

Sunny Oaks Purpose & Need, Proposed Action, Alternatives, and Design Criteria Presentation Transcript

A note about the transcripts. These transcripts contain the raw closed captioning that was captured real-time while the presentation was being given. They were typed by a person at the pace that the presenter was speaking. As such, they contain grammatical and spelling errors. More major errors that could potentially change the meaning or understanding of the material were corrected by the Sunny Oaks planning team to reflect what was actually stated; however, less major errors were left in place.

Hello. My name is Rachel Reed. I'm the Forest NEPA Planner for the Wayne National Forest. Today I'm going to discuss with you the purpose and need, the proposed action, alternatives and design criteria related to the Sunny Oaks project.

Before I get into the specifics of the project I want to note that this presentation along with specific resource presentations, maps and other material are all available on a public webpage, which is found at the web address showing on your screen right now, then by clicking on the Sunny Oaks title.

Before you watch this presentation, consider taking a look at the legal framework for projects, presentation that's also found at this web link, the presentation gives a good primer on why we propose projects on national forests.

The purposes for this project are showing on your screen right now. The first one being to create young, brushy forest that is lacking in the area. What is young brushy forest? I want to paint a mental picture for you of what that looks like it. It's also known as early successional habitat. What I mean are dense thickets of young shrubs and trees talking about lots of herbaceous plants, lots of flowering plants, lots of berry producing shrubs. The second purpose is to regenerate oak forest in areas where it is favored so that forest type is maintained across the landscape. When I'm talking about oak forest throughout this presentation I want you to keep in mind that I'm talking about the broad ecosystem oak history forest. I'm talking about more than just oak trees. Purpose three, respond to insect and disease threats. Purpose four, contribute to the local economy through commercial timber harvest.

A bit more on each one of these purpose and needs. The Wayne National Forest currently contains 244,263 acres across Southeast Ohio. In contrast out of that ownership, we currently have in the young, brushy forest type that is forest under 10 years old, only 156 acres. That's only 0.06% of the total acreage. Assessments that were conducted for the 2006 Forest Plan, the current Forest Plan, the one we operate under currently, concluded that young, brushy forest is an important habitat type for 35% of the land animals found on the Wayne National Forest. In order to provide that needed habitat, the forest plan calls for 3% of the Wayne National Forest to be in that less than 10-year-old age class. That should be Forest-wide. Numerous bird

species depend on this habitat in order to successfully breed including the ruffed grouse, Kentucky warbler, field sparrow, and blue winged warbler.

Populations of many of these bird species and others that are dependent on young brushy forest are declining across their ranges. Data from Ohio Breeding Bird Survey shows that declines of 32% of shrubland species are occurring versus 14% of what are known as typically more mature forests breeding species. For example, of the shrubland species, the ruffed grouse has been declining by 77%, the American woodcock has declined by 23%, the blue winged warbler has declined by 33%, the yellow breasted chat has declined by 27%, and the whippoorwill has declined by 58%.

Bird species that are more commonly known as mature forest breeding birds have also been found using young brushy forest during their post breeding time period. This includes cerulean warblers, ovenbird, worm-eating warblers, and others. What do they find desirable in these areas? The answer is cover from predators and abundance of food. Speaking of an abundance of food, the flowering plants present in young brushy forest will draw in and provide food for a variety of insects. Other wildlife that use young brushy forest include mice, shrews, the eastern cottontail, foxes, fox turtles, snakes, black bears and of course, deer and turkey. They're all attracted to abundant flowers, fruits, and shoots. Young brushy forest provides more structural diversity with areas of increased stumps, logs, and coarse woody debris. Repeated disturbances of the forest are required to maintain this ephemeral habitat on the landscape because each area will eventually grow into older forest through time. For the wildlife that rely on young brushy forest, this means that the area will quickly become lower value and those species must find new areas to meet their needs.

Oak ecosystems support a high level of native plant and wildlife diversity. Young oak shoots and buds are abundant food cover. All sorts of wildlife rely on the acorn crop to sustain them through the winter. Birds, mice, chipmunks, squirrels, bears, deer and turkey the list goes on and on. Associations have been made between acorn crops and quality of deer antler and success breeding black bear. Acorns are staple food crop of the ruffed grouse in the Appalachians. It also appears based on our current knowledge that oak hickory forests are well-suited to be adaptable to projected future climates. Not to be ignored is the fact that oaks are important economically for their high quality lumber.

Now it's true that oaks are very long-lived, individuals can live anywhere from 200 to 400 years. However, oak forest must at some point be regenerated if we hope to keep them a large part of our native forest cover in the future. Right now there's an abundance of mature oak forest in our region. According to a paper put out by Daniel Dey of the Forest Service Northern Research Station, oak forest is at peak capacity for acorn production across the eastern United States. If we don't produce enough young oak forest, but instead they continue to age over the next 50 years, we may run into a sharp reduction of acorns because acorn production declines as stands age.

Promoting oak forest into the future requires active forest management. Why is this? Oaks have something known as an intermediate tolerance for shade and they are disturbance

dependent. For example, if you are a gardener you know you place plants in different spots. So if you grow tomatoes you would put them in a sunnier spot that gets full sun all day long, so that your plants produce tomatoes for you. Versus, if you're growing hostas you would put them in a shadier spot. They need a little bit more shade so their leaves don't get scorched by the sun. Well trees are the same way. We have trees that will thrive in full hot sun and other tree species that prefer that shade, and those are the species that do really well establishing in forest understories. Oaks fall somewhere in between and that is the intermediate tolerance to shade. When their seedlings become established oaks can tolerate some shade and they also need some sun. In order for them to continue to grow and thrive and become the next forest, they need disturbance. That disturbance does what's called releasing those young oaks - that involves removing the overstory to open them up to the sunlight. But that's not all that is needed. Success in going and oak forest requires weeding just like in your garden. Competing vegetation must be weeded out.

Responding to insect and disease threats. Here on your screen are some insects and diseases that threaten our forests here at Southeast Ohio. This map shows the Wayne National Forest. We have in the northeastern corner, the Marietta Unit, then center top is the Athens Unit. Those two are combined to make the Athens Ranger District. Then on the bottom left is the Ironton Ranger District. The areas that are shown in dark green show areas where the Chief of the Forest Service has designated landscapes in which carry out projects aimed at addressing insect and disease threats.

For contributions to the local, regional, national, and global economy – there is a wood product industry in Ohio. As a large forest landholder in the state there's a role that the Wayne National Forest can play in supporting that industry and the people employed in it in a sustainable manner. Products made from the forests of Ohio include paper, plywood, lumber, and world renowned hardwood furniture. Not only do we have a role to play in the wood products industry, but we also offer support to the 12 counties containing Wayne National Forest. Currently, in 2018, there are four categories of payments made to these counties. Payment in Lieu of Taxes, Secure Rural Schools, the 25% Fund, and Federal Minerals Payments. The amount of the payment to each county is determined through different formulas for each program. All take into account how many acres of federal lands are contained in each county. The 25% Fund also includes the amount of revenue generated through things like timber sales and mineral leases on the Wayne National Forest. Out of those 4 categories, the Secure Rural Schools, 25% Fund, and Federal Mineral Payments are legislatively required to be 50:50 split in their use towards supporting schools and road maintenance.

So the take home from my discussion of these four purpose and needs for the project is that we can meet all of these objectives by conducting the same actions in the same area.

What area are we looking at? The project area shown on this map outlined in the orange brown color with the shaded area inside of it being the actual project area. The green lands on this map are Wayne National Forest land and the white areas depict private lands or lands that are under other ownership. For the project area we are talking about the Ironton Ranger District including parts of Jackson, Gallia, and Lawrence Counties. Is east of State Route 93, west of State Route 141, north of the community of Aid, and south of the community of Oak Hill. It's

within the Symmes Creek watershed. The watershed contains about 228,000 acres of land. Within the project area we are talking about 50,000 acres of private land and Wayne National Forest land. The Wayne National Forest takes up about 25,000 acres of that project area. Why did we decide to propose a project in this area? The area within the orange brown lines contains the Forest Shrubland Mosaic management area on the Ironton Ranger District. This management area focuses on more active management practices than other areas of the Wayne National Forest. It focuses on providing young brushy forest patches that are mixed in with middle-aged patches and older forest patches. The intent of this management area is really aligned with the purposes of our project which are to provide young brushy forest and oak hickory forest. We also have in the project area on the eastern side portions of the River Corridor management area and then within the southern part of the project area the Handley Branch Special Area management area. Within those two management areas of the River Corridor and Handley Branch we are proposing only the prescribed fire activities so keep that in mind as we move forward to discussing the actual activities.

Earlier in the presentation I was talking about creating young, brushy forest purpose of the project and I gave that at the scale of the entire national forest, the entire Wayne National Forest. That was we should be at about 3% across the entire national forest. This slide in this table focuses in on the Ironton Ranger District and that Forest Shrubland Mosaic management area. Now we are talking about a smaller area. I understand this table is difficult to read and so this entire presentation as I mentioned is available on our public webpage where you can pause at this moment and blow things up and looked a little bit closer. But what you see here in red - this early successional - just go ahead and a substitute in there young brushy forest. Just another way of describing the same thing. Forest under 10 years in age. You can see that in even aged hardwood forest the Forest Plan designates between 6 and 6.8% should be under 10 years of age in the Forest Shrubland Mosaic. Then for pine forest we should be anywhere between 0.1 to 1.2%. Now if you look and see what is actually represented on the ground in the Forest Shrubland Mosaic in the Ironton Ranger District, for hardwood forests currently there are 2.5 acres. In pine forest 0 acres. Overall that means 0.01% is in that young brushy forest condition where as we should be anywhere between 6 and 8%. You can see we are far below where we should be.

What happens if we do nothing? The answer to that is we have been doing nothing. Over the entire Wayne National Forest we've implemented about 60 acres of even aged harvest over a 12 year period. Even aged harvest include things like clearcut and shelterwood harvests and these are designed to regenerate or bring back young brushy forest. Those are the harvests that create the habitat that we are looking for in this project. We have not done this as I just mentioned. What has been happening? We have seen declines in the species populations that rely on young brushy forest. Eventually if we do nothing we know that natural succession will not sustain an oak forest across the landscape because of sustaining oak forest requires active forest management. Overtime we would expect that forest would transition from to maple, beech, tulip tree. These species don't provide the valuable foods that oak and hickories do - the acorns and hickory nuts. So that would potentially lead to more shifts in wildlife species as the wildlife are no longer finding the food and shelter that they need. Is it up to public lands to provide these habitats? Yes. The Wayne National Forest holds a large acreage in Southeast Ohio and these lands will be managed by the US Forest Service in perpetuity. That means we

can take a long-term approach. Growing trees and forests is a long-term activity, one needs to be thinking decades into the future. If we take action on the national forest then we also become an example of sustainable forest management.

Here is our proposed action. The first component is commercial timber harvest. We are talking about clearcut harvest on about 1595 acres. And shelterwood harvest on about 1145 acres. Shelterwood harvest involves two harvests. The establishment cut and the overstory removal harvest.

Here's a little bit more about each one and a diagram showing what they would look like afterwards. On the right side you see a diagram of what the clearcut would look like. The clearcut involves cutting all of the trees within a forested stand, except for those that are intended to be retained around streams. What are riparian filter strips? The idea is those are uncut areas around perennial streams, intermittent streams, and ephemeral streams. Those areas are left uncut to provide shade and prevent erosion from reaching waterways. The shade is needed to keep those waterways temperatures right where they should be. Then they also provide filter areas where any potential soil movement from the cut area is stopped before it reaches the waterway before it becomes sedimentation in the waterway. Some of the clearcuts that we are proposing in this project are little bit larger in size so in those situations what we intend to do is take those riparian filter strips and uncut areas on waterways and extend them uphill across the cut area to connect them to the more mature unharvested forest on the other side. In effect what we would be doing is reducing the size of large clearcuts into smaller patches. We are calling these forested travel corridors. How does clearcutting regenerate oak? The first thing to realize is that the clear-cut method that we use is termed a silvicultural clearcut whereby all of the trees would be cut except for those I just mentioned it would be retained. This includes saplings in the understory. This means that all of the trees would be starting back over from zero age and the oaks then would have an advantage over other species that were present in the stand. The second thing is it's important that prior to the cut there already was an adequate amount of vigorous oak stems in the stand and they had large roots development and had to be already present. The third thing is that what's termed advance reproduction and other competitive species such as maples and tulip trees are not present in large numbers. Then on the left side of your screen there is a diagram or depiction of what a shelterwood harvest would look like. A shelterwood involves a logger coming in and removing about 60% of the forest canopy from the stand. That's the first harvest what's called the establishment cut and after that we monitor the stand. We monitor what grows back in the stand and anywhere from five to 15 years after the establishment cut there's an overstory removal harvest, which involves coming back in and removing all of the trees that were left the first time except for those riparian filter strips. How does a shelterwood regenerate oak? In that establishment harvest we've created the intermediate light levels needed to allow seedlings and saplings to grow and thrive in the understory. Then the second harvest - the overstory removal harvest releases those oaks and allows them to fully develop. When adequate numbers of advanced oak seedlings are over 4.5 feet tall and are vigorous and have well-developed root systems then clearcutting is the most effective method to regenerate the stand to species dominated by oaks and hickories. In oak stands that lack advanced reproduction, shelterwood harvesting is the best method to develop that advanced reproduction and then foster the stand on to oak. Clearcut and shelterwood harvest are the best way to create young brushy forest that

is currently a missing component. These harvest immediately stimulate a pulse of new growth of flowering plants, shrubs and new trees.

I've got a few pictures real-life examples of what these things look like after they have been implemented. The photograph on the left is a recent shelterwood harvest after the establishment cut and you can see that there are large mature trees remaining. That picture is taken during the winter. On the right side we see clearcut harvest and that this is a year or two potentially after the harvest and you can see how these things look after they have been implemented.

Where are we proposing harvest? This is our project map. The areas shown in pink are the proposed shelterwood harvests. The areas shown in orange are the proposed clearcut harvests. In recognition of course this is difficult to see at this scale. I've gone ahead and provided a blowup of what the northern area looks like. I will pause for a moment.

Here is the same thing for the southern part of the project area.

The second component of the proposed action involves supplemental tree planting. This could be done across the project area, however it's most likely to only be needed in native pine stands to regenerate that pine component. Then there's also the potential for research opportunities as they arise.

Timber stand improvements or TSI are the types of treatments that tend the stand before or after a harvest. To improve the forest. Using these treatments can push the species make up of a stand to oak and get rid of a lot of crowding in the forest understory which allows for a flush of growth of herbaceous and flowering plants on the forest floor. The TSI treatments proposed for this project are prescribed fire, manual tree felling and herbicide application. These treatments will clear out crowded and cluttered forest understory by controlling small trees and shrubs growing under the canopy. For prescribed fire, we are proposing a range of about 2000 to 4000 acres per year. That area which would be on Wayne National Forest land however we also for this activity are interested in cooperating with willing adjacent landowners to expand the benefits of prescribed fire across the area. Then for the manual tree felling and herbicide those would occur on Wayne National Forest land only across the project area. Prescribed fire involves intentionally lighting fire to the dried leaves on the forest floor. This burns up the leaves, twigs and downed wood to a lesser degree. It will top kill things that are competing with small oaks that are present and will help to clear out the understory. Prescribed fire follows strict planning that includes acceptable weather conditions that will allow the smoke to rise and move away. Manual tree felling is where people use chainsaws to cut down shrubs and trees that are crowding the desired trees. Herbicide application for this project is intended to target the trees and shrubs that are crowding the understory. All of these treatments are designed to allow more sunlight to reach the forest floor which promotes the growth of a whole host of plants that need sunnier and drier conditions. On oak sites these treatments provide more space for existing oak seedlings and saplings.

The next piece of the proposed action involves what's called connected actions. These are the types of things that must occur in order to allow the main activity to take place. Involve road

construction, road reconstruction, log landings, skid roads and fire line. The roads needed to haul out the timber for the project would be what's called low development or low standard. That is that they would be gravel roads or dirt roads used for the timber harvest once the sale is complete there would be berms and rocks put in place where those roads meet open, public roads. They would not be open to public motorized traffic, but they would be open to people for walking. For new roads those are roads were we would be constructing a road where none has existed before. Road reconstruction in contrast involves redeveloping a road that has deteriorated over time. Since this project has a lifetime of about 20 years, we anticipate that any existing roads may need reconstructed at some point during implementation so that is what's reflected in that mileage shown above. Log landings are areas where logs are stacked to be placed on log trucks and hauled to a mill. The two photographs shown in the bottom part of your screen show log landings. Skid roads are the main routes that get used -- repeated use by the equipment that drags the cut trees to the log truck. Then fire line is a term given to features that contain a prescribed burn within a designated area. In many cases existing trails, roads or streams act as fire line. You can see in the picture at the top right of your -- top right corner of your screen constructed fire line. Fire line construction means clearing, down to mineral soil, trails through the woods. Log landings and skid roads are most often located within harvest areas but sometimes the lay of the land may prevent that in which case landings and skid roads may be needed outside of the harvest unit.

Here's what the proposed action looks like in totality.

How does the proposed action meet the purpose and need that I described? The clearcuts we estimate would be implemented over an eight-year period meaning that we would have a group implemented year one and another set year two, year three, etc.. During any given year there would be immediate young brushy forest that is created. Then it would be staggered over time so that as some of it is aging, new is being created. In the shelterwood harvests the overstory removal harvest occurs anywhere between five and 15 years after the first cut, the establishment cut, meaning that we are also staggering young brushy forest even further into the future. 70% of harvest in the proposed action has the likelihood of regenerating oak. The harvests are within an ice storm area. In 2003 an ice storm hit Southeast Ohio and the broader central Appalachian region. It created a broad swath of impacted area. Following that 2003 ice storm there was a wave of pathogens that followed in all of this collectively referred to what's called oak decline. The shelterwood treatments select individual trees for retention based on the species longevity and the individual tree's health then also the species resistance to disease. The overall shelterwood harvest equals increased resiliency. The timber sales provide employment, wood products to the market, and revenue to local communities. I'm going to come back to that point but before I get there I also want to note that there are two additional benefits from project activities. The activities will reduce hazardous fuels in the area and then contribute to the continuation of native pine forests.

In response to some public input, we did estimate the economic contributions from the project. We used four scenarios to come up with these estimates. In the first we have assumed we would be maximizing the amount of clearcuts and then under the clearcut scenario, we had a high volume and a low-volume scenario. We also did the same thing where instead we had assumed

maximized shelterwoods than with the high and a low volume estimate. When I talk about volume -- what I mean there is what is the amount of wood that is removed from the site, how many trees are cut and what is the amount of timber. Implementing the project also has cost. It has cost related to prescribed fire, mechanical tree felling, the herbicide application and the road construction and reconstruction. We estimated those costs based on per acre or per mile recent cost incurred on the forest. What we ended up with here are four different dollar amounts. You can see the revenue generated minus the cost of implementation are estimated to be anywhere from just over \$500,000 to over \$1.5 million.

There's more economic support offered from this project than just that. Timber sales employ loggers, and the manual tree felling and herbicide application employ contractors. Typically we contract out those activities to a private company. Temporary staff are typically hired to carry out our prescribed fire operations. We are also providing wood products that continue to build value as they move through the chain of production on to become a final product. Whether that final product is a piece of fine furniture or plywood or 2x4s used in home construction or paper used in an office setting.

I discussed the National Forest Management Act (NFMA) a little bit in my prior presentation related to the legal framework for proposing projects on national forest. There are additional facets of the NFMA that are addressed including timber requirements. The first component I described already is that the clearcuts and shelterwoods are the optimal method to reach the project goals of creating young brushy forest and regenerating oak hickory forest across the landscape. The NFMA sets a threshold of 40 acres for a size of individual temporary openings for forest in the eastern United States. The Act permits that this acre threshold can be exceeded as long as the Forest gives a rationale, gives the public 60 day notice and consults with the Regional Forester. In the Sunny Oaks proposed action nine of the harvest would be larger than that 40 acre threshold. The rationale here provided has four points to it. There's urgency, there's existing land ownership patterns, the forest age and then this meeting the intent with the forested travel corridors.

For the urgency as I mentioned earlier the Forest Plan calls for approximately 6 to 8 percent of the Forest Shrubland Mosaic management area to be covered in young brushy forest. This percentage range was developed to provide habitat for plants and animals. In contrast, we have currently less than 1% -- pardon me, less than 0.1% of the Forest Shrubland Mosaic on the Ironton Ranger District that's currently in the young brushy forest. As you recall I mentioned 2.5 acres that we have currently. There's urgency to create that habitat because right now we are not and that means we are not providing habitat to the diversity of plants and animals.

Then there's the land ownership patterns. Across the Wayne National Forest, private land is interspersed with Wayne National Forest land. This means that when developing a project the planning team must take into consideration what forest stands are adjacent to open public roads meaning they like they have easier access, you can get to them easier. Versus those forest stands that are located behind private land or upland with the roads located at the valley bottom. Meaning we would likely have to work with others to cross private land to access Wayne National Forest land.

And the forest ages. The planning team that developed this project looked at the urgent need to create young brushy forest habitat within the context of the existing land ownership pattern and then on top of that the current stand ages in the project area. Forested stands that are under 60 years of age would not likely result in viable commercial timber sales then also those forests are just really not ready to harvest. They need to grow a bit more. All of those things create some complexities and challenges.

Then for the fourth point here, the meeting the intent, as I mentioned earlier we are retaining riparian filter strips and then in the larger harvest areas we are connecting those with what we are calling forested travel corridors so that we are taking large areas and breaking them up into smaller patches of young brushy forest that are going to be right next to one another. So all that in combination leads to a reasonable rationale for exceeding that 40 acres.

The NFMA also says that if we are going to depart from any Forest Plan guidelines that we should provide the rationale for that as well. There are a number of Forest Plan guidelines that we would be departing from in implementing the proposed action or implementing the Sunny Oaks project. The entire list is contained on our project webpage, but for now the two to be aware of here are shown on the screen. The first one states that temporary openings in the forest canopy, resulting from even age timber harvest should vary in size from two to 30 acres. As I mentioned on the previous slide, we know there are nine harvest that would be over 40 acres so if I take those nine harvest and then add in the ones that are between 30 acres and 40 acres we have a total of 21 harvest over 30 acres. Then the second guideline states to space even age, final regeneration harvest in time and space to that temporary openings are at least 500 feet apart. I would just like to go back to the previous slide and remind you of the discussion that we just had. I provided the rationale for exceeding harvest over 40 acres including the urgency, the land ownership pattern, the forest age that also how we are meeting the intent with these for us to travel corridors. The rationale is the same for these two measures or guidelines from the Forest Plan.

When we develop the proposed action we considered potential impact to trails and recreation and they are addressed in the following way.

The Elkins Creek horse camp is located in the southern portion of the project area. It currently has two trails that lead into it. We will be able to keep open one of those trails at all times. When we implement prescribed fire activities we will do so in such a way that any potential temporary trail closures only impacting one of those trails that goes in and out of the horse camp at any time. We will also be in close communication and coordination with the Elkins Creek horse camp on the timing of prescribed burns so that we are avoiding to the extent that we can high use periods and so that they are not also scheduling rider events during our intended to burn windows in those areas. The Johns Creek trailhead is a horse trail is also within the project area and we have determined that we can have timber hauling in that area on Forest Road 607 and not need to close or impact the road that goes into the trailhead. We will use signs on the horse trail in the area to notify horse riders of the forestry activities and the two instances where the trail crosses the hall road.

The Dean State Connector is located in the western part of the project area. If it's physically possible and economically feasible, we will permanently reroute that segment of the Dean State Connector that is proposed to be used as a haul route for Sunny Oaks. This segment has pre-existing drainage issues that make permanently rerouting desirable. However, if we determine that it is not possible or feasible, then we would be looking to a temporary reroute so that no trail closure is needed. Overall we'll be selecting temporary or permanent reroute of horse trails out of harvest units over closures. We discussed this as being possible for all situations where the horse trail is in harvest units and if we find that is not possible for some reason, then we would be looking at some sort of timber sale contract clause that has to do with weekend harvest operations in those specific areas.

Then for the Symmes Creek and Morgan Sisters trail systems, currently those are hiking trails for foot traffic only and we have had some interest from different members of the public in expanding those trails to different uses. When we are implementing and designing, laying out sales in those areas, we will be considering what the planned or future use of those trails is.

We have done a lot of interaction with the public about this project since the fall of 2017. Our staff has met with the Southern Wayne Advocacy Council of SWAC many times since the fall to discuss this project. The SWAC is a group that advocates for the Wayne County for the benefit of people living and working and recreating in the national forest and are interested in the economic and social and ecological well-being of southern Ohio. The SWAC organized and hosted two meetings at which our staff presented on the project and answered questions and interacted with the public. We held a public scoping period and the scoping period is really just a comment period. It's when we invite feedback from the public about the project. During our scoping period we released a 25 minute TV show that our staff presented on the project. We pulled together and sent out a newsletter and a press release that was published in various local newspapers. We held a landowner meeting at the Oak Hill High School where we had invited in landowners that are adjacent to timber harvest areas to talk with them about the project and get their feedback. Through all of these efforts we have gotten about 60 individual responses. All that public feedback that we get helps our planning team to determine if there is a potential for an effect that we need to avoid, an effect that should be lessened, or if there's something we just need to better understand.

Here's what we heard. This list of 10 items includes the key issues that we identified from public scoping and I'm going to pause for a moment and allow you to read through that list.

We considered all of these key issues and addressed them in different ways. The first group we considered then created a response which is available on our public webpage and the project record and I do want to draw your attention to item 4. Enough young brushy condition on private land issue.

Here's a real world situation we identified that speaks directly to that issue. Here we have in the upper left-hand corner of your screen imagery from Google Earth that shows the area around a spot called Kenton Lake or Pumpkintown Lake, it has both names. Then in the lower right part of your screen you are seeing the same area just depicted with a topographical map. You can

see here that there's a hard edge shown on the aerial imagery. That is reflected here on the topographical map right here. Those coincide with each other, they are showing the same area and they represent a property boundary between what is private land up here and then what is national forest land which is represented by these green areas on this map then on the aerial imagery, deforested area here. That's around Kenton Lake. You can see the private land you can see from the imagery that the private land has recently been harvested, recently had a clear-cut. This imagery from Google Earth is dated from the year 2015 so right now that clear-cut is a minimum of three years old. Is likely to potentially be a year or two older than that as well since the area appears all greened up after the harvest. We are proposing clear-cut and you can see that it is right next door to what has been clear-cut on private land. What is one to do about that? Our strategy in this scenario is using the timing of our timber sale to address the issue or the potential issue. We can delay the harvest. So this young brushy forest area on private land right now is providing that 0 to 10-year-old forest. By delaying the harvest that would occur on the Wayne National Forest land for a few years than what's happening is once the habitat on private land is transitioning into older forest, 11, 12, 13-year-old forest, no longer suitable habitat to those wildlife species. We create clear-cut areas right next door than what we are doing is creating suitable habitat in very close proximity. Once one habitat is no longer suitable and we are creating new habitat.

The second set of key issues from public scoping was analyzed by our staff and then documented in resource inputs and the project record.

The third item was considered the design criteria developed so to address ATV trespass on private land we intend to gate our timber haul roads and then rehab skid trails.

These three issues here, the flooding of the scenery and impact on horse trails and disagreements on clearcuts, we analyzed to determine if an alternative to the proposed action could potentially lessen those effects. That led to the development of Alternative 2.

For flooding we are not talking about at the entire watershed scale. We've identified localized, smaller drainages and those are what we were looking at here. For disagreement on clearcuts, our commenter made the point that ruffed grouse is potentially preferring smaller sizes than 40 acres so we looked into how wildlife might be impacted by clearcuts. What is different? What you see here -- before I get into what is different a little bit of background.

In the proposed action the planning team used the best available science data and on the ground knowledge along with expert judgment to make determinations of which stands were already well-suited for regeneration harvest. (Those areas are in the clear-cut harvest bucket here.) Which areas require harvest to bolster the oak understory (those areas are in the shelter would harvest bucket on the table). Which areas would require too heavy of an investment to push towards oak in the future (clearcut for mixed hardwood).

For the proposed action of these determinations were made while leaning towards the urgency to create young brushy forest as the primary driver. After we got in all of our comments from the public and consider them the team developed Alternative 2 which looks at the stands proposed for treatment with more emphasis placed on the oak objective. In addition to that

during the 2018 field season intensive stand exams on 1000 acres in the project area, meaning the data set has improved since the original proposed action was developed.

A little bit more about stand exams. Our staff go out to the forest and establish a point/plots and in that part they look up at the trees growing overhead and how big are they, what species, what health are they in, are they being impacted by insects, those sorts of questions. Then they looked out across the forest to see what is growing underneath the forest. Then they look down to see what is growing at their feet, what is going on the forest floor, what species of tree, how many, that sort of thing.

Once all of that data was collected and looking at the proposed harvest stand with more emphasis towards the oak objective, there was in some cases an opportunity to change the harvest objective or the harvest type in some of the stands. That is what led to what you see in the column for Alternative 2. You can see an Alternative 2 there are two additional treatments not present in the proposed action. That is two-aged and the re-inventory.

In Alternative 2 there are no strict clearcuts for stands that have an oak objective. Those oak stands the best oak stands are instead proposed to have a clear-cut with reserved harvest that results in a two aged stand - that's displayed here with the 390 acres and -- in the two aged bucket. In these stands a maximum of 15 square feet of basal area, which is a measurement of how many trees are kept after the cut, would be retained. That's averaged across the harvest area. Primary trees retained would be shagbark and shell bark hickory trees that are over six inches diameter at breast height in accordance with our Indiana bat measures in the Forest Plan. Secondary preference for retained trees would be seed producing, healthy white oak trees followed by other oaks if the maximum basal area has not been reached. The reason for this slight change in harvest is so a white oak acorn producing component would be kept in the stand. These white oak trees would continue to produce acorns while the regenerating stand is growing. The reason for that is generally a regenerating oak stand needs to be 30 to 40 years old before it starts to produce acorns. Keeping some mature white oaks continually provides new seed that may germinate under the oak stand decades before those young trees have reached the age where they would produce their own acorns. This strategy is called "life boating" and gets a start on the next round of regenerating oak forest. It also ensures the supply of acorns and hickory nuts for food as well as mature trees remaining in the stand for roosting, nesting and housing a variety of wildlife species.

There is a small subset of oak stands that are on the cusp of being the best. For the stands and re-inventory will take place and that's what you see here displayed with 100 acres in the re-inventory bucket in Alternative 2. If the inventory finds the stand meet the threshold then a clear-cut with reserves resulting in a two aged stand would be prescribed. If the stand does not meet that threshold following re-inventory, shelterwood would be prescribed. There is some level of flexibility here in Alternative 2. -- Have a lower percentage of understory oaks a shelter wood harvest is proposed and that's what you see displayed currently an alternative two in the shelterwood harvest bucket, that 1425 acres. For stands that would require too heavy of an investment to push towards oak in the future, a clear-cut is proposed for young brushy forest that is composed of mixed hardwood species. That the 795 acres you see displayed in the clear-cut harvest bucket under Alternative 2. Please note that for Alternative

2 the riparian filter strips will be retained as will the forested travel corridors connecting a subset of those acres across the harvest unit go as I discussed earlier related to the proposed action, that component would remain in Alternative 2.

Here's a map showing the difference between Alternative 1 and Alternative 2. You can see on the left side of your screen that's the proposed action or Alternative 1 and at the pink areas display clear-cut harvest. You can see there are two large pink areas shown within the map that were originally under the proposed action intended for clear-cut harvest. Now under Alternative 2 you take a look at the map on the right side of the screen, you can see that the treatment changes for those two large areas. Two-aged treatment. The stands here actually happen to be some of the best oak stands in the project area. Maps like this that display the difference between the proposed action and Alternative 2 are found on our project webpage for each of the harvest block.

Here is a pictorial description or showing what the difference between a clear-cut and a this is a simulated photograph created by our Northern Research Station. On the left side you can see what a clear-cut would look like post harvest and on the right side in comparison there is the two-aged stand that is left after a clear-cut with reserves harvest.

There's another component to Alternative 2 that involves reducing harvest acre. When our Hydrologist began to investigate and evaluate effects to watershed resources he did see that there was a potential for increased water yields in certain small drainages that could potentially impact nearby adjacent private lands. This is described in far greater detail in the watershed effects presentation also on our public webpage I would like to encourage you to review that information if this topic interests you. In order to address the potential for increased water yield, the planning team reduced harvest acres in those blocks and that that's what this table displays. For harvest block Slab Fork Road and Old Forrest Ridge Road we reduced harvest acres between Alternative 1, the proposed action, and Alternative 2. I will pause here for a moment for you to review.

Here's a map showing the difference looks like between the proposed action and alternative two in the Slab Fork Road harvest block. The areas on the right side map shown in black are the areas that were reduced from harvest so you can see a substantial harvest reduction in Alternative 2.

The same thing here for the Old Forrest Ridge Road harvest block. The area on the right shows in black the area reduction or the area that would not be harvested.

Let's take a moment to compare the proposed action and Alternative 2. I described earlier how the proposed action meets the purpose and need. Does Alternative 2 also meet the purpose and need? The answer in short is yes. Under Alternative 2 we are still implementing clearcuts over the next eight years that would provide immediate and sustained young brushy forest. Under Alternative 2 we would also be conducting the overstory removal harvest in shelterwoods that would still occur 5 to 15 years after the first establishment cut, which sustains young forest even future into the future. I mentioned earlier in the proposed action about 70% of the harvests have an objective for oak and it's about the same under Alternative

2. It is slightly less about 68% of harvests that have an oak objective. The harvest areas are still within the 2003 ice storm area and also we would still be conducting commercial timber sales which would provide wood products to the market and revenue to local communities.

There were some additional mitigations or design criteria developed for Alternative 2.

In regards to trails scenery, the same mitigation from the proposed action will apply to Alternative 2.

The northern metalmark is a species of butterfly that was recently located within the project area. When we are implementing or working to implement the project, the team will work with our biologist to locate all roads in areas where the northern metalmark has recently been detected so that no population would be eliminated due to the activity there. We will also provide a no harvest buffer along roadsides with the northern metalmark has recently been detected. In those same areas, if a spring prescribed fire were to take place, we would apply a no burn buffer and/or wet line roadside with the northern metalmark has recently been found.

So here's showing that area where we found the northern metalmark and in the Alternative 2 map you can see that we are reducing the harvest area.

For scenery impact the District Ranger would be working with adjacent private landowners to determine where and when reasonable no harvest buffers can be applied in order to reduce visual impact to land owners at their homes. Then these District Ranger would also consider where to apply buffers along open roads and trails to screen harvest from view. I would also like to mention; however, that we are not trying to hide these actions or activities from the public.

In working on this project the planning team did consider other alternatives. These were considered but not studied in detail. The first one being keep all harvest under 30 or 40 acres. As I discussed earlier there are 21 clearcut harvest areas under the proposed action that would be over 30 acres. We did consider an alternative where the harvests would be under that threshold; however, what we found is that we were meeting the intent of why we would want to have a smaller harvest areas through the implementation of the riparian filter strips and forested travel corridors, which break up larger areas into smaller patches of habitat. Then for the second alternative considered but not studied in detail, that was brought up by a commenter who wanted us to keep all mature, acorn-producing oaks in all of the stands. We did consider that and we actually developed Alternative 2 from this idea from the public. We did not however implement or study this alternative in detail because it goes against our oak silviculture which says that oaks need that disturbance, they're disturbance dependent. Once we have the young saplings in the stand, they need to be released from competition so they don't become suppressed. When we looked into some research we found that there's a threshold of the amount of retained overstory trees, so a number or concentration of trees that we can retain in the over story and not suppressed the regenerating saplings, that's what we used in Alternative 2. We found that 15 square feet of basal area doesn't interfere with growing regeneration. Another member of the public suggested that we only thin or select harvest

stands. That type of treatment will not lead to young brushy forest and it also will not lead to regenerating oak forest so it was eliminated from detailed study.

This map on your screen I understand will be very hard for you to see in this format so it's also found on our public webpage where you can enlarge it and take a look at specific areas. What's displayed here are other activities that are going on or will be potentially going on in the future and in the vicinity of the project area. So on this map the harvest treatment intended for Sunny Oaks are displayed in the pinkish reddish color. Here are some. Then the potential prescribed fire areas are shown in these larger blocks here. These would not be the only prescribed fire areas but they are likely areas under the Sunny Oaks Project and that is displayed the project activities. The areas that are shown in black are areas of recent timber harvest or clearcuts on private land that we were able to identify based on our own staff knowledge since they are familiar with the area and then confirmed through looking at Google Earth imagery. Those are at adjacent timber harvests. Outside of the project area we have other projects that are being implemented on the Wayne National Forest one of which I'm circling right now. It involves some timber harvest and some prescribed fire. Then there is this black line, the north-south line here which is known as the Buckeye XPress project and that is a natural gas pipeline replacement project. Those are some of the other activities that our specialists consider when they are analyzing the potential effects and the potential for cumulative effects.

What now? Our staff, our agency resource experts, conducted analyses of the proposed action and of Alternative 2 in order to determine the types and nature of effects that may occur and they completed their analyses. It is time for you to take a look if you would like to. Their analyses are available on our public webpage, that is the URL shown on the screen and they are given in the same presentation format as what I am doing right now.

Here's a short display of some of the references that were used to develop the purpose and the need and also the proposed action and Alternative 2 in this project.

With that, I am concluding this presentation. I would like to thank you for listening along and please feel free to provide us with any feedback that you feel relates to this project. Thank you.