IMPACT OF ACCESS ROADS ON HABITAT

Best Road Placement Practices
Best Construction Practices
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Sullivan County is known for its pristine forests and natural wildlife. Development, such as housing and roads, takes away core habitat for many native Pennsylvania animals. Drill pads require around 4 acres of clear-cutting and access roads need to be run to existing infrastructure from drill pads. All of this has an impact on local habitats.

3 Options for Access Road Placement
My project will be focused on identifying three different options for the placement of access roads to proposed well locations determined by the Nature Conservancy. These three options will be: a direct connection to the closest local road, a connection to a major state road following pipeline corridors, and a direct connection to the closest state highway.

Laporte Township Map
This map shows core habitat areas found throughout the township in green and unsuitable core habitat in yellow, orange, and red. White areas represent regions that are not forested. Core habitat was determined by buffering development by 100 meters. This map will be run through the three different scenarios identified above.

Axonometric View of the Landscape
This view shows the three different placement scenarios from an aerial perspective. A state road is seen in the foreground, a local gravel road to the right, and a pipeline corridor to the left.
Perspective View
The final view for each scenario is a perspective view. This shows the amount of fragmentation to not only core habitat, but to forest canopy as well.

Current vs. Proposed Design
These perspectives also show current and best practice construction scenarios. Current conditions call for wide roads to allow trucks the opportunity with ease. Creating pull-offs would allow for thinner roads and thus less fragmentation especially to the forest canopy.

Best Construction Practice
Penn State’s Dirt and Gravel Road division has pages of information for recommended gravel road construction. These guidelines should be implemented for any well pad access road.

www.dirtandgravel.psu.edu
Current Conditions

Pipeline Access Road

Summary info

HABITAT FRAGMENTATION

Access Roads

Pipeline Access Road Scenario

Summary info