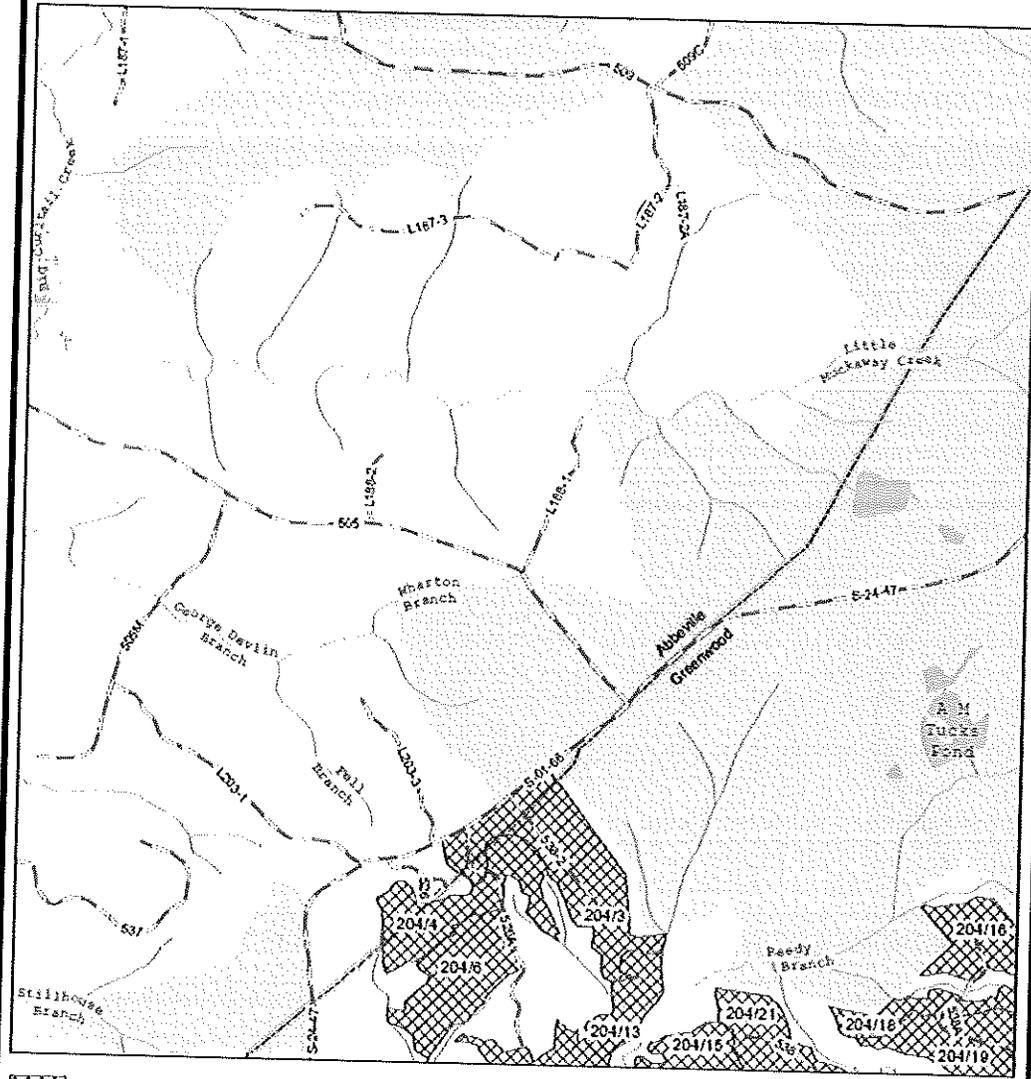
## Proposed Action — Index Map



The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed for purposes of different accuracy requirements of certain uses based on modeling or interpretation, products are prepared other than those for which they were created may yield inaccurate or misleading results. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. For more information, contact Forest Manager and District Natural Resource Supervisor's Office.

Data Source: USGS NHD, areaborder, ESRI Data and Maps, Urban areas

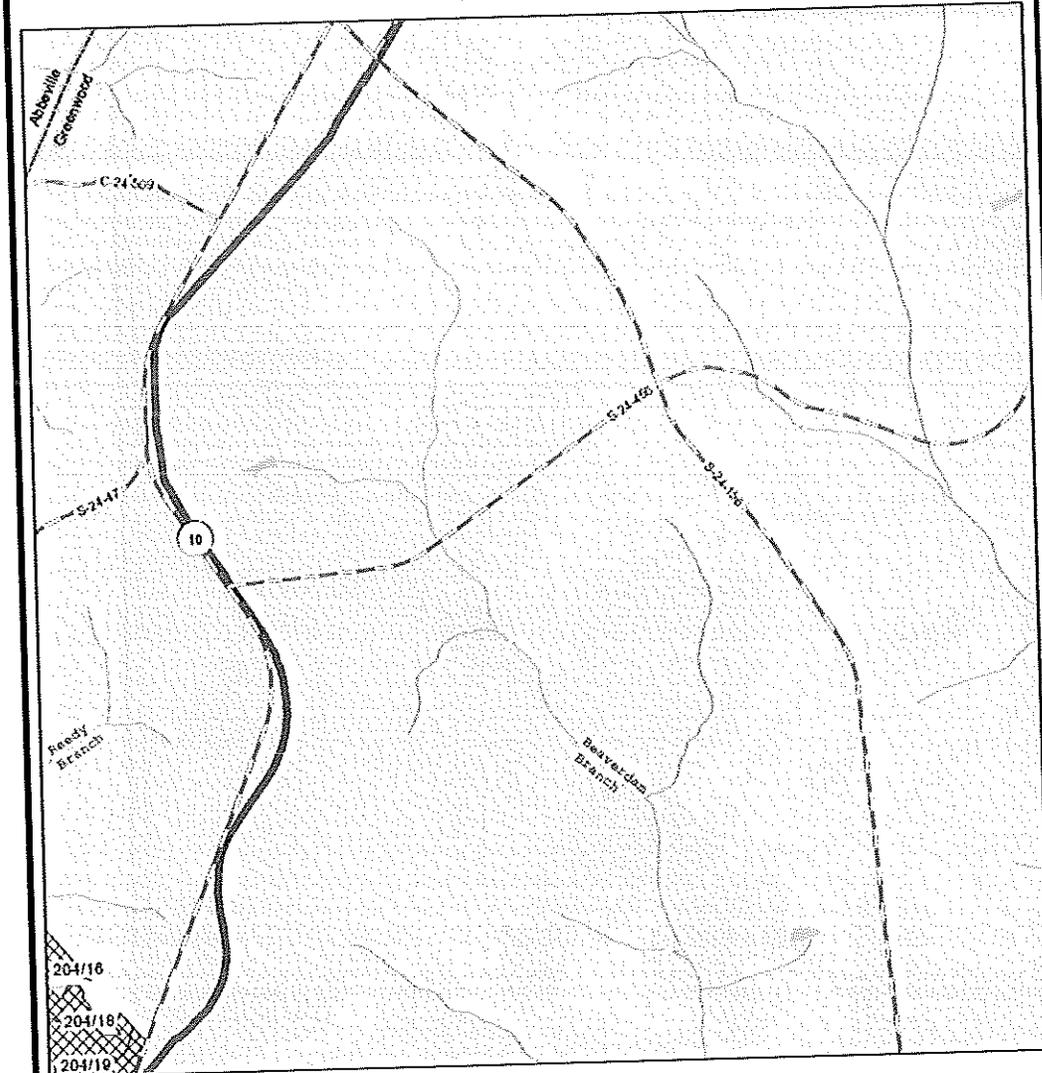
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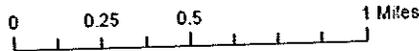
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Data Source: USGS NHD stream boundaries

# Watson Hill Project Proposed Action



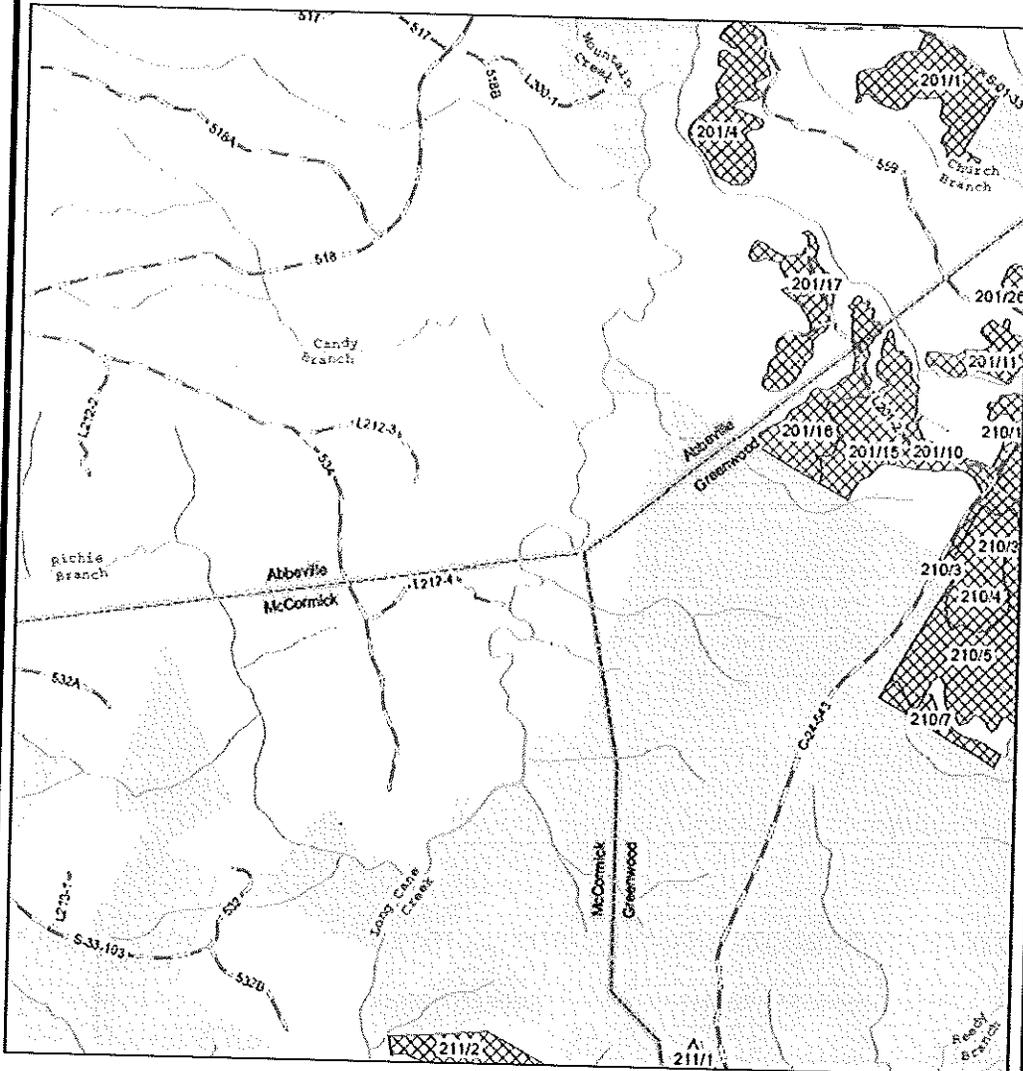
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-  Road
-  Forest Boundary
-  Private Land
-  Forest Service



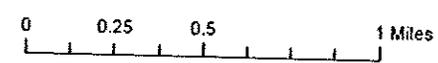
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Data Source: USGS NHD stream footlines

# Watson Hill Project Proposed Action



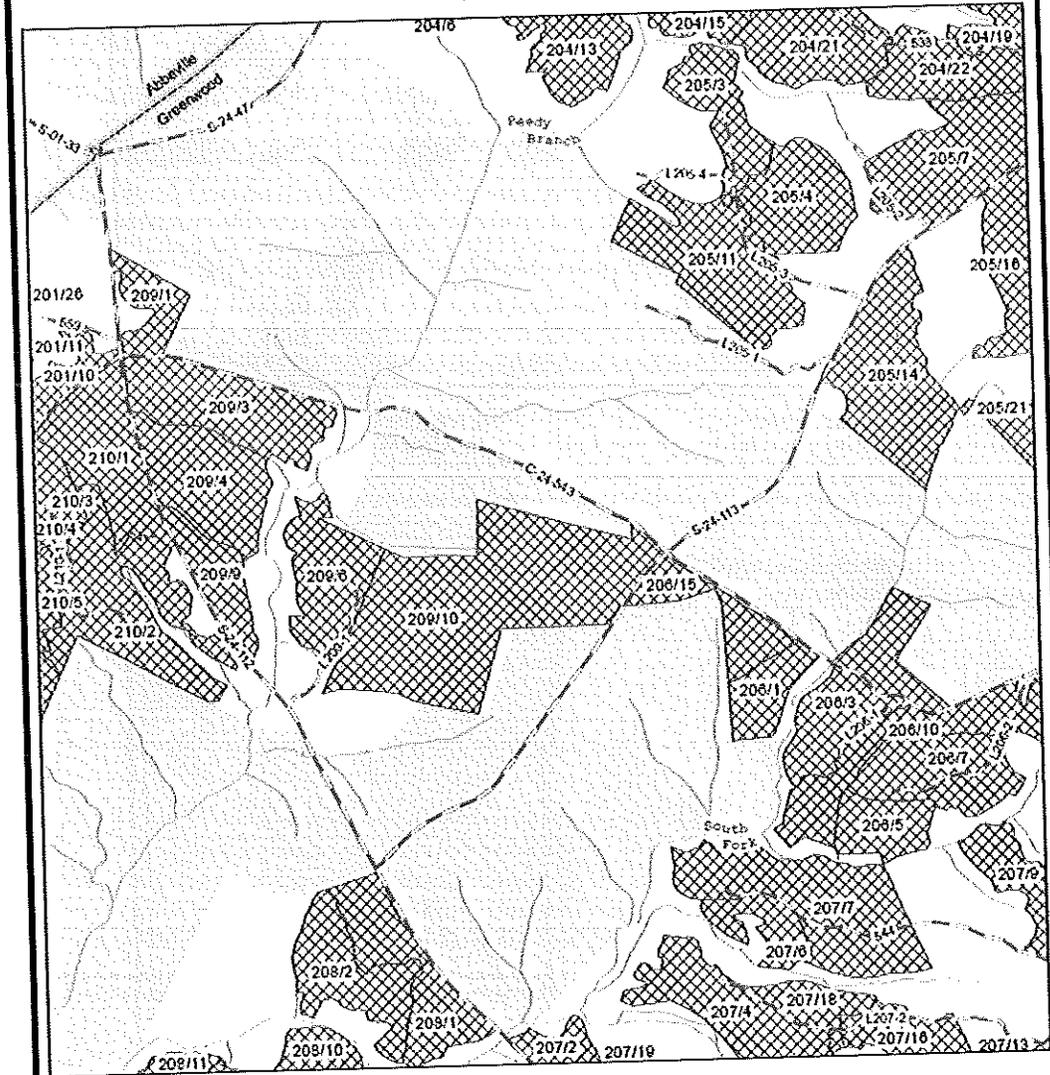
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- Forest Service



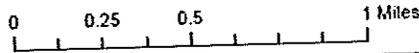
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Data Source: USGS NHD stream flow lines

# Watson Hill Project Proposed Action

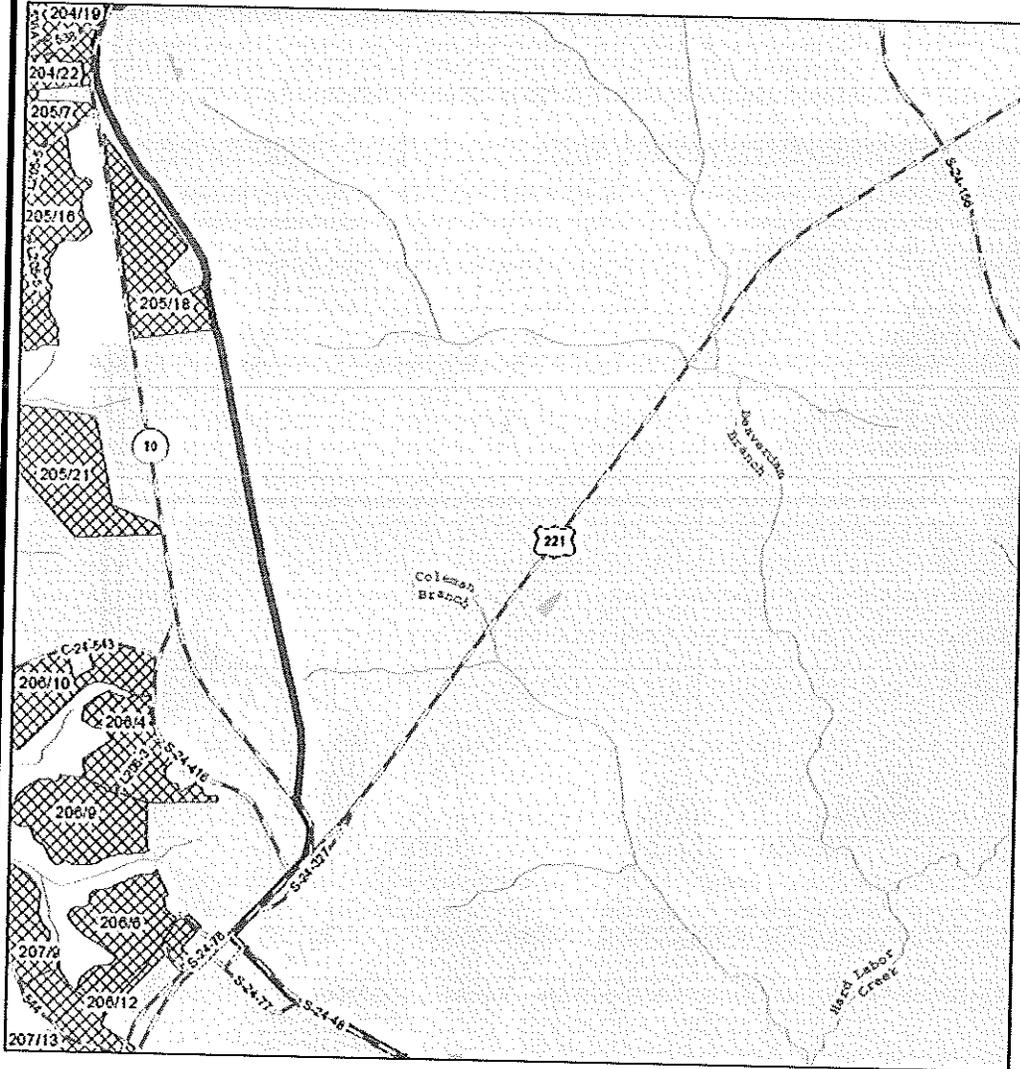


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-  Forest Service

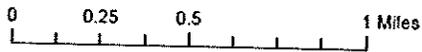


Data Source: USGS NHD stream data

# Watson Hill Project Proposed Action



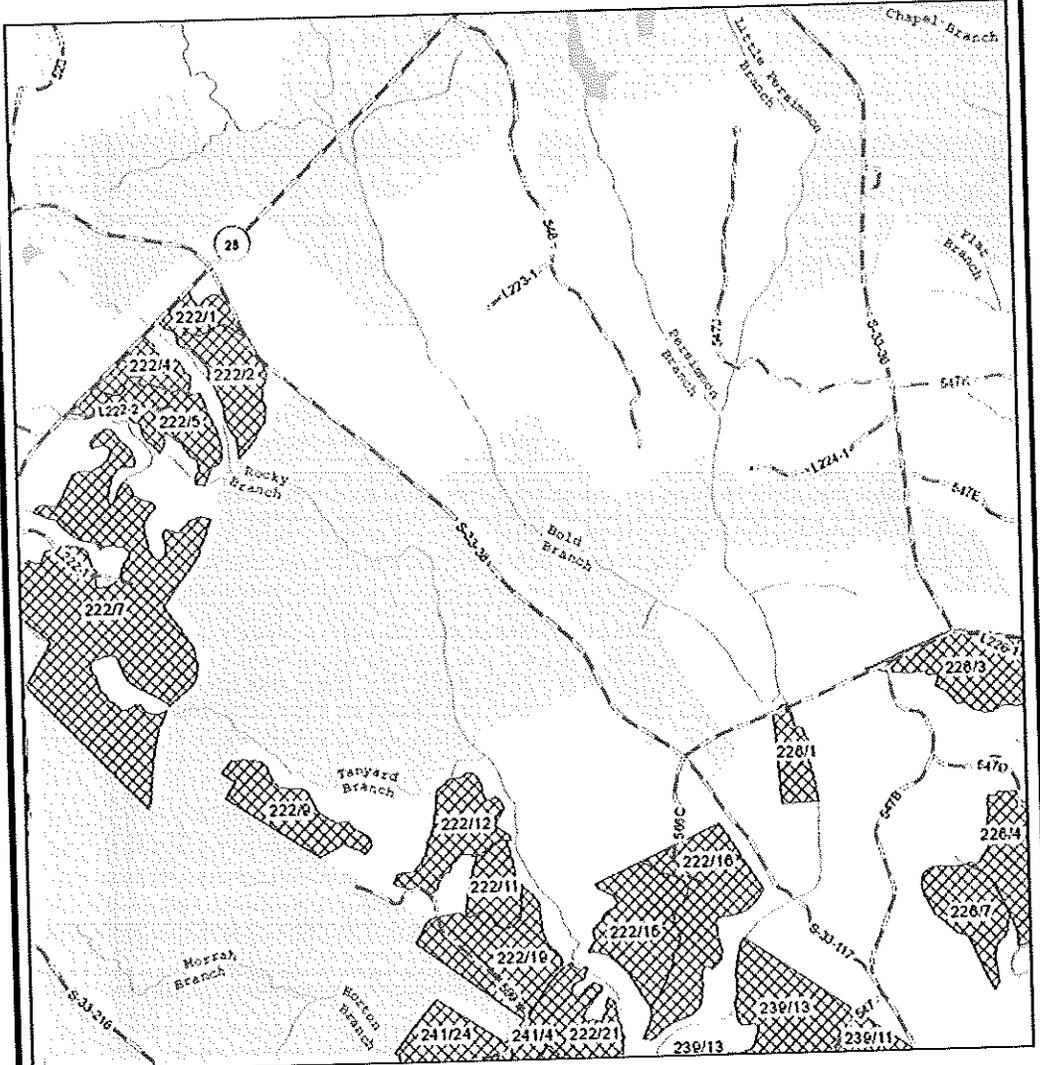
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-  Private Land
-  Forest Service



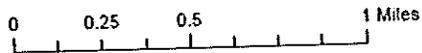
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Data Source: USGS NHD stream features

# Watson Hill Project Proposed Action



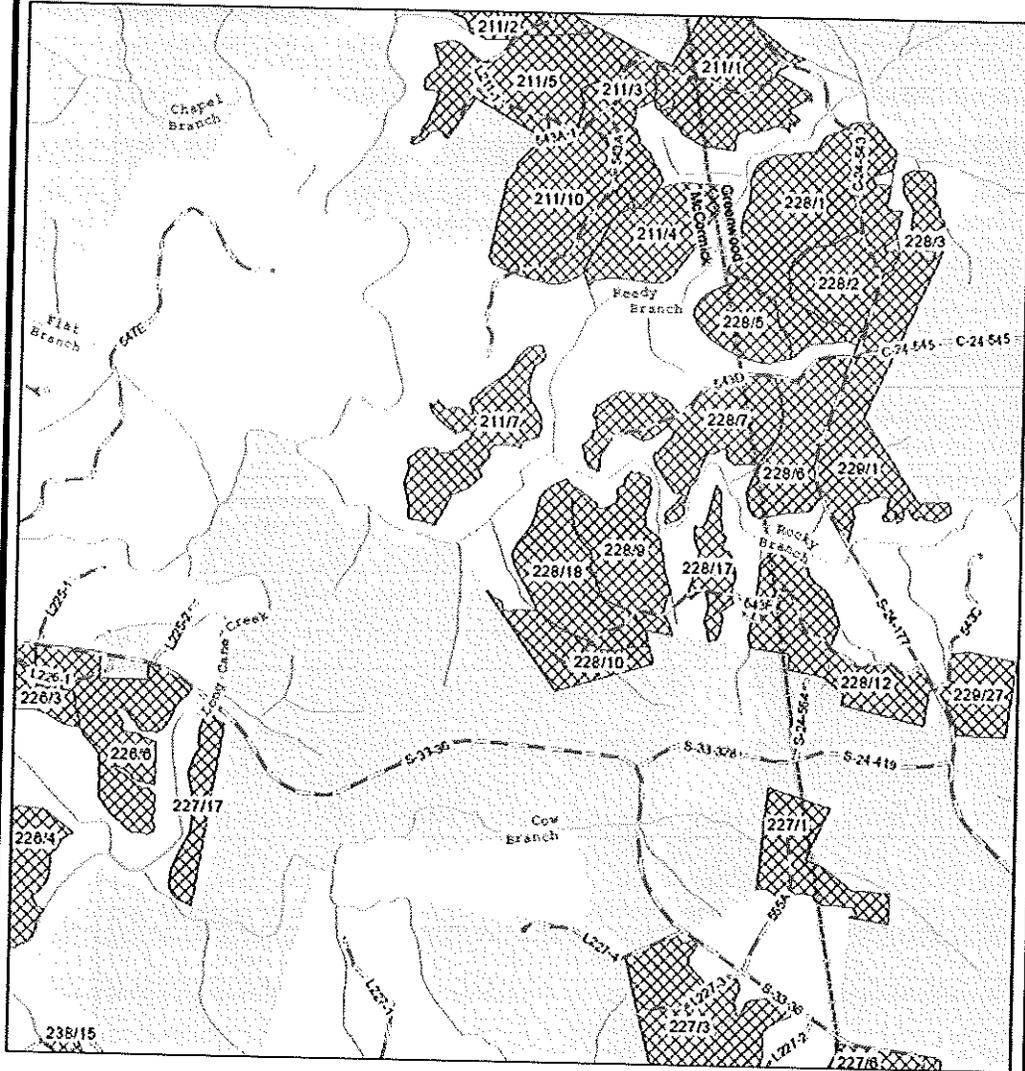
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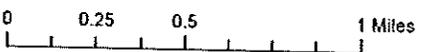
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Data Source: USGS NHD stream outlines

# Watson Hill Project Proposed Action



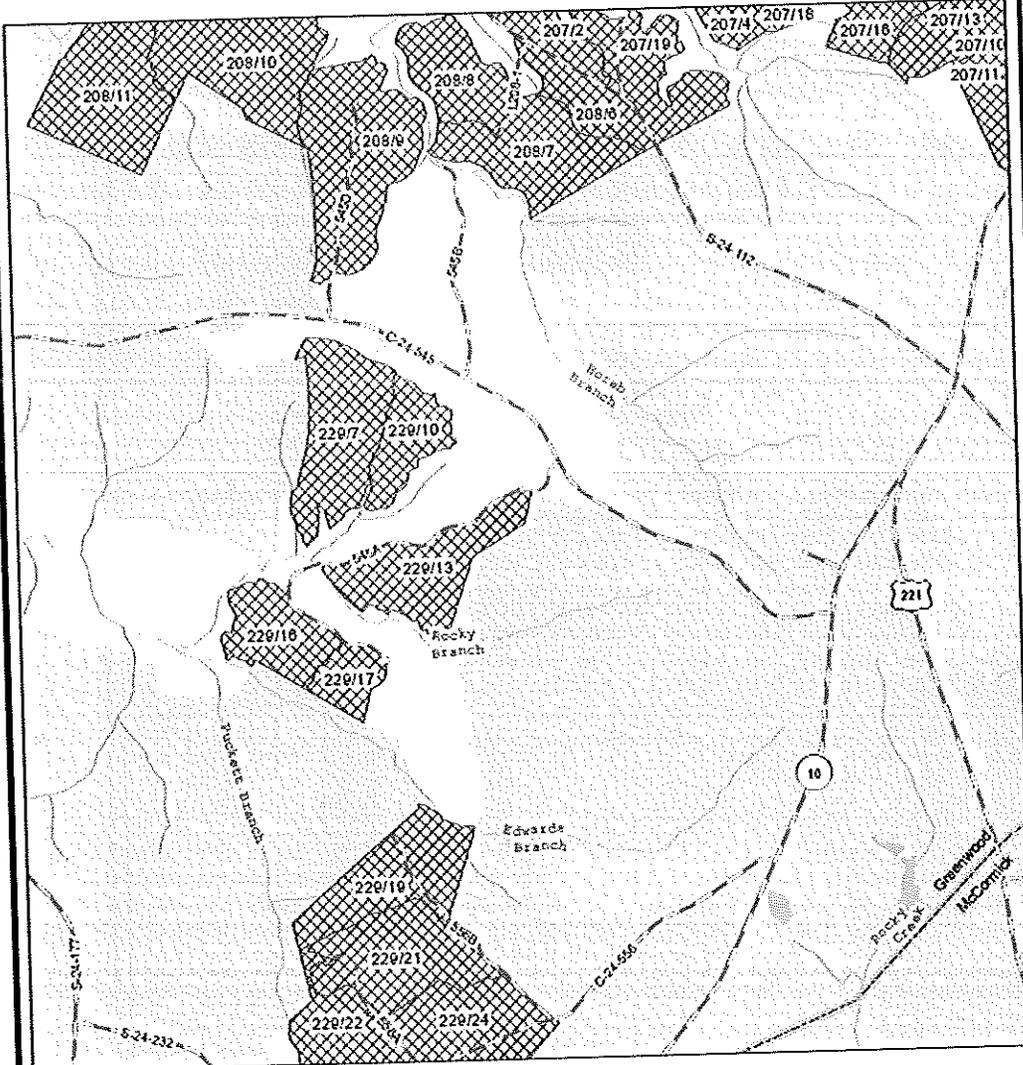
- Watson Hill Stands
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- Forest Service



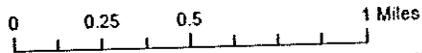
The Forest Service uses the most current and complete data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy including aerial photos, maps, field notes, or other data. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. For more information, contact Forest Service and/or the National Forest Supervisor's Office.

Data Source: USGS 1:250,000 stream flowlines

# Watson Hill Project Proposed Action



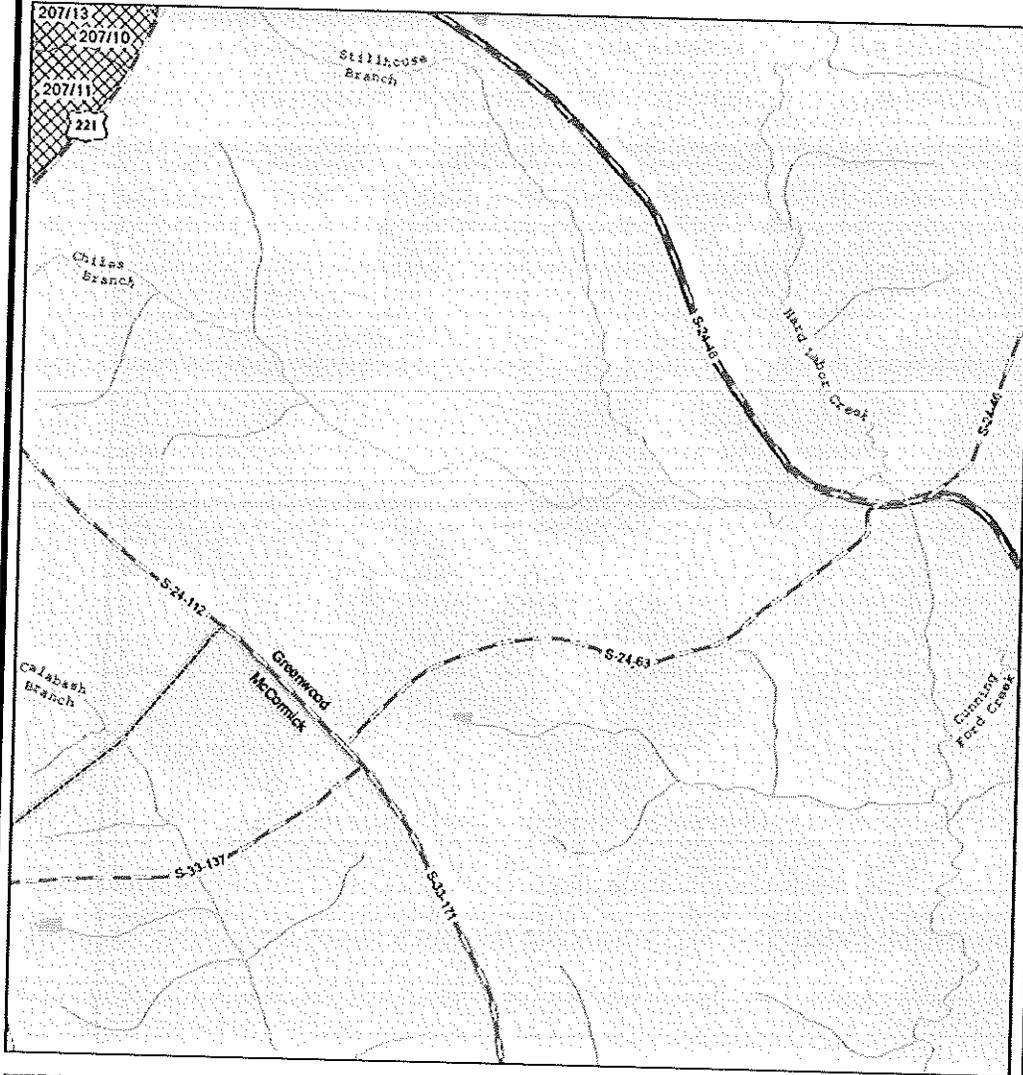
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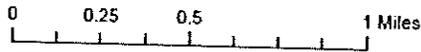
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Data Source: USGS NHD stream footlines

# Watson Hill Project Proposed Action



-  Watson Hill Stands
-  Road
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-  Forest Service

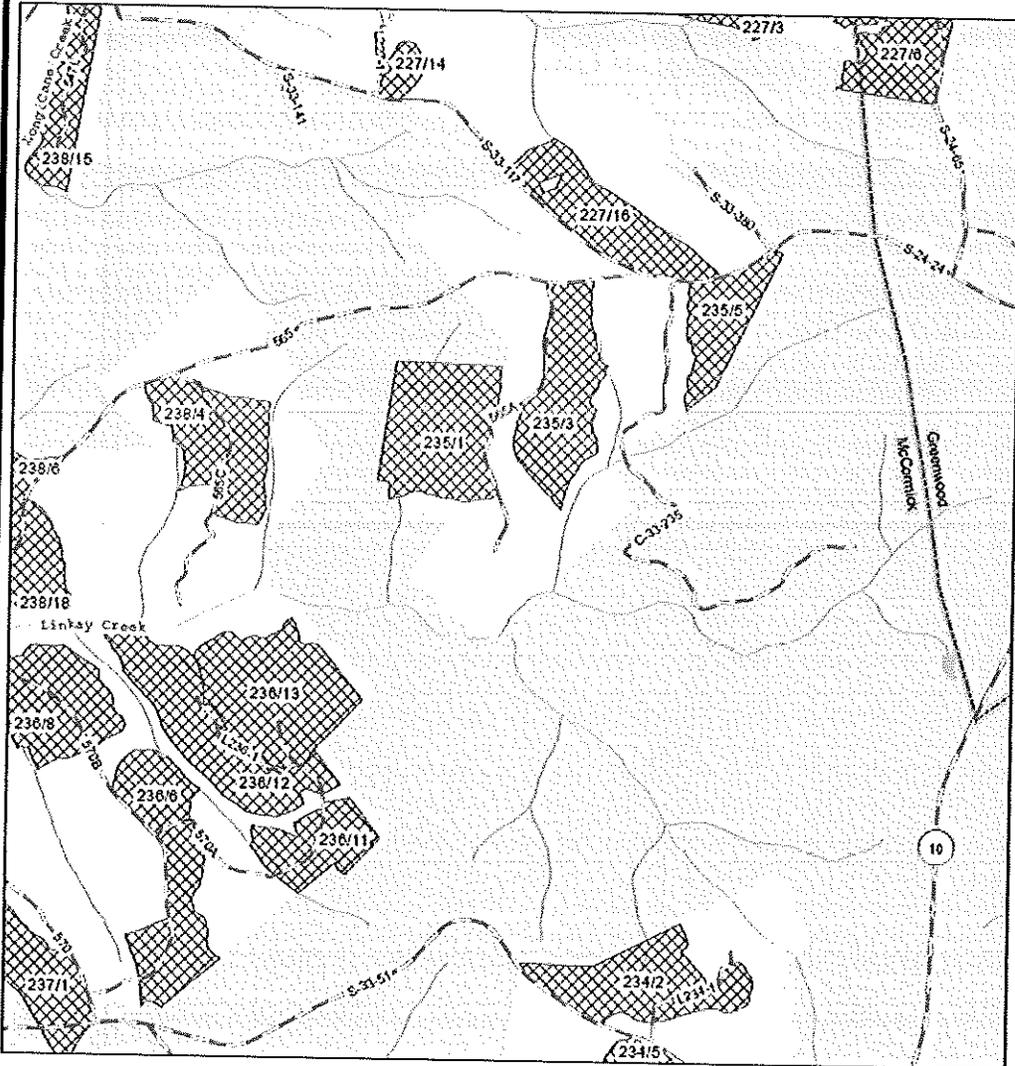


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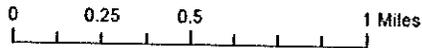
Data Source: USGS NHD stream footlines



# Watson Hill Project Proposed Action



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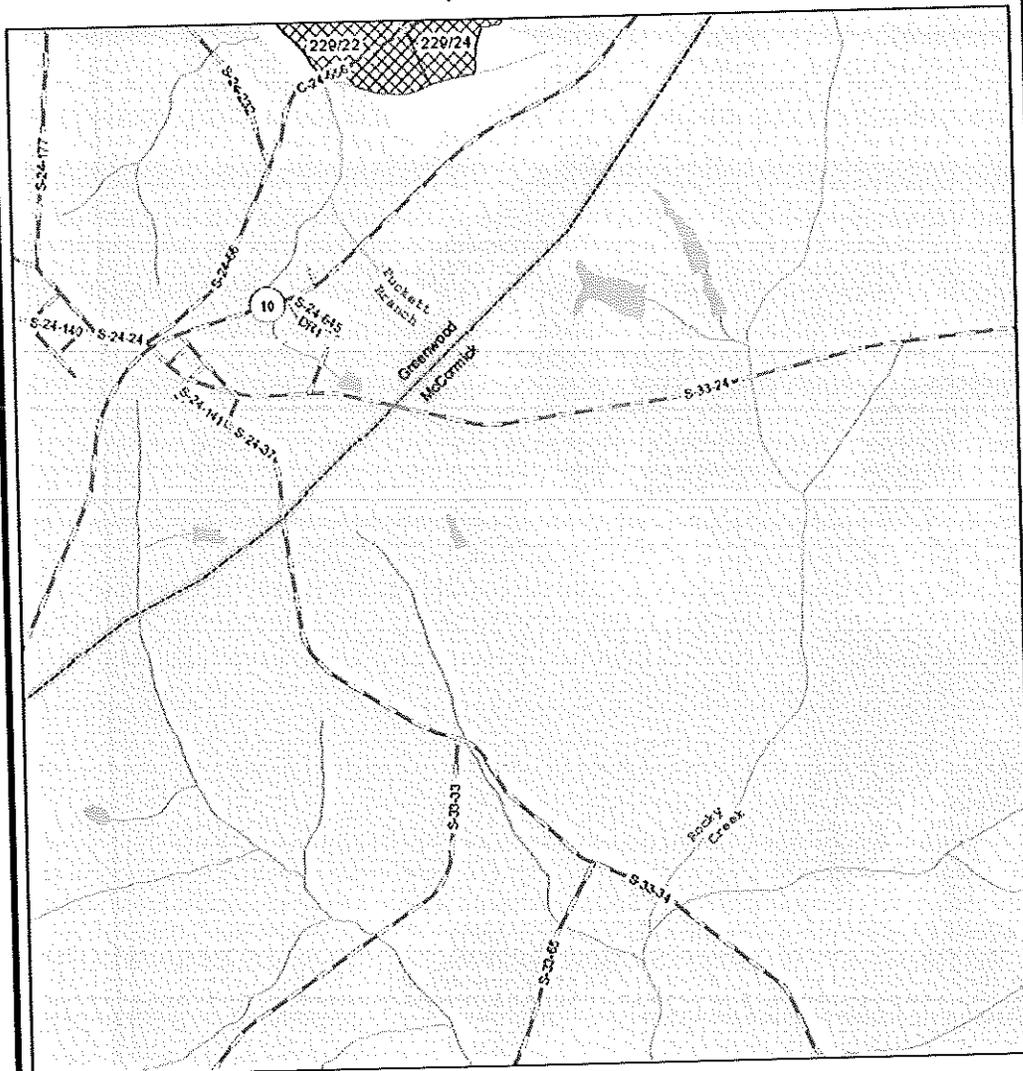


The Forest Service uses the most current and complete data available. GIS data and products accuracy may vary. They may be developed from sources of differing accuracy. Accuracy of certain data may be based on modeling or interpretation, or incomplete work, but is not intended for use as a substitute for professional data. The Forest Service reserves the right to correct, update, modify, or replace GIS products without notification. For more information, contact Patrick Weston and Staff at National Forest Supervisor's Office.

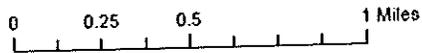


Data Source: UGGS NHD stream boundaries

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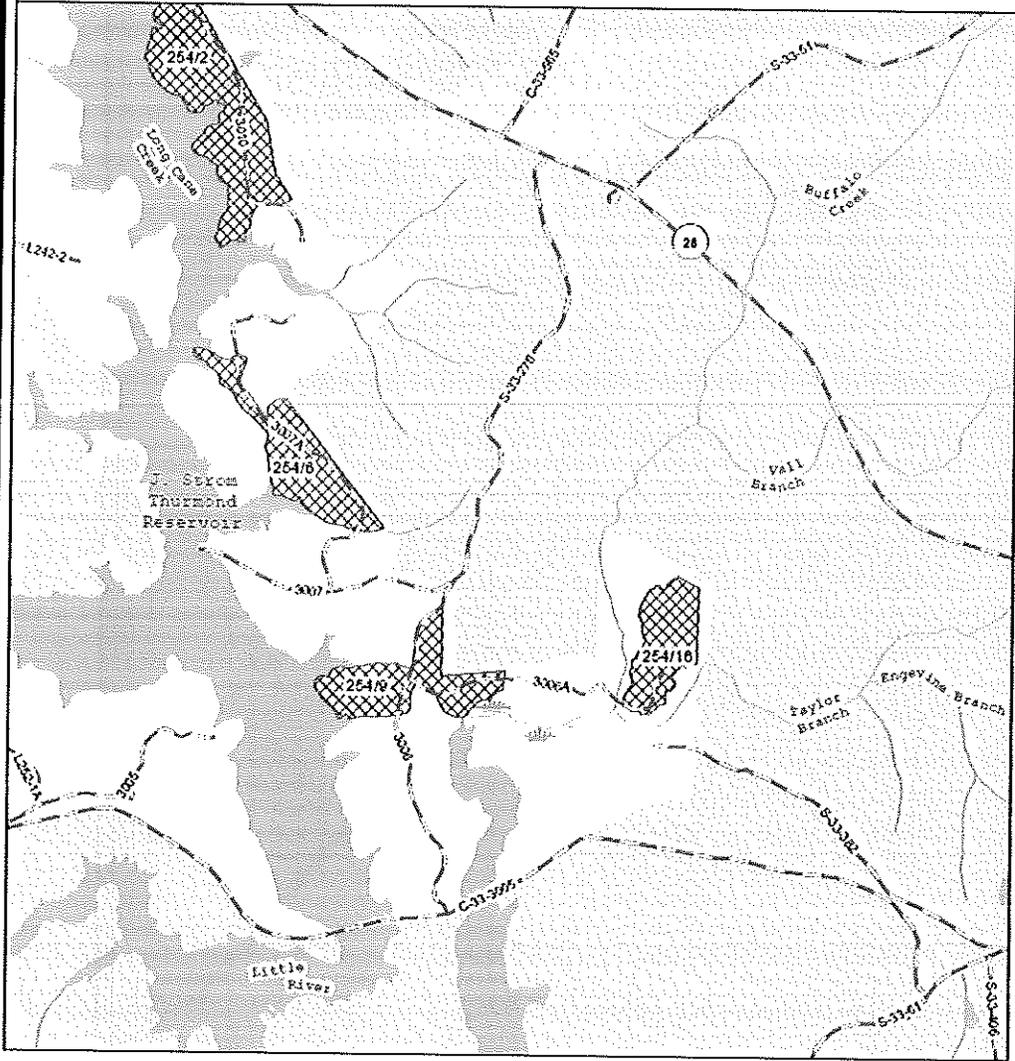
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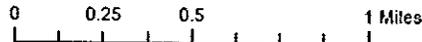
Data Source: USGS NHD stream features

# Watson Hill Project Proposed Action



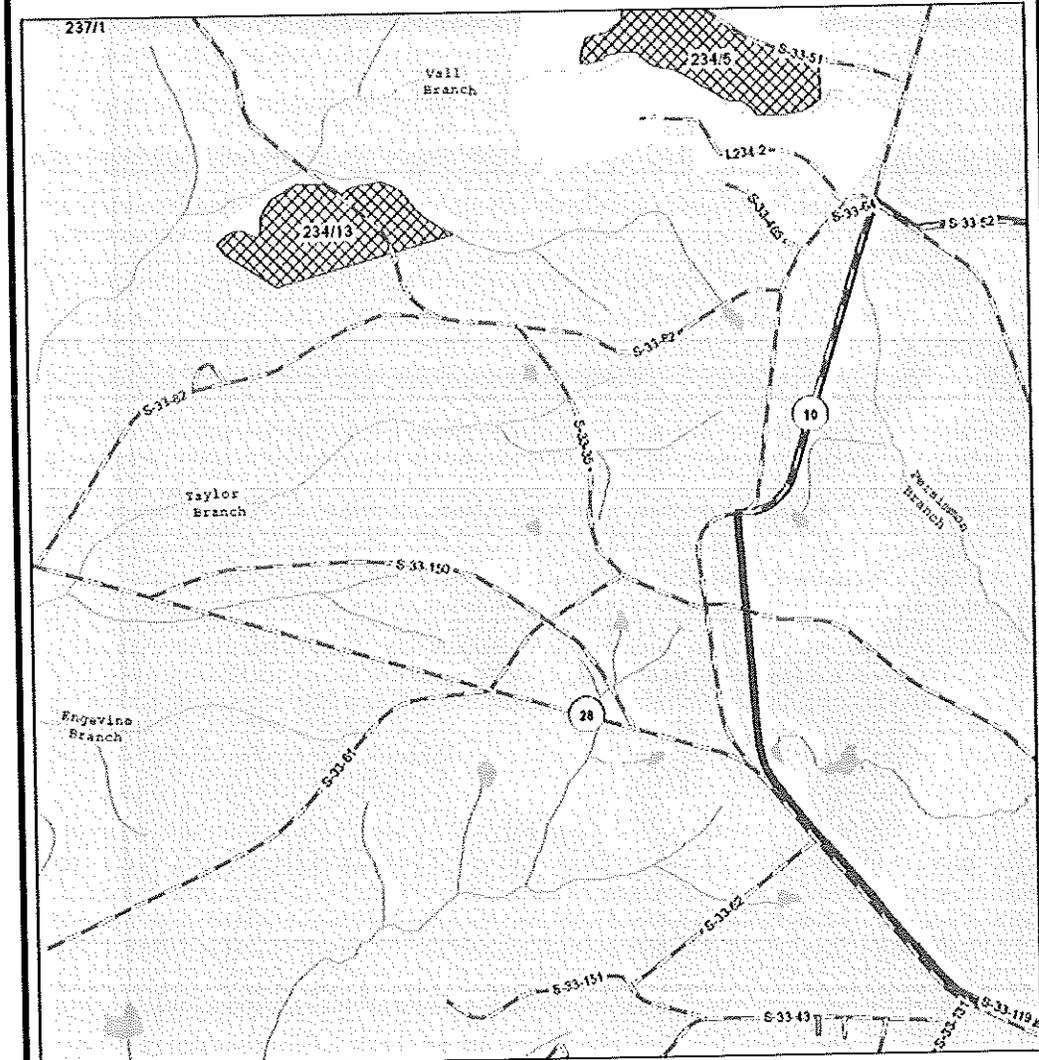
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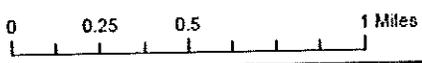


Data Source: USGS NHD stream flowlines

# Watson Hill Project Proposed Action



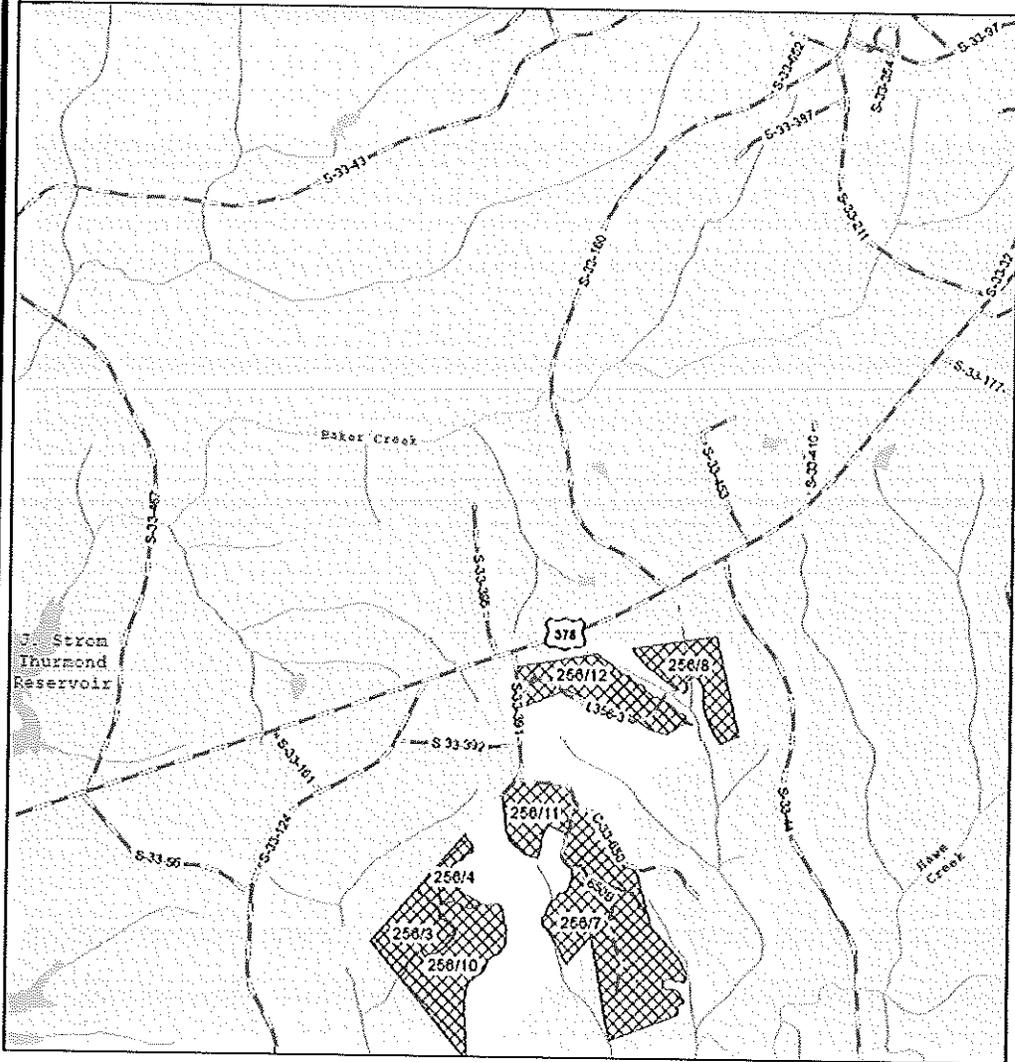
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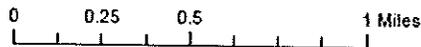
The Forest Service uses the most current and complete data available. USGS data and procedures are used. They may be developed from sources differing in accuracy or in the way certain data are collected or interpreted. The Forest Service does not warrant the accuracy of the data for purposes other than those for which they were collected. The Forest Service reserves the right to correct, update, modify, or replace this product without notice. For more information, contact Forest Management and Planning Division, National Forest Supervisor's Office.

Data Source: USGS NHD stream flow/area

# Watson Hill Project Proposed Action



- Watson Hill Stands
- Road
- Forest Boundary
- Private Land
- Forest Service



The Forest Service uses the most current and accurate data available. GIS data and product accuracy may vary. They may be developed from sources of differing accuracy, accuracy only of certain scales, based on modeling or interpolation, horizontal and/or vertical, etc. Using GIS products for purposes other than those for which they were created may yield inaccurate or misleading results. The Forest Service reserves the right to correct updates, modify or replace GIS products without notification. For more information, contact Frank Walton and Sutter National Forest Supervisor's Office.

Data Source: USGS NHD stream footlines

