TENNESSEE GAS PIPELINE COMPANY

NORTHEAST UPGRADE PROJECT

NO NET LOSS REFORESTATION PLAN

PUBLIC MEETING

DATE: August 4, 2011

AT: Ringwood Municipal Building,

60 Margaret King Avenue

Ringwood, New Jersey

PRESENTED BY:

STATE OF NEW JERSEY DEP

DIVISION OF PARKS AND FORESTRY FOREST SERVICE

BY: MICHAEL V. D'ERRICO, Supervising Forester

TENNESSEE GAS PIPELINE COMPANY

El Paso Corporation

MELISSA DETTLING, Principal Environmental Scientist,

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in association with

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MR. D'ERRICO: Okay. Ladies and gentlemen, it's a little after 7:00. I was told maybe we should start. We will go through the process one more time.

Welcome to Tennessee Gas Pipeline Northeast Upgrade Project No Net Loss Reforestation public forum. I didn't know how to spell forum, so I put meeting down. It's a new one, Amy. I got to start some new material.

Anyway, so this is the welcome. We appreciate you being here. We're going to have an agenda. We're going to talk about the No Net Loss Reforestation Act, and then we're going to talk about the Tennessee Gas Pipeline and NEUP is the Northeast Upgrade Project for Bergen and Passaic, and then we'll have questions and statements.

So we'll get started, if that's okay. I'll step over here. One of the things that -- I'm Mike D'Errico, Supervising Forester for the DEP Forest Service.

One of the things that we do is community forestry in New Jersey, although I think we skipped one. The purpose of this slide was to -- I think my pointer actually went. There you go. It's communityforestry.NJ.gov. You can find these
plans online, Bill. The two plans, the two
Tennessee Pipeline plans. Yes.

UNIDENTIFIED SPEAKER: Is that
spelled wrong?

MR. D'ERRICO: It's
communityforestry.nj.gov. Wow, you are right. That
was a test, Amy, to see if you knew that. Everybody
ever in the place I told ahead of time that I
spelled it wrong. I said, let's see if Amy -- well
Evan, I think we've got to fix that. Write that
down. We're making it a little different tonight.
Thank you, Amy.

Community Forestry Assistance Act in
New Jersey, of which we oversee and help communities
in their plant care and management of trees in
cities and towns. And as I told the people last
week at the end, when you see the forestation
relative to cities and towns, you'll know why we are
overseeing that Act and that project.

We do many projects and programs
within the Community Forestry Program. One of them
of such is the No Net Loss Reforestation Act. We
license tree experts. We have an assistance program
that we help 566 municipalities in 21 counties
manage their green resource. We catalogue our big
trees. We hold Arbor Day and we do lots of other things as a state entity.

That's our -- as you know, what comes next, this is for Lynn because Lynn didn't see it. I'm not just a forester, but I'm also a salesman. So in a public meeting, I try to make sure that people are here because they care about the forest. And there are license plates, one of 17 dedicated plates that support our cause. We have the Treasure Our Tree license plate. So a little bit of new information from last night to tonight. It has -- New Jersey is fortunate to have two state trees, not just one. We have the Red Oak, 1949. That's what that is in fall color, and 1950 we have the State memorial tree which is the Flowering Dogwood, and that was for the men and women of World War II. So we put them on the license plate.

So I did tell them, Lynn, last night that on my car, I have a Ford Taurus and now it's a Ford Mustang, and now they understand that but it went over a lot better last night. I think Amy actually believed me.

What we're going to talk about for the next couple of minutes is the No Net Loss Reforestation Act. Originally it was passed in 1993
and as I said yesterday, it didn't have a lot of
details. It didn't have a lot of guidance on how it
should be implemented. There was no funding
mechanism identified. The replacement formula was a
one to one. So the size of the trees removed was
not a factor. It didn't distinguish between
seedlings and bigger diameter trees. Replacement
could be anywhere in the state.

I remember one under the old law that
the Garden State Parkway had removed some trees up
north and they ended up putting seedlings all the
way down south probably about 75 miles away from the
impact area. So replacement could have been
anywhere under the previous Act.

It was amended in 2001, January of
2001, and as a result of an incident that happened
on the Parkway, actually at the PNC Garden Art
Center where they needed some extra parking space,
they went and cut down ten acres of trees and didn't
tell anybody. It was a gravel -- they wanted to do
it as a gravel parking area because they needed more
parking, but before they could do that, it rained
like heck and all the soil that was from that ten
acres filtrated into the Holmdel Creek (phonetic),
which then backed up and all of the towns up above
had flooding.

So they revisited the Act and that was one of the reasons why it went from one acre to a half acre and some of the upgrades that happened. That opened the door for changes. The Act had a better structure and more detail. The funds for oversight and administration came from the state entities doing the project. That helped us as a state entity because now we have a memorandum of agreement with the state agency and in essence, if you deforest, you're also going to pay for our time in administering this, as well as the trees.

The replacement formula more accurately represents what's removed. So if big trees are removed, that gets into account. If saplings are removed, that gets into account, or seedlings. It doesn't just lump them into one. And it was developed a hierarchy of trees would be planted. The locations, there would be a hierarchy. If it's not on site, it could be off site and these are the following off-site locations. We'll get into that.

There is an exception of the law deemed by the division to constitute standard forestry arboriculture practices or actively managed
existing utility easements, and those would be prior
to the date of 2001. So if there's -- if it's an
existing easement and they're clearing it, that's
okay. If DEP is doing arboricultural practices by
cleaning up the roadside, that's okay. If our
sister agency of Fish and Wildlife is doing wildlife
management, that's okay. And if we are doing
forestry on our Division of Parks and Forest land or
even on wildlife management areas, that's okay. If
you put a parking lot in, then that would come up no
net loss reforestation.

It only affects state entities.

Those are the DOT, Department of Corrections, our
own department, as you could see with this project.
We have South Jersey -- we have -- I'm trying to
think of some of the other state departments. New
Jersey Transit, that's the one I was trying to think
of. New Jersey Transit when they put parking
garages in. So we've -- we've dealt with about a
dozen different agencies as of right now.

We also do commissions and
authorities, the Garden State Parkway, New Jersey
Turnpike is kind of one right now. At the time this
slide was made, they were separate. South Jersey
Transportation Authority, as we mentioned last
night, they run the airport down in the Pamona area. So they're concerned about landing planes and the heights of trees. Make a big deal of that. So they come into that.

State colleges and universities.

Rutgers is one of them. When they built the expansion for the new stadium, that was involved. When DOT put in Route 18 and it went through Rutgers property, it was on the other side, Rutgers benefited from that. We've been in Ramapo, Montclair, Stockton, Kean University. So a lot of these universities -- College of New Jersey are developing dormitories -- they're developing parking garages.

These are all -- the Act affects any land that is maintained or that we have ownership over. And this is what's important because the South Jersey Authority there doesn't own that land. They have an easement over it and so even though they don't own it, if they cut trees for the purpose of landing planes, then they have to mitigate that. And it does affect any project that deforests a half acre. It used to be back in '93 one acre, but that was lowered to capture more projects.

The reason we're here tonight is
because this project deals with one acre or more and
in the law, it was written that between a half acre
and one acre you don't need a public meeting. If
it's over an acre, then you have to have a public
meeting scheduled 180 days prior to deforestation.
The public gets a period of 60 days to make a
comment. And deforestation must be on the agenda.
If you have a project for road widening, the
deforestation must be on the agenda to speak about
it. It can't be lumped into everything else. It
has to be a specific line to talk about the trees so
that you can't be just, well, we're going to put,
you know, ten acres of roadway through here. And
then public comments are submitted to the New Jersey
Forest Service and, in turn, we consider them and
answer those and take into account those comments.

In the Act it defines a forest as a
forested area and so as a program, we've come up
with three definitions of a forested area --
established forest, emerging forest and seedling
forest. And these are the ways that you could come
up with the established forest, either a canopy
coverage, which we'll talk about in a minute, or the
good old method of forestry where you do a point
sample to figure out if you have the coverage
necessary to make it an established forest.

   Established forest is a forested area
where the predominant diameters are four inches or
greater. That's measured at four and a half feet,
or diameter breast height four and a half feet. If
that diameter of tree is four inches or greater,
then that would be an established forest. And then
the way that you would figure that out is the
percentage canopy cover is subject to the
reforestation at 102 trees per half acre, and that
would be replaced by two to two and a half inch
caliper trees.

   So statistically and scientifically,
we've come up with that there are 204 trees per
acre. The growing capacity of an acre -- the
growing capacity of an acre can support 204 trees at
mature size. And so we worked our way back.
Obviously, it's a 102 per half acre and we'll get
into why we do half acre. The law says it's a half
acre or more, and also our grid system is on a half
acre.

   Emerging forest is any forested area
with trees being less than four inches in diameter,
but larger than seedlings. Seedlings are under 18
inches. The percentage of this forested area is 204
trees per half acre and they could be done with
whips or small container trees. So you could get
from that two to two and a half inch caliper trees.
Caliper is measured six inches above the ball,
burlap. So six inches above that ball is two to two
and a half inch caliper. That's how you measure
those trees that you buy off of a nursery or those
shade trees that we like to talk about.

These are whips. They're bare root
or container grown. So they're a lot smaller, but
you're replacing a emerging forest. That's less
than four inches in DBH.

A seedling forest is any forest where
the trees are seedling size. That's 18 inches or
below. And it's 605 trees per half acre or 1210
trees per acre. That's at a spacing of six by six.
So every six feet you put a tree and you have that
row and six feet over, and that would be a spacing.
So that spacing equals about 1210 trees per acre to
fill that spot up.

Remember that that's 1210 trees as a
seedling. Whether we say that's a mature forest,
the capacity of an acre to hold is -- so it's 204
trees. So from the seedling, what we're assuming is
competition will take over, like the natural forest
does, and you will end up with that amount of trees for growth. You might even end up with more. An acre can hold more than that, but the capacity of maximum growth and maximum health of the forest would be at that range.

The established forest is an area that has 33 percent canopy cover or 40 percent basal area. That's that sampling method that we talked about. Forestry and natural resource professionals to be determined.

This canopy cover can be done on aerial photos using the grid system, which I'll talk about in a minute. But 33 percent. So an area doesn't have to be a hundred percent canopy cover in order to be considered to be an established forest. This definition comes from the U.S. Forest Service and we use that.

An emerging forest has to have a density of 230 small trees and that's doing a sampling that a resource person can do. You don't have to go through a whole acre and count, though you could do that, but you could take a sample and count it out. Same with seedling. You can do an estimate to determine if these are a forested area.

This is a no net loss grid. For
those that were here last night, this is what I
tried to show the public, that this is a grid that
is locked in on our quad maps. So when the agency
brings up the aerial photograph that they're going
to use, this grid is actually locked on to the maps
of New Jersey so you can -- the agency cannot adjust
it to make it less forested or more forested. These
grid lines are permanently on the aerial photos and
that locks in it so that the agency then can use
this to measure whether they have a 33 percent
canopy cover in one of these half acre grids. These
are half acre grids. And as I said last night, if
you look at this one here, this is leaf off, but
these are all trees here. There's some dark stuff
here which may be an indication of some evergreens.
But this is leaf off. So what I showed was that if
you're looking at the forest in that acre, you could
say a hundred percent that's a no acre, that's a
half acre that we deforest. But if you look at this
one right here, you could see there's part of the
field on the bottom, part of the field on the top,
and in the middle is a ban of trees. At 33 percent
you would calculate that, that particular one, and
that most likely would be a half acre of
deforestation. You would have to claim for the
whole half acre, not just 33 percent.

And likewise, if you took another one
that was right here and you take some of the trees
out there, it's not a 33 percent. So that would not
count towards the deforestation. We think that was
fair, and most agencies seemed -- they all seem okay
with that and it seems to be the fair way of
calculating what a deforestation half acre is using
this grid system.

Remember we talked about the
differences between the two additions of the law,
the early one and the later one. Reforestation
sizes are included in the new updated amended
version. The type of forested area will determine
the size of the reforestation stock. So if we're
talking about an emerging forest, seedling forest
existing, they will determine the type of stock that
then the agency that did the deforestation has to
put back in on site.

Downsizing the reforestation stock is
not acceptable. So we will no longer accept
seedlings for an existing forest. We no longer will
do that.

In some cases I think we have worked
with some of the agencies to look at steep slopes,
rocky soils. You know, there's a lot of factors involved. While this is part of our guidelines, the agency has and will continue to be open to the conversations with those using agencies when they deforest. But for the most part, we don't want to see seedlings when there's an existing forest there.

As I said to you last night, there is a conversion factor for evergreens or conifers. And some of the cases that we've had for the reforestation projects it's called for the replacement of evergreens as a screen. They are used very effectively that way. Evergreens are not measured by caliper. They're measured by height, and so we have a chart that takes the caliper and the amount -- those caliper, two to two and a half, and equate that to evergreens at a certain height. Evergreens are sold four to six to eight feet.

Welcome. We're going over the Reforestation Act. We're halfway through that and then right after this, we're going to get into the project itself.

Reforestation locations. The uniqueness about the new version, the amended version is that it takes into account the hierarchy of where the trees should be planted. The intent of
the No Net Loss Act is to compensate reforestation to be done. It is for reforestation to be done on the deforestation site or as close to it as feasible. The legislature said that they would like to see the trees to be put back on site. If not, then as close as possible within that area. And a hierarchy was developed.

Again, the idea behind no net loss is that the state agency is doing an impact to that property within the municipality. The legislature said that that reforestation should go back on site. As we mentioned last night, when you have a road widening project and it's a linear road widening project and there's not enough room to put the trees back on site because of the road widening work itself, then a state agency can choose to do it within the affected municipality.

So the hierarchy goes on the project site itself; within the affected municipality; within five miles of the site on state, county and municipal lands, or on state lands within the state. So that's the hierarchy as we go -- as we go through. So as an agency overseeing this, we work with that entity that deforesteds to see if they could put the material back on site. If they could put
some but not all, then they can put it -- they have
a choice of putting it into the affected
municipality next. Maybe they do -- they can't put
it all. They can't put any back on site because of
that road widening. They don't want to cut down
more trees to put more trees in. So the affected
municipality would be then approached to possibly
take these trees.

The off-site reforestation, money can
be transferred to the New Jersey Forest Service in
lieu of that particular state entity doing the
planting. And this is a law that the agency can
provide us with the monetary compensation for the
deforestation to the State Forest Service, and then
in turn, we will grant the money out to the
municipality and monitor the project. A lot of the
agencies are doing that now. Especially ones that
the project -- the reforestation cannot go back on
site or a hundred percent of that cannot go back on
site. They have chosen to do that. They get signed
off on that amount of trees and then it's our job to
work with that municipality to get the reforestation
done.

Just to give you an example of the
monetary compensation and established forest, those
are the ones four inches and greater, would be about $31,000 per half acre. An emerging forest is about $17,000, and that seedling forest is about $4,000 per half acre. That's the monetary compensation if an agency cannot put it back on site.

The reforestation plan that we ask the agency to come up with are site maps, the aerial photography, a landscape drawing, a narrative about what's there, what's not there, what's going to happen, in this case the community, plant list that goes into the plan, what was existing there, maybe Hemlock, maybe some species of trees that -- the native species that we want to put back, the plant list that's going to be developed and the specification for planting and maintenance.

What's important is the maintenance side of it as well. As I told you last night, it takes five years to plant a tree. The first year you plan, the second year you plant, and then the next three years you take care of that tree.

Again, when you scan documents in, you can't blow them up. So I put my heading on the side, but the important thing here is that this is our -- this is our flow chart that shows the process of the no net loss reforestation. When I bring this
out to show the public, right here in the middle is
the New Jersey Community Forestry Council. This
council was established under the law under the New
Jersey Forestry Act. It's a member of public
council that serves the department on trees and
community forests. In the no net loss law, they get
to review and assist the State Forestry in the
review of the no net loss reforestation plans and
make recommendations to the State Forestry on
whether to accept or not.

So in reality, this is a public
meeting that reviews and allows the public to look
at the plans, but every month our Community Forestry
Council actually does that for us in that they get
to review the plans and then make recommendations
back. There's some professionals on there in the
nursery industry. There's professionals in the
agriculture, soil people, and lots of times they
have good comments about plant material, about
certain things and it only is to make the project
better.

The process goes through and what I
show you down here is that it's ultimately approved
by our state forester. Once our state forester
signs the letter of approval, then the state agency
can go forward and deforest and the process then
starts.

What's important, I put this slide in
to show the public that during the process of the
replanting, that we as an agency try to get out
there with these inspections at the initial planting
and then there's an annual planting, the two annual
plantings. Because remember, after two years,
there's a level threshold of success that has to be
met as part of the law and so as such, we do
inspections to help that agency with their
groundwork. We think the ones that we have been
involved in where we've started at the beginning
here and worked our way through make the better
project. We have a better success rate and I think
in the long run, both the Agency and Forestry
Service makes out because it's a good project and
the project gets established after two years and we
meet those criteria.

The reforestation protection and care
method. It says that after two years, the health
and vitality of the plant stock has to be met or
exceed the minimum listed below. That is that
existing forest when you replant it. Ninety-five
percent survivability out there and the whip and
container, which is the emerging forest 90 percent, seedling stock has to be 80 percent. Those are the minimum. So our foresters go out and inspect those properties. Like I said to you earlier in the previous slide, one, two years, and then we give feedback to the using agency telling them where they are and they have to make adjustments. In the plan, there usually is written if these minimums are not met, how they would meet those survival rates. And after two years, if they meet the survival rate, we sign off on it and it's a done year. Again, the intent of the legislation was that the impacted municipality, the impacted area, as a state agency being a good steward, an environmental steward, if you make an impact and you remove those steps from the trees, then after two years those are back as a no net loss. And the benefit of being a no net loss project, you have to have these minimum survival rates. And it will be considered complete and acceptable when the actual survival rates meet after two years.

For us as we talk to our state agencies about the benefits of participating and for the public, it's additional benefits of tree planting. And, of course, last night this is where
I got Amy involved with the "B" word and she thought that was pretty neat. I could see her eyes going, what is he talking about? The additional benefits of a roadside construction where we're looking at beautification, beautification, right, we're putting trees back along that construction. We're trying to beautify that community, that state highway.

Remember, we're talking about state land. So in that case, it's a state highway and we're trying to add beautification. The public doesn't distinguish between a state highway, a county highway and a municipal highway. They just know you're in this town whether you're on your way to the shore, whether you're on your way to one of the cities to see a sporting event. It is a town. So that's -- that's some of the traditional we are moving ahead and we know that the urban forest, the community forest provides us the forest, provides us with many, many social, economic and environmental benefits -- clean air, storm water control. There's so many things. Calming effect, making people perceive differently when you enter into a tree-lined street, a tree-lined area.

So what we talk about to our state agencies is that this is a positive program that
puts them in a good set of light and a good light as
we go forward. So that's the idea here.

    We're going to wrap this up. That's
the salesman again. We do have to treasure our
trees. The important thing here is I noticed last
night and I made sure I went back and changed it,
the public notice it says within 60 days the public
can make comment. It should be sent to our field
office, which is in Somerset, New Jersey. I think I
had the Trenton address on that last night. So I
put that up there. It is the field office at our no
net loss office that we work out of. That is the
actual address and the phone number. So there we
have it.

    We'll take questions in a little bit.
We do have that on the agenda. Questions and
statements. But I'm going to turn it over to
Melissa now.

    MS. WOLFE: If comments are sent to
the Trenton office, will you get them?

    MR. D'ERRICO: We get them and
transfer them to our field office who compiles and
makes sure we answer them. We do answer. We
answered all of the public -- if we do questions, we
do respond to them. And like I said, in some cases,
people bring up good ideas.

UNIDENTIFIED SPEAKER: If it does come from the Trenton office, we still take it under 60 days.

MR. D'ERRICO: We're going to switch over to Melissa now who's going to talk specifically about the project itself. So just take a second here.

MS. DETTLING: My name is Melissa Dettling. I'm the environmental project manager for Tennessee Gasline Company for the Northeast Upgrade Project. We're here to discuss the portion of the Northeast project in New Jersey referred to as Loop 325. So I'll go through, once I get to the mapping, and show you exactly where our discussion point will be.

We're going to discuss here the reforestation plan for the sections of Loop 325 that cross state-owned lands, or maintained.

Here's an overview map of the Northeast Upgrade Project. The blue lines that are shown up here, they show the existing pipeline system that Tennessee Gas has had actively working here in the area since the '50s, and there are some areas where the pipeline has been looped.
The red lines that you can see up there are the proposed pipeline loops for the Northeast Upgrade Project. There are three loops that are in Pennsylvania. One that crosses the state border into New Jersey, and one that's wholly in New Jersey. The Loop 325, which is the 7.6 miles that's all in New Jersey, is the one we're going to be discussing tonight.

The project is set to be in service in November of 2013. It will have an incremental volume of gas of 636,000 dekatherms a day. The entire project, like I said, all the loops that I discussed are approximately 39.6 miles, 22 in Pennsylvania and 17.6 in New Jersey. And the boxes up there with numbers, the blue and green are existing compressor stations. We will be making some modifications to existing compressor stations which will add an additional 20,620 horsepower to the system.

Here's a summary of the state lands. On the 325 Long Pond Iron Works State Park, North Jersey District Water Supply Authority property, and the Ringwood State Park. Here's an overview map of all Northeast Upgrade Project facilities that are proposed in New Jersey. So Loop 323, that we
discussed last night at a different meeting, was
High Point State Park, and then Loop 325 here on the
map on the right is where we cross Long Pond Iron
Works, Ringwood and the North Jersey Water Supply
district properties.

Here's a little blown up area of the
properties that we're discussing tonight. The
proposed pipeline loop is shown here with mile posts
and lot and block information, if you'd like to
reference that. Here's just a little bit more blown
up area of the parks themselves, Long Pond Iron
Works, and Ringwood. We'll go over the impact
acreage in a table where it's a little bit better to
see it all together, but the proposed forest impacts
are 20.99 acres of temporary work space, an
additional temporary work space.

When we refer to that, we're
referring to work space that's needed to put the
pipeline in construction. We have an area that's
approximately 100 feet that we're allowed -- that we
refer to as temporary work space for pipeline
construction. Any areas beyond that which we refer
to as additional temporary work space must justify
the use of those. Those are typically at road
crossings. If we're boring a road and we need extra
work space for soil storage, if we're crossing a
wetland where we neck down our work space and we
need additional space outside of that wetland for
topsoil storage, those areas is where we request
additional temporary work space and that's where we
refer to it as the ATWS.

These are the additional properties
in Long Pond Iron Works and Ringwood just blown up
here with the lots and blocks identified and the
pipeline with loops crossing that you can refer to.

Another slide here, North Jersey
Water Supply Authority property. Here approximately
mile post 3 in the project between the parks we have
approximately 2.7 acres of temporary and additional
temporary workspace impact, and approximately .91
acres of right-of-way, and we refer to that. That's
a new permanent easement that we're requesting to
expand on our existing easement that will not be
reforested due to safety reasons. We can't have
trees planted over the pipeline for pipeline
integrity, as well as maintenance reasons.

So here, as Mike discussed, the No
Net Loss Reforestation Plan. The plan we prepared
for this project for New Jersey State lands, the
plans are dated August 2011. They are prepared in
conjunction with DEP Division of Parks and Forestry Staff, and the New Jersey Forest Service No Net Loss Reforestation Program Guidelines. They go over the replanting of temporary workspace and additional temporary workspace, as I described, and off-site restoration or monetary compensation of the new permanent easement impacts, depending on hierarchy that Mike discussed where we'll look for properties to replant. And if that's not done, then we may need to resort to monetary compensation, if that's requested.

The plan goes over specialized methods for paulustrine forested wetlands, upland forest seed mixes, how we will restore in moderate to poor suitability of soils for planting, and how we'll address Hemlock and oak community restoration.

We'll start by going over deforestation. The deforestation will be limited to approved workspace. When I refer to that, the Federal Energy Regulatory Commission regulates natural gas pipeline construction. When we design a project, a proposed project and workspace, we have to have a very specific workspace, including access roads identified and approved through all the regulatory processes that need to go through NEPA.
and the FERC approvals. We cannot have any type of materials or activity outside of those areas. No soil, no people, no equipment, nothing can go outside of the approved work space.

Stumps during deforestation will be left in place within wetlands, unless it's a safety issue and we need to be working and have a safe condition over that, and then over the trench line where we need to, obviously, be trenching to put the pipe in to be reattached.

Deforestation activities will be conducted in compliance with Migratory Bird Treaty Act, timing restriction recommendations for tree clearing. So we will be deforesting the entire Loop 325 within recommended timing restrictions so there are no — to minimize any potential impacts to migratory birds.

What I had on here last night which I don't have tonight is Indiana Bat Clearing Restrictions. None have been recommendd by the Fish Wildlife Service for this loop. If that changes, we will revise the plan to include that, but there are other areas in New Jersey for our no net loss reforestation where we will have a recommendation for. The bat restriction falls close with the
migratory bird restriction and we'll be following
that as well.

MR. SHUART: There was bat colonies
at the Ringwood Manor and at the Skyland Manor.

MS. DETTLING: Really? We did
surveys. We had no captures.

We will be following -- we will be
complying with the Migratory Birds Treaty Act. So
we will be clearing in the fall, which is not
outside of the Indiana Bat Clearing recommendations.

Tennessee's Northeast Upgrade Project
Environmental Construction Plan was prepared to
identify all the best management practices during
construction that we'll be following during these
clearing activities, including the implementation of
erosion and sediment controls, and measures that
will be used to prevent the spreading of invasive
species.

A wetland mitigation plan will be
implemented for the forested wetland impacts under
Flood Hazard Area Control and Freshwater Wetland
Protection. Tree species will be replanted and
developed for wetlands and open water buffer zones.
And specialized seed mixes for restoration in
wetlands, riparian zones and open water buffer
Forrested Land Assessment and Forested Community Type Assessment to determine acreage impacts. So the grid works, that Mike discussed, not only do we look at, like he said, the amount of trees that are there, but we look at the size and the community type so they could be replaced accordingly.

On the properties that we're looking at tonight, we determine approximately 23.69 acres of additional temporary and temporary workspace that will be reforested under the No Net Loss Reforestation requirements; 9.15 acres, the total acreage for the new permanent easement that we'll be requesting. No reforestation will be occurring in those areas and so we'll be looking to do off-site reforestation or monetary compensation.

And community types have been identified by milepost of the pipeline and are covered in the plan on the reforestation mapping.

Here's just an example. So as you can see, the state grid mapping, we've overlaid it over the proposed pipeline workspace so that we can identify the acreage and the community types that we'll be reforesting. The maps, as you look down
here, show the community types which is where the
color grids are.

Here's another example of the
community types shown. The grid works over our
proposed pipeline workspace.

Here's the summary table where we've
broken out the acreages that have been identified.
The 33 percent or greater grids that will be subject
to No Net Loss Reforestation, the acres identified
here, Long Pond Iron Works State Park and then the
North Jersey District Water Supply Authority. So we
have total acreage established of forest shown. We
have total acreage of reforested subject to no net
loss. And then we have it broken out the acreage
that's the new permanent easement that will be
requested that will not be reforested.

We also showed on here the grids that
are less than 33 percent of forest. And those total
acreage that would not have been subject to
reforestation under no net loss, we will be
reforesting those areas anyways. So it shows the
acreage is there. The acreages that are under 33
percent in the grid works that are the new permanent
easement, those numbers are shown, which we also
will not be able to reforest those acreages.
Is there any question on the acreage?

The Reforestation Plan Details goes over the restoration methods. Temporary and permanent erosion control measures, as I discussed; that we limit mature tree cutting as practicable, and stump removal wherever we can. We restore area to pre-construction contours and grades, and we'll use specialized wildlife forage seed mixes. Lime, fertilizer, seed and mulch rates and application will be in consultation with DEP.

Some properties request that it not be used and we comply with whatever the requests are of those properties.

Forest species replanting matrices are prepaid by the community types, as I showed you. You'll have planting mixes that are laid out in the plan that can -- you can look at the grid work mapping that shows community -- that shows the community types, and then there will be a seeding matrix that will correspond to those communities.

The replanting methods and individual sizes vary by the site limitations. And like Mike went over, we'll go over the requirements for the balled and burlapped and the whips and the seedlings.
I put in here a section on the Hemlock and oak community special considerations. I changed the slide from last night. We had in our plan for previous projects that we will be harvesting for Hemlock seedlings our workspace prior to deforestation to be used. We didn't find that it was feasible in other projects. So I put in here that we may. If it's not possible, then we will be going to nurseries to be getting Hemlock species for planting for the project.

So for the two- to three-inch caliper balled and burlapped individuals, we'll be proposing, as required, the 204 individuals per acre, where accessibility and soil conditions allow.

Now, the ruggedness of the landscape and linear distance of the pipeline in question limits the planting of species to areas adjacent to roadways. You have to get to them frequently to make sure you're watering regularly. Where we've got everything restored, we need to be able to get to these very frequently and easily. So the limiting factors include the shallow depth of bedrock, very or extremely stony soils, steep slopes, and accessibility for trucks and heavy equipment. So the proximity of the access roads is
very key for the supplemental watering.

The whip sized individuals, two to three feet tall, containerized 1210 individuals per acre to reach statutory replacement factor stem count of 408, while accounting for dead loss. More appropriate to rugged landscapes and linear distance to the project. It allows for faster re-establishment of forested cover while accommodating the landscape and limitations. Steep slopes and extremely stony soils, and accessibility for trucks and equipment are less limits for these when factoring the planting whip-sized specimens.

All terrain vehicles can be utilized to facilitate hauling and staging activities and planting completed via foot traffic and simple hand tools.

The limiting factors include extremely shallow depths to bedrock and presence of extremely stony soils.

Seedlings, which are the one to two feet tall bare root stock, 1210 individuals per acre, statutorily planting density using tree replacement factor identified in the guidelines.

It's more appropriate to extremely rugged landscapes and longer distances from
available equipment access points. It allows for faster re-establishment of forested cover over natural successional processes while accommodating landscape and limitations for this project. It's appropriate for areas where extreme shallow depth to bedrock, steep slopes, and very or extremely stony soils and accessibility for trucks and equipment are limiting factors.

So all terrain vehicles, again, can be utilized to facilitate hauling and planting activities, likely implemented in conjunction with specialized seed mix containing tree species seeds.

So the maintenance schedule, like Mike discussed, will be conducted for a minimum of three years. We'll have four inspections per season. Supplemental watering weekly when seasonal rainfall is insufficient to maintain proper soil moisture. We may use water polymers, which assists in keeping moisture there for a longer period of time. Mulch ring to 36 inch diameter and three-inch thickness will be used for balled and burlapped specimens.

Tall growing weeds will be controlled to prevent adverse competition. All balled and burlapped specimens shall be supported by stakes and
guy wires.

To continue the maintenance schedule,
all balled and burlapped specimens will be
maintained in a plumb position, not with an M but a
B. All balled and burlapped specimens will be
monitored for insects and disease and will be
diagnosed and treated on a case by case basis.

If there are heavy signs of deer
browsing damage to vegetation, measures will be
taken. We may be able to put fencing in, put bud
caps during dormant season using repellents and
ultimately replanting with deer-resistant species.

Slow release fertilizers will be
applied to the balled and burlapped specimens at the
end of the first growing season to the trees within
uplands. Fertilizers will not be used within
wetland areas. And pruning will be done as
necessary to remove the damaged, dead or insect
infested branches.

Survivorship monitoring and success
rates. That was discussed earlier by Mike as well.
Annual monitoring and survivorship and calculation
of success rates will occur in all reforested areas
for a minimum of three years following the
completion of the replanting.
Quantitative sampling will determine
the type and quantity of woody species colonizing
the construction right-of-way, including planted and
volunteer species.

So we'll be looking for not just
percent cover or percent of successful growth.
We'll also be looking at the community types that
were meant to be planted and those that are thriving
to meet what's the community types surrounding the
workspace.

Results will be compared to
predetermined threshold success criteria. As Mike
discussed, that's in the net no net loss guidelines.
And restoration shall be considered successful if on
visual survey the density is similar to the cover of
non-nuisance vegetation to the adjacent undisturbed
land.

Annual monitoring reports will be
submitted to the NJDEP Division of Parks and Forest
at the end of each growing season. If actual field
stem counts fall short of the predetermined
threshold values, Tennessee will develop
supplemental plans in conjunction with the
appropriate state and federal agencies.

Areas that don't meet the minimum
survival rate percentage shall have all unhealthy stock replaced within 120 days of receiving notification from New Jersey Forest Service. And inspections and replacement plantings shall continue with the same time frames until minimum survival rates are achieved.

So the new permanent right-of-way that I discussed that we'll need for the proposed pipeline, which cannot be reforested for safety reasons as well as operation and maintenance, we need to be able to maintain a line of sight to monitor our pipeline, and we also can't have root systems within a certain distance of our pipelines that are underground for integrity reasons.

So those areas that could not be reforested we'll be mitigating. So part of that that I just put under here is we do plan to reforest anything within the half acre grids that have less than 33 percent of forest cover that would not be required under the No Net Loss guidelines. Anything that's not reforested will either have off-site plantings or monetary compensation as the last resort, if no lands are identified for replanting possibility.

Off-site restoration projects are
subject to availability and recommendation by DEP Division of Parks and Forestry, and Fisheries and Wildlife. Tennessee will work with the Division to identify and conduct suitable off-site restoration projects.

As I stated, monetary compensation will be the last option and it will be per the requirements of the No Net Loss guidelines.

We put the website on here that you can check, and we have two Ms. We're happy to answer any questions that you might have. Thank you for coming tonight.

MR. D'ERRICO: As you know, the agenda calls for, and so does the public notice, that the next hour or so we can take comments and/or questions and/or statements from the public. The public does have 60 days to give their comments to us. The two projects, the one in Sussex County and the one here in Bergen/Passaic County are both on this website, spelled correctly so you can find them. They are there right up in front so when you first go on to the front page, that whole document, the plan that's in the back on the counter, we are going to leave a copy of that plan here in Ringwood Borough Hall, and we also are trying to get it -- we
will be getting it to the library as well. We did that with the other site as well in Sussex County so that the public can have paper access if they don't have this as well.

So we open it up for any questions. As you can see, we are keeping a record of the meeting and your questions will be taken for the record as well.

MR. SHUART: Jack Shuart, State Forest Service.

Have the permanent access roads that will be left after construction been final mapped yet? And how many of those are in the temporary work zones, the acreage corrections?

MS. DETTLING: Right now we're not proposing any new permanent access roads. There's only one, the Mahwah Meter Station, which is an aboveground facility, has an existing road, Bear Swamp Road, there. And if improvements are needed we'll be working with, you know, landowners to do those. But we're not planning on using any heavy equipment on that road. So we're planning to use it as is and we're not planning to build any new roads. So all the access roads that we are proposing to use for the project have been identified.
MR. SHUART: Okay. I work for the State Forest Service. I was wondering if it was going to be mapped, the availability of that information to them.

MS. DETTLING: They are, yes, absolutely.

MR. SHUART: Be careful on that Bear Swamp. It's a C1 classed native brook trout that runs on that road.

MS. DETTLING: We talked about it and I don't think the bridges that are on that road will even support any construction activity.

MR. SHUART: The main bridge was condemned a year ago at the base of the mountain. They wouldn't even allow a school bus to cross it.

MS. DETTLING: We're discussing using just light traffic that's authorized to use the road now to access the meter station facilities that are --

MR. SHUART: There was another access road that comes down from Route 17 from New York State, comes through the Old Ramapo Company lands that was used by the last logging company that worked up in that area on the north end of Bear Swamp. It crosses just down the hill from the
telemeters.

MS. DETTLING: If at any time there's other access road needs, we'll have to identify that and add them to the plan because right now the way they have it set, they've identified all the access roads that we're planning on using right now. All of them are existing.

MR. D'ERRICO: Any other questions, statements that need to be said?

Well, again, we appreciate you all coming out. Again, the material is online so you can get a handle on and actually see those maps and those kind of things, and we want to thank you all and we'll see you next time.

(Hearing concludes at 8:01 p.m.)
CERTIFICATE

I, DIANE AMORESANO DiTIZII, Certified Realtime Reporter, a Notary Public and Certified Court Reporter of the State of New Jersey, Certificate No. XI01674, do hereby certify that the forgoing is a true and accurate transcript of the proceeding as taken stenographically by and before me at the time, place and on the date hereinbefore set forth.

I DO FURTHER CERTIFY that the within transcript format complies with Rule NJ ADC 13:43-5.9.

I DO FURTHER CERTIFY that I am neither a relative nor employee nor attorney nor counsel of any of the parties to this action, and that I am neither a relative nor employee of such attorney or counsel, and that I am not financially interested in this action.

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DIANE AMORESANO DiTIZII, C.S.R., C.R.R.

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