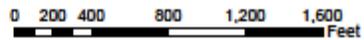
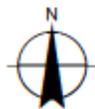
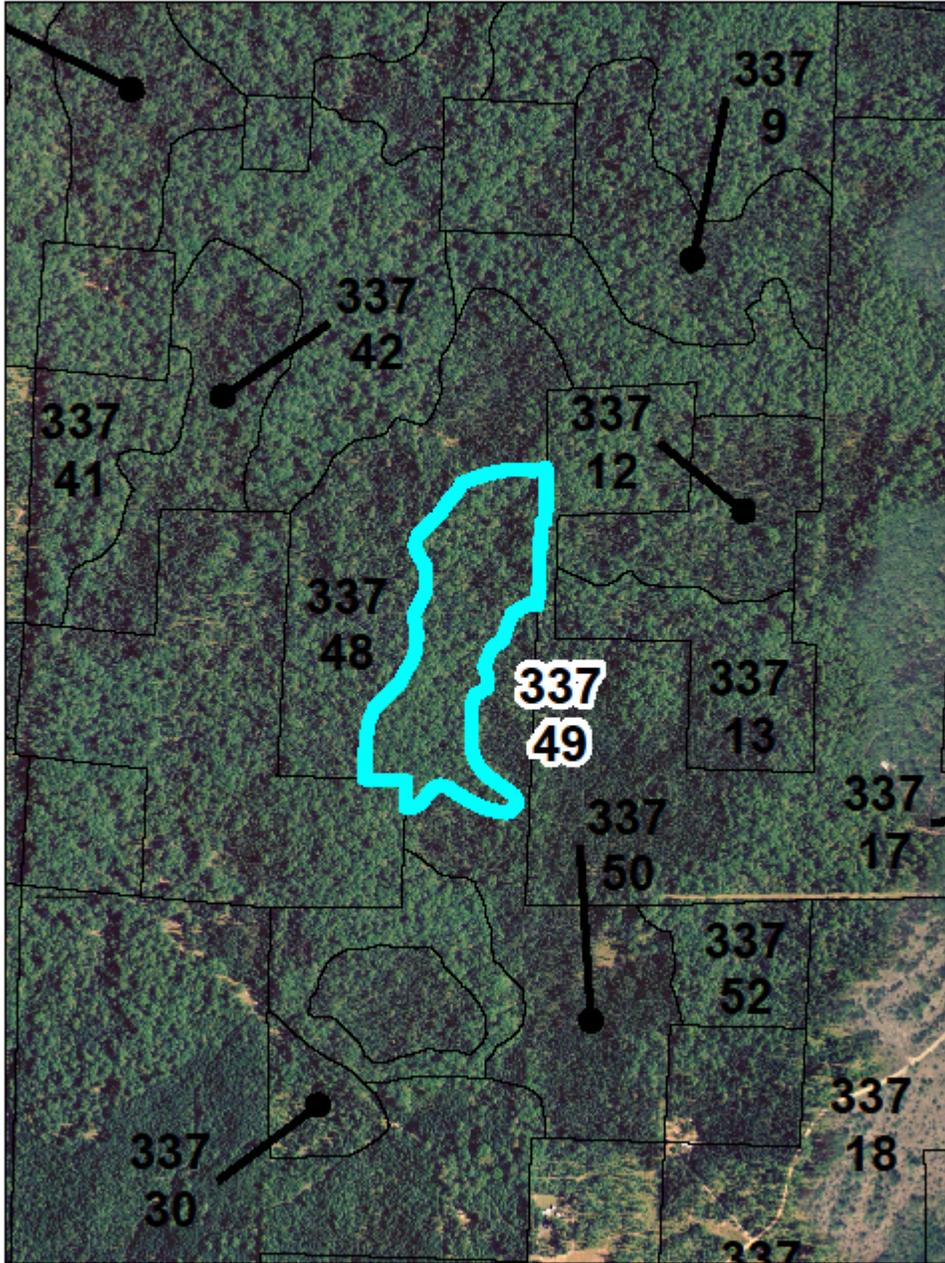


# County Line Fuels Project Treatment Unit Card 23



## **Treatment Unit Card 23**

**Alternatives:** 2

**Compartment:** 337

**Stand:** 49

**Acreage Treated:** 21

**Treatment:** Sanitation; Pile and burn

**District:** Cadillac-Manistee

**Location:** T20N, R16W, Sec 12; Mason County

**ELTP:** 10

**Unit Description:** A jack pine-oak stand with a year of origin of 1905 and a basal area (BA) of 100. It is located on LTA 1 in Management Area 4.2.

**Resource Prescription:** Remove decadent/high risk jack pine; retain a minimum of 40 BA of trees >5" dbh. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**Fuels Prescription:** Machine pile material resulting from sanitation cut throughout the stand. Piles can vary in size and where possible should not be placed under overstory trees.

Burn the piles created during machine piling. This would take place when long range weather forecasts would insure that fire does not spread from the piles to adjacent land, usually late fall and winter.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Prescribed burning would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts. Prescribed burns would be conducted only when smoke would be transported away from the Tippy Management Zone (TMZ) or when the majority of the smoke would disperse before reaching the TMZ to protect bats during spring and fall swarming.

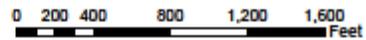
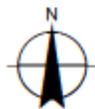
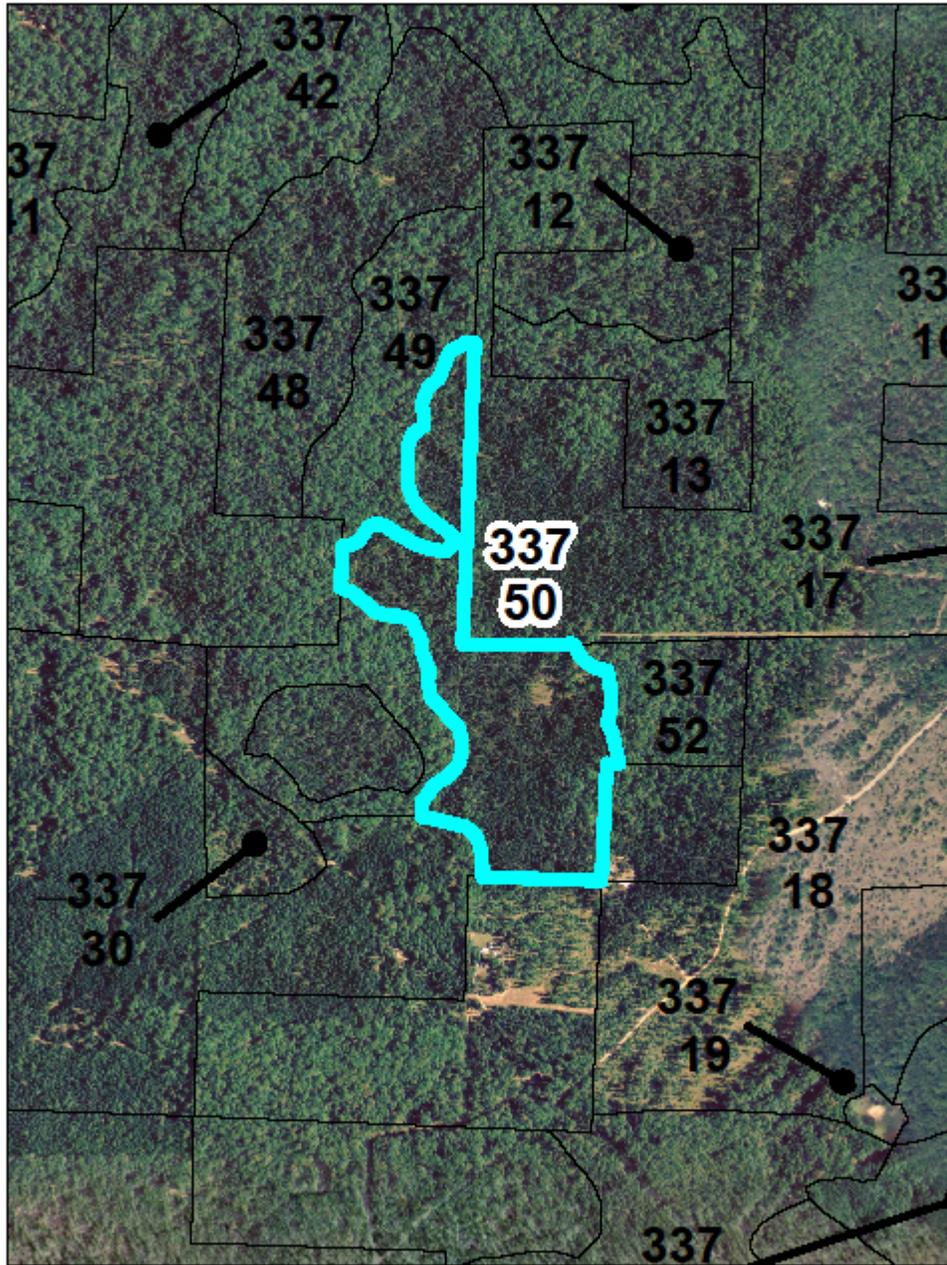
**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

**Concern:** Protection of bald eagle nesting areas.

**Mitigation:** Prescribed burning would be conducted only when smoke would be transported away from active nesting areas. See district wildlife biologist for current nest area locations and status.

# County Line Fuels Project Treatment Unit Card 24



## **Treatment Unit Card 24**

**Alternatives:** 2  
**Compartment:** 337  
**Stand:** 50  
**Acres Treated:** 35

**Treatment:** Clearcut; Site prep  
**District:** Cadillac-Manistee  
**Location:** T20N, R16W, Sec 14; Mason County  
**ELTP:** 10

**Unit Description:** A jack pine stand with a year of origin of 1930 and a basal area (BA) of 70. It is located on LTA 1 in Management Area 4.2.

**Resource Prescription:** Retain 10-20 oaks/acre >9" dbh. Site prep for natural regeneration all jack pine and oak <5" dbh. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**NNIS Prescription:** Inject glyphosate capsules into stems of honeysuckle (0.5 ac) with EZ-Ject Lance or stump treatment with 10-20% glyphosate. The alternative is the mechanical removal twice a year for 3-5 years.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

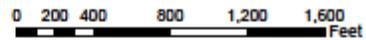
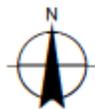
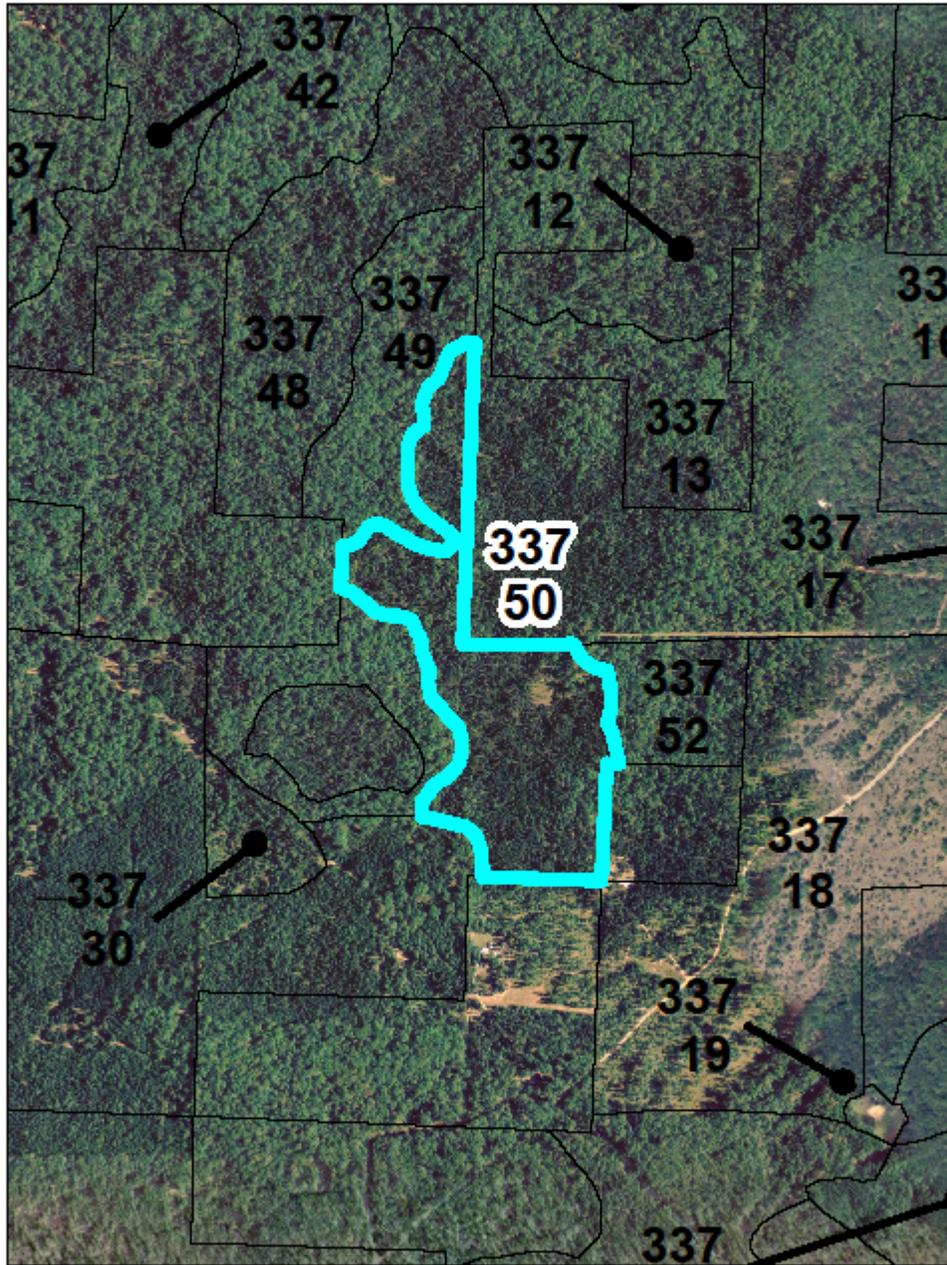
**Concern:** Cultural resources found in stand.

**Mitigation:** Avoid cultural resource, which will be marked with a 20-30 meter flagged boundary prior to project initiation. If any unknown cultural resources are discovered during project activities for the proposed project or there is a change in location of the APE, then a professional Cultural Resources Specialist must be contacted. Project work will not be allowed to resume until the cultural resources have been documented and the sites are preserved from any potential impacts.

**Concern:** Protection of Hill's thistle (RFSS plant) in Compartment 337 Stand 50.

**Mitigation:** Create buffer around confirmed Hill's thistle specimens. Prevent vehicle traffic through the areas and keep piles out of sensitive areas. Hand-cut shrubs and trees within buffer to maintain open canopy for species.

# County Line Fuels Project Treatment Unit Card 24



## Treatment Unit Card 24

**Alternatives:** 3, 4  
**Compartment:** 337  
**Stand:** 50  
**Acreage Treated:** 35

**Treatment:** Barren restoration; Broadcast burn  
**District:** Cadillac-Manistee  
**Location:** T20N, R16W, Sec 12, 13; Mason County  
**ELTP:** 10

**Unit Description:** A jack pine stand with a year of origin of 1930 and a basal area (BA) of 70. It is located on LTA 1 in Management Area 4.2.

**Resource Prescription:** Thin to 20-30 BA; retain all oak with a dbh >8"; reduce conifer activity fuel by 95%; allow tree length skidding and complete topwood utilization. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**This stand would be moved from a land suitability classification (LSC) 500 to an LSC 600, removing the stand from the Forests' timber base.**

**Fuels Prescription:** A broadcast burn would be conducted. The prescribed burn would take place after a burn plan is written and approved for the units to be treated. Details of desired weather conditions, firefighting forces required, safety concerns, and other critical issues would be detailed in the burn plan. The objectives are to reduce fuel loading, reduce ladder fuels and to maintain a more open condition to reduce the possibility of catastrophic wildfire. The prescribed burn should reduce 1 hour fuels 75% (10-90%), 10 hour fuels 50% (5-80% range), 100 hour fuels 35% (10-70% range), and 1000 hour fuels 10% (0-40% range). Exposed mineral soil would occur on no more than 15% of the stand. Over all tree mortality in the residual stand should not exceed 15%. Manage smoke to minimize impacts to smoke sensitive areas.

A series of maintenance burns may be required to reduce additional fuel buildup; encourage continued growth and sustain plant species dependent on fire; and, discourage regeneration of tree species associated with extreme fire behavior. It is anticipated that up to two additional burns spaced every 3-5 years may be required to achieve these goals.

**NNIS Prescription:** Inject glyphosate capsules into stems of honeysuckle (0.5 ac) with EZ-Ject Lance or stump treatment with 10-20% glyphosate. The alternative is the mechanical removal twice a year for 3-5 years.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Prescribed burning would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts. Prescribed burns would be conducted only when smoke would be transported away from the Tippy Management Zone (TMZ) or when the majority of the smoke would disperse before reaching the TMZ to protect bats during spring and fall swarming.

**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

**Concern:** Protection of bald eagle nesting areas.

**Mitigation:** Prescribed burning would be conducted only when smoke would be transported away from active nesting areas. See district wildlife biologist for current nest area locations and status.

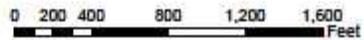
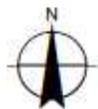
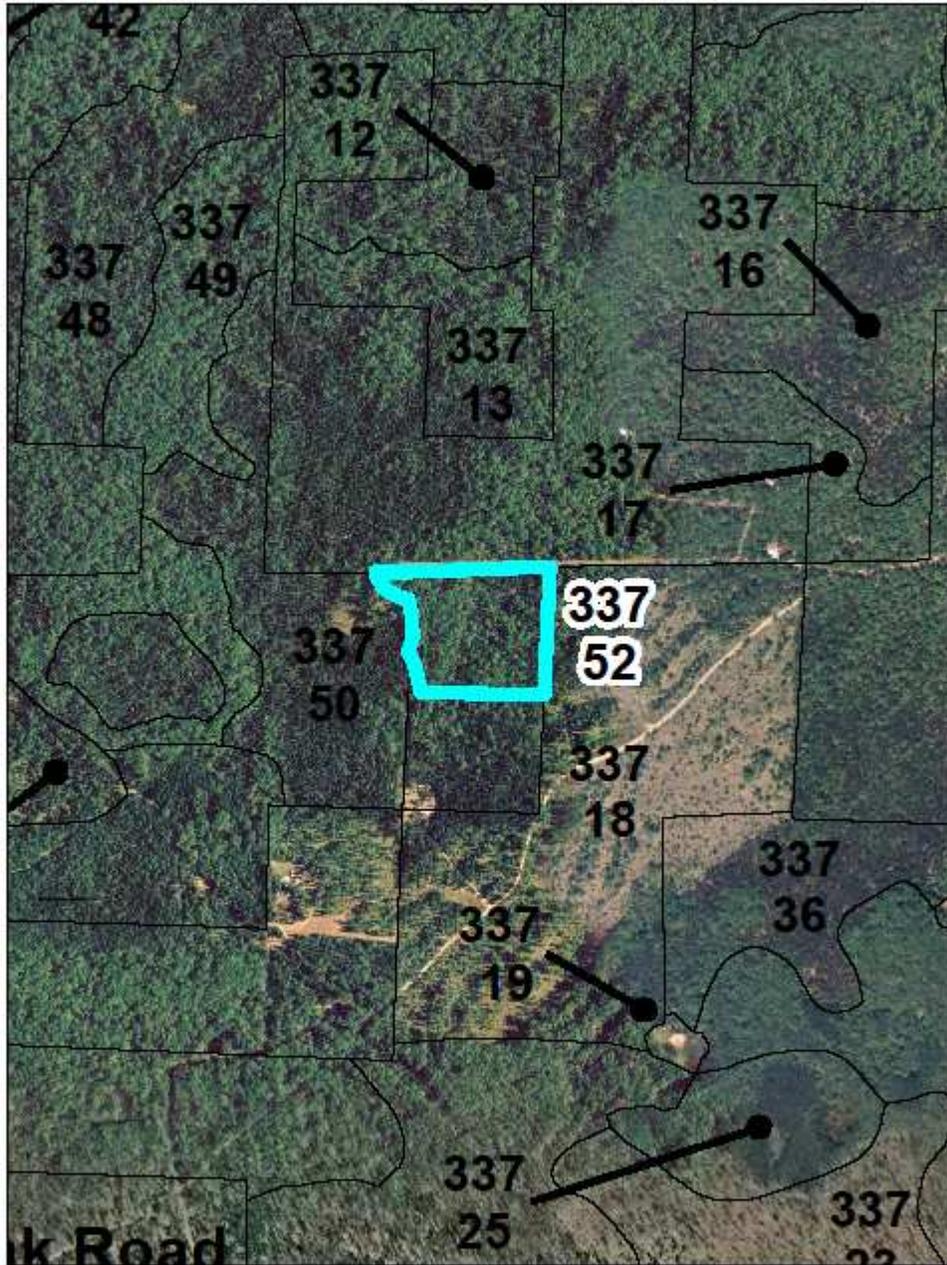
**Concern:** Cultural resources found in stand.

**Mitigation:** Avoid cultural resource, which will be marked with a 20-30 meter flagged boundary prior to project initiation. If any unknown cultural resources are discovered during project activities for the proposed project or there is a change in location of the APE, then a professional Cultural Resources Specialist must be contacted. Project work will not be allowed to resume until the cultural resources have been documented and the sites are preserved from any potential impacts.

**Concern:** Protection of Hill's thistle (RFSS plant) in Compartment 337 Stand 50.

**Mitigation:** Create buffer around confirmed Hill's thistle specimens. Prevent vehicle traffic through the areas and keep piles out of sensitive areas. Hand-cut shrubs and trees within buffer to maintain open canopy for species.

# County Line Fuels Project Treatment Unit Card 25



## **Treatment Unit Card 25**

**Alternatives:** 2, 4  
**Compartment:** 337  
**Stand:** 52  
**Acreage Treated:** 11

**Treatment:** Sanitation; Pile and burn  
**District:** Cadillac-Manistee  
**Location:** T20N, R16W, Sec 13; Mason County  
**ELTP:** 10

**Unit Description:** A jack pine-oak stand with a year of origin of 1930 and a basal area (BA) of 100. It is located on LTA 1 in Management Area 4.2.

**Resource Prescription:** Remove decadent/high risk jack pine; retain a minimum of 40 BA of trees >5" dbh. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**Fuels Prescription:** Machine pile material resulting from sanitation cut throughout the stand. Piles can vary in size and where possible should not be placed under overstory trees.

Burn the piles created during machine piling. This would take place when long range weather forecasts would insure that fire does not spread from the piles to adjacent land, usually late fall and winter.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Prescribed burning would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts. Prescribed burns would be conducted only when smoke would be transported away from the Tippy Management Zone (TMZ) or when the majority of the smoke would disperse before reaching the TMZ to protect bats during spring and fall swarming.

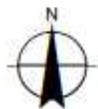
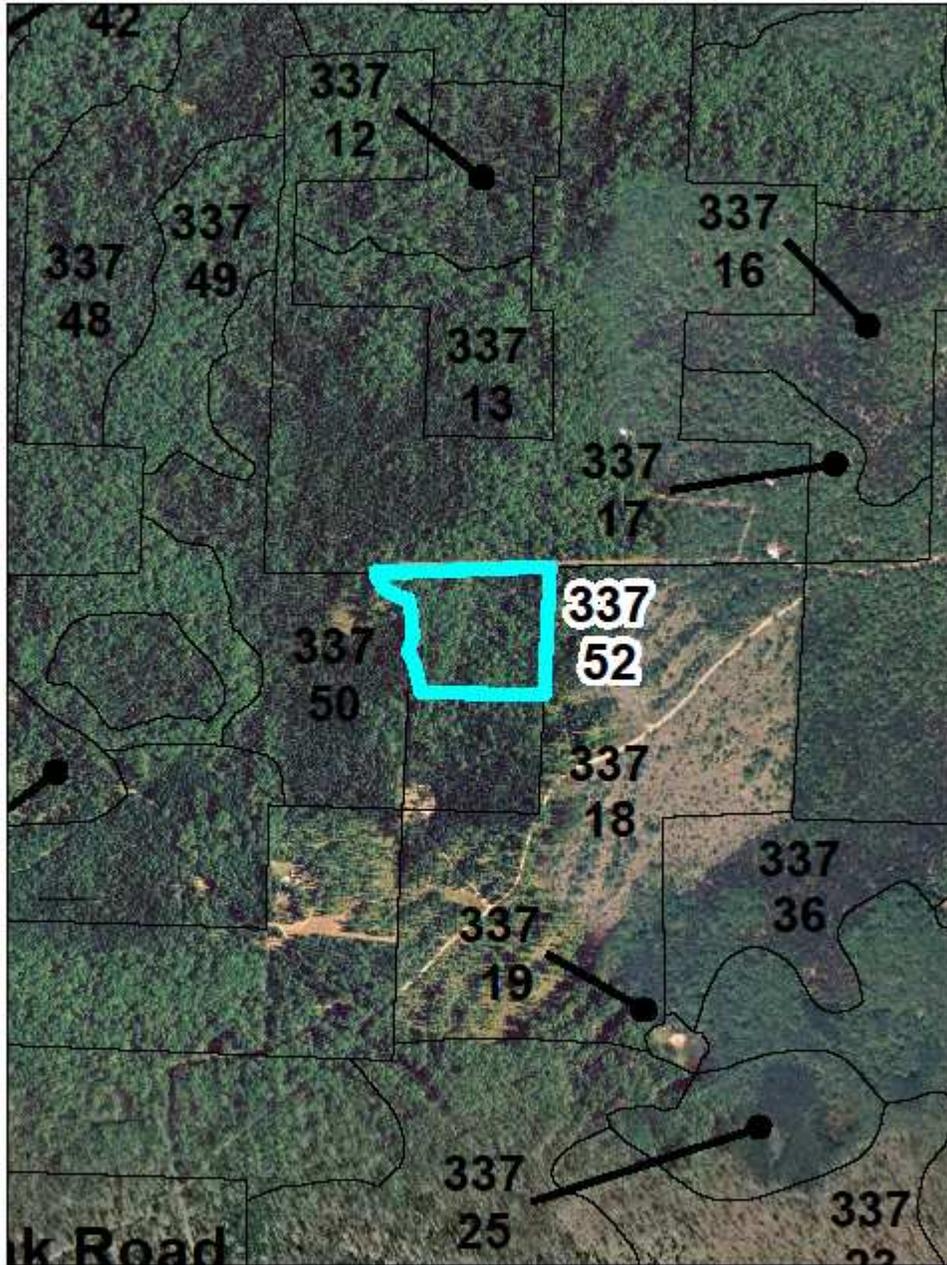
**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

**Concern:** Protection of bald eagle nesting areas.

**Mitigation:** Prescribed burning would be conducted only when smoke would be transported away from active nesting areas. See district wildlife biologist for current nest area locations and status.

# County Line Fuels Project Treatment Unit Card 25



**Treatment Unit Card 25**

**Alternatives:** 3  
**Compartment:** 337  
**Stand:** 52  
**Acreage Treated:** 11

**Treatment:** Shelterwood; Site prep  
**District:** Cadillac-Manistee  
**Location:** T20N, R16W, Sec 13; Mason County  
**ELTP:** 10

**Unit Description:** A jack pine-oak stand with a year of origin of 1930 and a basal area (BA) of 100. It is located on LTA 1 in Management Area 4.2.

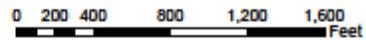
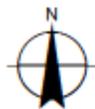
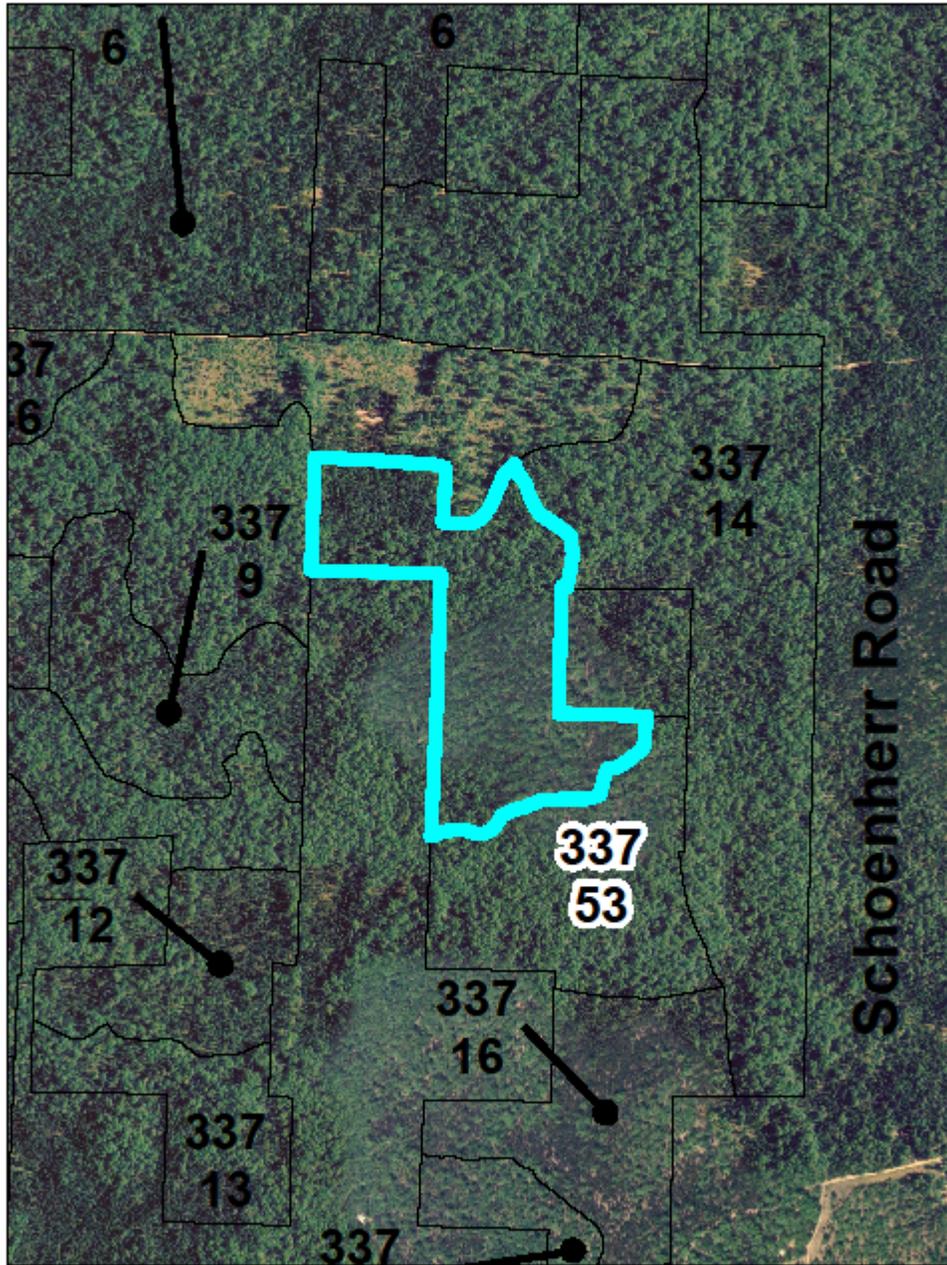
**Resource Prescription:** Shelterwood removal cut harvest; remove decadent/high risk jack pine and oak <8" dbh. Site prep for natural regeneration by hand tool felling of all jack pine and oak <5" dbh. Retain a minimum of 30 BA of oak and pine >8" dbh. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

# County Line Fuels Project Treatment Unit Card 26



## **Treatment Unit Card 26**

**Alternatives:** 2  
**Compartment:** 337  
**Stand:** 53  
**Acreage Treated:** 36

**Treatment:** Barren restoration; Broadcast burn  
**District:** Cadillac-Manistee  
**Location:** T20N, R16W, Sec 12; Mason County  
**ELTP:** 10

**Unit Description:** A jack pine-oak stand with a year of origin of 1920 and a basal area (BA) of 100. It is located on LTA 1 in Management Area 4.2.

**Resource Prescription:** Thin to 20-30 BA; retain all oak with a dbh >8"; reduce conifer activity fuel by 95%; allow tree length skidding and complete topwood utilization. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**This stand would be moved from a land suitability classification (LSC) 500 to an LSC 600, removing the stand from the Forests' timber base.**

**Fuels Prescription:** A broadcast burn would be conducted. The prescribed burn would take place after a burn plan is written and approved for the units to be treated. Details of desired weather conditions, firefighting forces required, safety concerns, and other critical issues would be detailed in the burn plan. The objectives are to reduce fuel loading, reduce ladder fuels and to maintain a more open condition to reduce the possibility of catastrophic wildfire. The prescribed burn should reduce 1 hour fuels 75% (10-90%), 10 hour fuels 50% (5-80% range), 100 hour fuels 35% (10-70% range), and 1000 hour fuels 10% (0-40% range). Exposed mineral soil would occur on no more than 15% of the stand. Over all tree mortality in the residual stand should not exceed 15%. Manage smoke to minimize impacts to smoke sensitive areas.

A series of maintenance burns may be required to reduce additional fuel buildup; encourage continued growth and sustain plant species dependent on fire; and, discourage regeneration of tree species associated with extreme fire behavior. It is anticipated that up to two additional burns spaced every 3-5 years may be required to achieve these goals.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Prescribed burning would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts. Prescribed burns would be conducted only when smoke would be transported away from the Tippy Management Zone (TMZ) or when the majority of the smoke would disperse before reaching the TMZ to protect bats during spring and fall swarming.

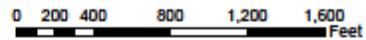
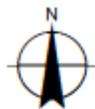
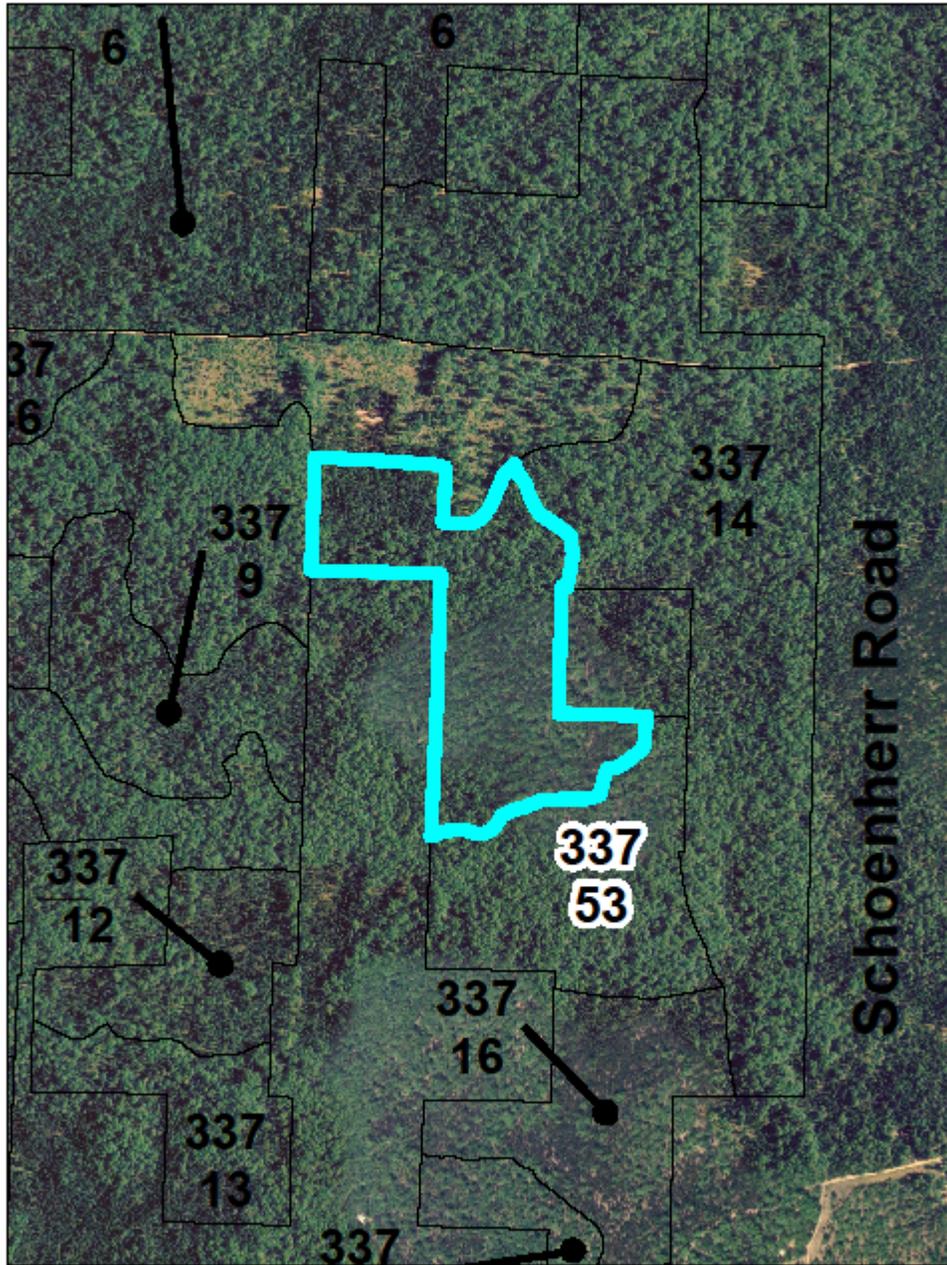
**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

**Concern:** Protection of bald eagle nesting areas.

**Mitigation:** Prescribed burning would be conducted only when smoke would be transported away from active nesting areas. See district wildlife biologist for current nest area locations and status.

# County Line Fuels Project Treatment Unit Card 26



**Treatment Unit Card 26**

**Alternatives:** 3, 4  
**Compartment:** 337  
**Stand:** 53  
**Acreage Treated:** 36

**Treatment:** Shelterwood; Site prep  
**District:** Cadillac-Manistee  
**Location:** T20N, R16W, Sec 12; Mason County  
**ELTP:** 10

**Unit Description:** A jack pine-oak stand with a year of origin of 1920 and a basal area (BA) of 100. It is located on LTA 1 in Management Area 4.2.

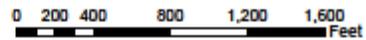
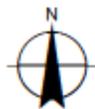
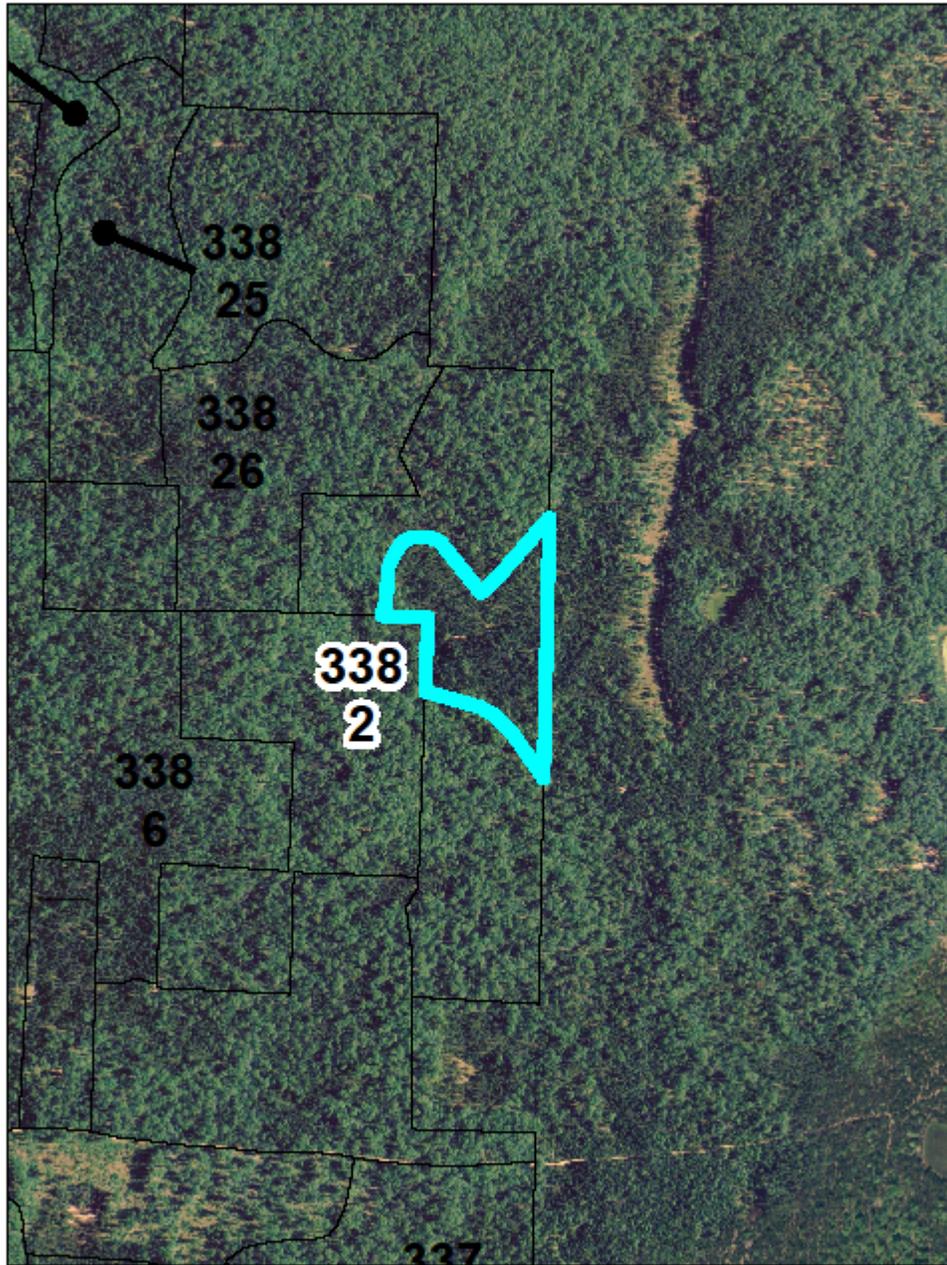
**Resource Prescription:** Shelterwood removal cut harvest; remove decadent/high risk jack pine and oak <8" dbh. Site prep for natural regeneration by hand tool felling of all jack pine and oak <5" dbh. Retain a minimum of 30 BA of oak and pine >8" dbh. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

# County Line Fuels Project Treatment Unit Card 27



**Treatment Unit Card 27****Alternatives:** 2**Compartment:** 338**Stand:** 2**Acreage Treated:** 14**Treatment:** Clearcut; Site prep**District:** Cadillac-Manistee**Location:** T20N, R16W, Sec 1; Mason County**ELTP:** 10

**Unit Description:** A jack pine stand with a year of origin of 1930 and a basal area (BA) of 70. It is located on LTA 1 in Management Area 4.2.

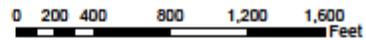
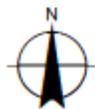
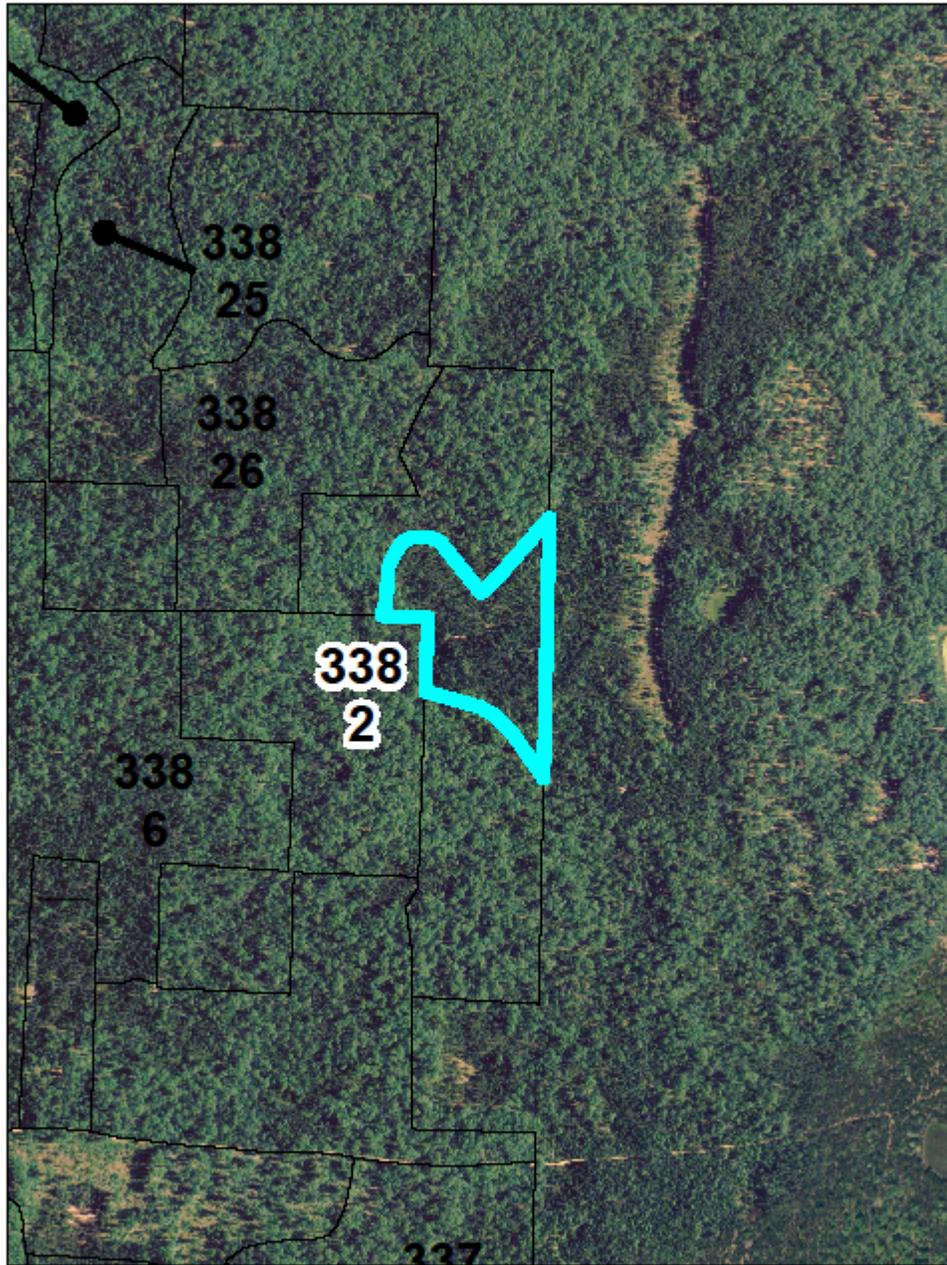
**Resource Prescription:** Retain 10-20 oaks/acre >9" dbh. Site prep for natural regeneration all jack pine and oak <5" dbh. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

# County Line Fuels Project Treatment Unit Card 27



**Treatment Unit Card 27**

**Alternatives:** 3, 4  
**Compartment:** 338  
**Stand:** 2  
**Acreage Treated:** 14

**Treatment:** Shelterwood; Site prep  
**District:** Cadillac-Manistee  
**Location:** T20N, R16W, Sec 1; Mason County  
**ELTP:** 10

**Unit Description:** A jack pine stand with a year of origin of 1930 and a basal area (BA) of 70. It is located on LTA 1 in Management Area 4.2.

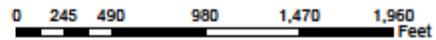
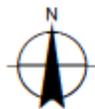
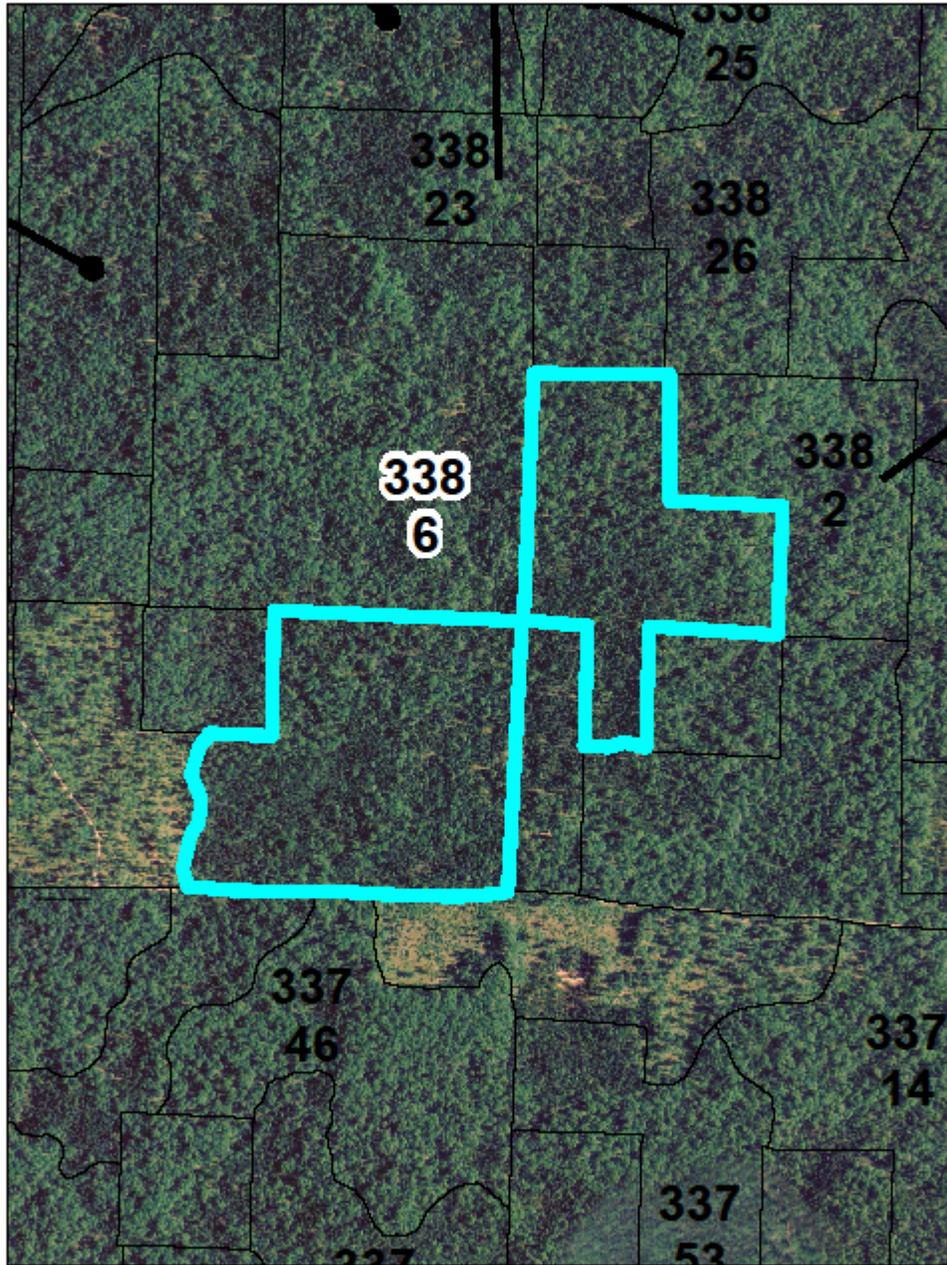
**Resource Prescription:** Shelterwood removal cut harvest; remove decadent/high risk jack pine and oak <8" dbh. Site prep for natural regeneration by hand tool felling of all jack pine and oak <5" dbh. Retain a minimum of 30 BA of oak and pine >8" dbh. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

# County Line Fuels Project Treatment Unit Card 28



## **Treatment Unit Card 28**

**Alternatives:** 2  
**Compartment:** 338  
**Stand:** 6  
**Acreage Treated:** 75

**Treatment:** Clearcut; Site prep; Barren restoration; Broadcast burn  
**District:** Cadillac-Manistee  
**Location:** T20N, R16W, Sec 1; Mason County  
**ELTP:** 10

**Unit Description:** A jack pine-oak stand with a year of origin of 1952 and a basal area (BA) of 80. It is located on LTA 1 in Management Area 4.2.

**Resource Prescription (south 40 ac):** Retain 10-20 oaks/acre >9" dbh. Site prep for natural regeneration all jack pine and oak <5" dbh. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**Resource Prescription (east 35 ac):** Thin to 20-30 BA; retain all oak with a dbh >8"; reduce conifer activity fuel by 95%; allow tree length skidding and complete topwood utilization. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25).

**The east 35 acres of this stand would be moved from a land suitability classification (LSC) 500 to an LSC 600, removing these acres from the Forests' timber base.**

**Fuels Prescription (east 35 ac):** A broadcast burn would be conducted. The prescribed burn would take place after a burn plan is written and approved for the units to be treated. Details of desired weather conditions, firefighting forces required, safety concerns, and other critical issues would be detailed in the burn plan. The objectives are to reduce fuel loading, reduce ladder fuels and to maintain a more open condition to reduce the possibility of catastrophic wildfire. The prescribed burn should reduce 1 hour fuels 75% (10-90%), 10 hour fuels 50% (5-80% range), 100 hour fuels 35% (10-70% range), and 1000 hour fuels 10% (0-40% range). Exposed mineral soil would occur on no more than 15% of the stand. Over all tree mortality in the residual stand should not exceed 15%. Manage smoke to minimize impacts to smoke sensitive areas.

A series of maintenance burns may be required to reduce additional fuel buildup; encourage continued growth and sustain plant species dependent on fire; and, discourage regeneration of tree species associated with extreme fire behavior. It is anticipated that up to two additional burns spaced every 3-5 years may be required to achieve these goals.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Prescribed burning would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts. Prescribed burns would be conducted only when smoke would be transported away from the Tippy Management Zone (TMZ) or when the majority of the smoke would disperse before reaching the TMZ to protect bats during spring and fall swarming.

**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

**Concern:** Protection of bald eagle nesting areas.

**Mitigation:** Prescribed burning would be conducted only when smoke would be transported away from active nesting areas. See district wildlife biologist for current nest area locations and status.

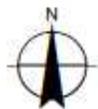
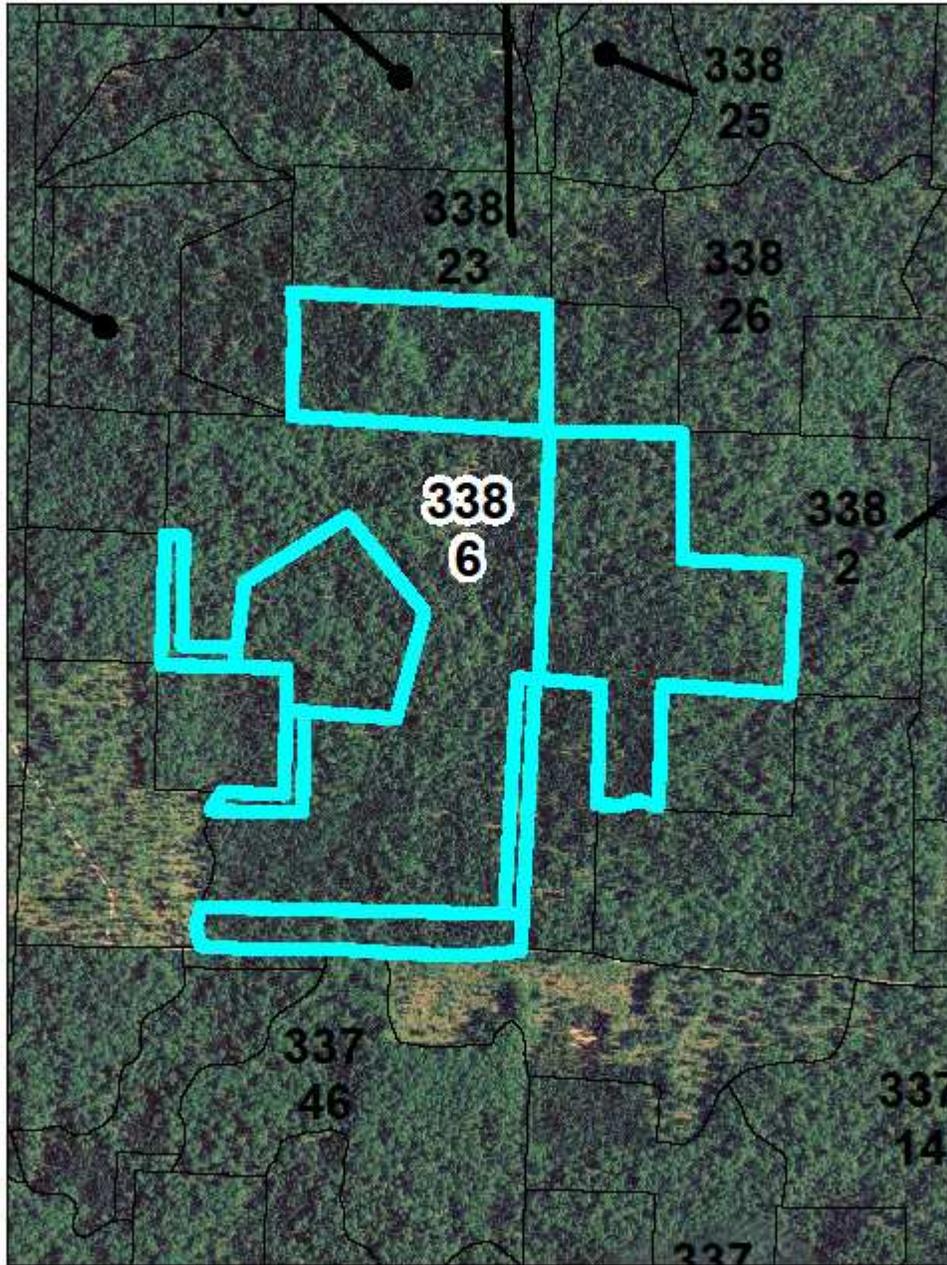
**Concern:** A small wetland is located on the closed forest road just north of the private 10 acres.

**Mitigation:** Identify and protect using minimum set-back distance.

**Concern:** Cultural resources found in stand.

**Mitigation:** Avoid cultural resource, which will be marked with a 20-30 meter flagged boundary prior to project initiation. If any unknown cultural resources are discovered during project activities for the proposed project or there is a change in location of the APE, then a professional Cultural Resources Specialist must be contacted. Project work will not be allowed to resume until the cultural resources have been documented and the sites are preserved from any potential impacts.

# County Line Fuels Project Treatment Unit Card 28



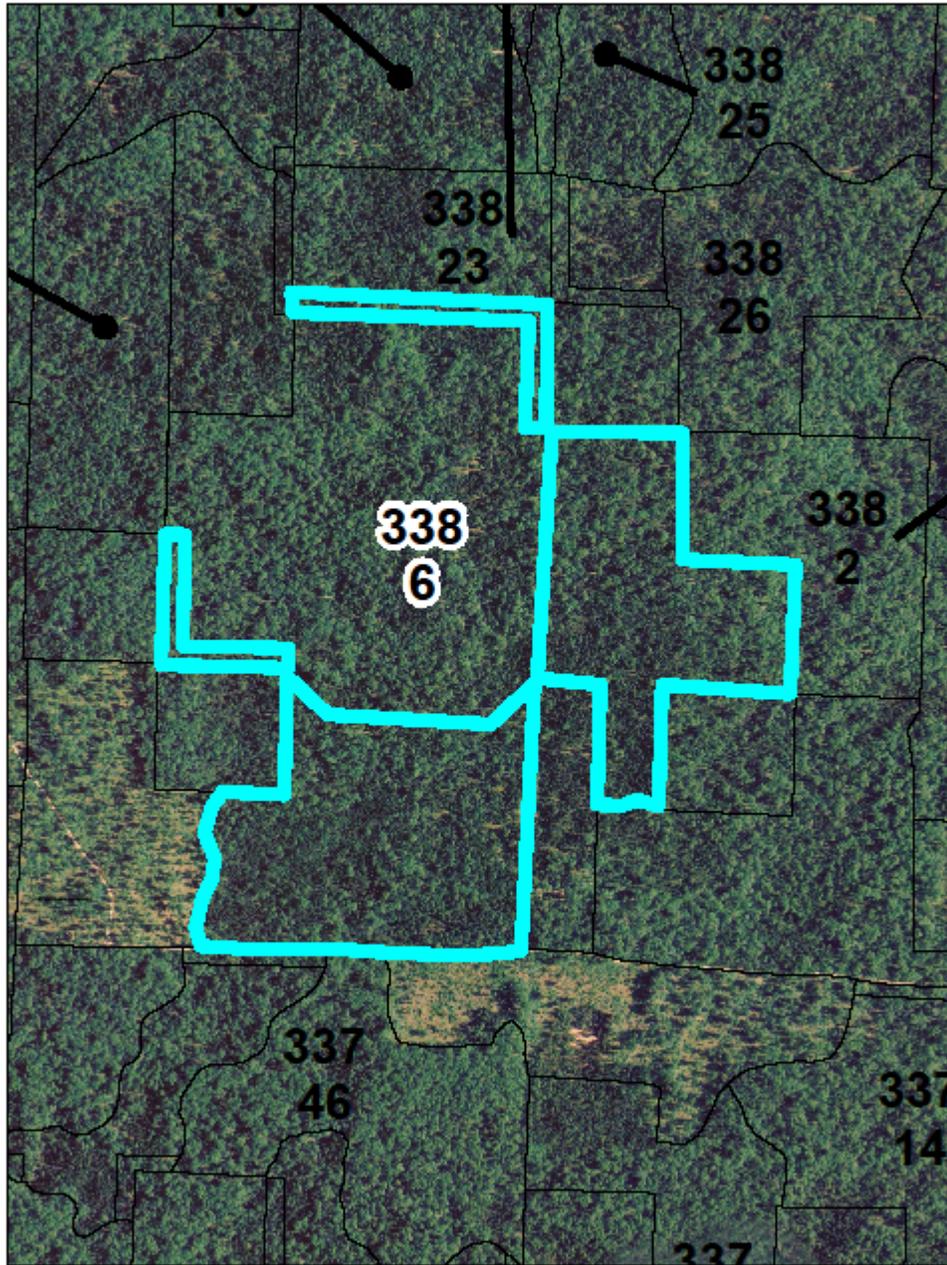
**Treatment Unit Card 28****Alternatives:** 3**Treatment:** Shelterwood; Site prep; Barren restoration; Broadcast burn  
Fuelbreak; Pile and burn**Compartment:** 338**District:** Cadillac-Manistee**Stand:** 6**Location:** T20N, R16W, Sec 1; Mason County**Acreage Treated:** 90**ELTP:** 10**Unit Description:** A jack pine-oak stand with a year of origin of 1952 and a basal area (BA) of 80. It is located on LTA 1 in Management Area 4.2.**Resource Prescription (north 20 ac/central 15 ac):** Shelterwood removal cut harvest; remove decadent/high risk jack pine and oak <8" dbh. Site prep for natural regeneration by hand tool felling of all jack pine and oak <5" dbh. Retain a minimum of 30 BA of oak and pine >8" dbh. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.**Resource Prescription (east 40 ac):** Thin to 20-30 BA; retain all oak with a dbh >8"; reduce conifer activity fuel by 95%; allow tree length skidding and complete topwood utilization. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.**The east 40 acres of this stand would be moved from a land suitability classification (LSC) 500 to an LSC 600, removing the stand from the Forests' timber base.****Fuels Prescription:** Cut all decadent hardwoods and all conifers within 100' of private property, road outside the areas to be shelterwood harvested and restored to barrens (15 ac). Break up all fuel concentrations that appear to pose a threat. These fuels would then be piled within the fuelbreak corridor. Piles can vary in size and should not be placed under overstory trees. All healthy hardwood overstory trees and hardwood regeneration would be retained. Burn the piles created during fuelbreak construction. This would take place when long range weather forecasts, usually late fall or winter, insure that fire does not spread from the piles to adjacent land.

A broadcast burn would be conducted on the east 40 acres. The prescribed burn would take place after a burn plan is written and approved for the units to be treated. Details of desired weather conditions, firefighting forces required, safety concerns, and other critical issues would be detailed in the burn plan. The objectives are to reduce fuel loading, reduce ladder fuels and to maintain a more open condition to reduce the possibility of catastrophic wildfire. The prescribed burn should reduce 1 hour fuels 75% (10-90%), 10 hour fuels 50% (5-80% range), 100 hour fuels 35% (10-70% range), and 1000 hour fuels 10% (0-40% range). Exposed mineral soil would occur on no more than 15% of the stand. Over all tree mortality in the residual stand should not exceed 15%. Manage smoke to minimize impacts to smoke sensitive areas.

A series of maintenance burns may be required to reduce additional fuel buildup; encourage continued growth and sustain plant species dependent on fire; and, discourage regeneration of tree species associated with extreme fire behavior. It is anticipated that up to two additional burns spaced every 3-5 years may be required to achieve these goals.

**Concern:** Refer to previous unit card.**Mitigation:** Refer to previous unit card

# County Line Fuels Project Treatment Unit Card 28



## **Treatment Unit Card 28**

**Alternatives:** 4  
**Compartment:** 338  
**Stand:** 6  
**Acres Treated:** 82

**Treatment:** Shelterwood; Site prep; Fuelbreak; Pile and burn  
**District:** Cadillac-Manistee  
**Location:** T20N, R16W, Sec 1; Mason County  
**ELTP:** 10

**Unit Description:** A jack pine-oak stand with a year of origin of 1952 and a basal area (BA) of 80. It is located on LTA 1 in Management Area 4.2.

**Resource Prescription (south 40 ac, east 35 ac):** Shelterwood removal cut harvest; remove decadent/high risk jack pine and oak <8" dbh. Site prep for natural regeneration by hand tool felling of all jack pine and oak <5" dbh. Retain a minimum of 30 BA of oak and pine >8" dbh. Retain or create an average of 9 suitable roost trees per acre within the treated area based upon the priorities in the Indiana Bat Management Guidelines (Forest Plan Standards and Guidelines, pages II 23-25). Retain native, mast producing shrubs where possible.

**Fuels Prescription (7 ac):** Cut all decadent hardwoods and all conifers within 100' of property line outside the areas to be shelterwood harvested. Break up all fuel concentrations that appear to pose a threat. These fuels would then be piled within the fuelbreak corridor. Piles can vary in size and should not be placed under overstory trees. All healthy hardwood overstory trees and hardwood regeneration would be retained. Burn the piles created during fuelbreak construction. This would take place when long range weather forecasts, usually late fall or winter, insure that fire does not spread from the piles to adjacent land.

**Concern:** Protection of potential Indiana bats present during the breeding season and potential roosting habitat.

**Mitigation:** Prescribed burning would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts. Prescribed burns would be conducted only when smoke would be transported away from the Tippy Management Zone (TMZ) or when the majority of the smoke would disperse before reaching the TMZ to protect bats during spring and fall swarming.

**Mitigation:** Standing snags  $\geq 6$  inches dbh would not be cut and/or removed unless considered a safety hazard.

**Mitigation:** Cutting would be prohibited from May 1-August 31 to eliminate the possibility of impacting individual bats in summer roosts.

**Concern:** Protection of bald eagle nesting areas.

**Mitigation:** Prescribed burning would be conducted only when smoke would be transported away from active nesting areas. See district wildlife biologist for current nest area locations and status.

**Concern:** A small wetland is located on the closed forest road just north of the private 10 acres.

**Mitigation:** Identify and protect using minimum set-back distance.

**Concern:** Cultural resources found in stand.

**Mitigation:** Avoid cultural resource, which will be marked with a 20-30 meter flagged boundary prior to project initiation. If any unknown cultural resources are discovered during project activities for the proposed project or there is a change in location of the APE, then a professional Cultural Resources Specialist must be contacted. Project work will not be allowed to resume until the cultural resources have been documented and the sites are preserved from any potential impacts.

# County Line Fuels Project Treatment Unit Card 29

