



AGRICULTURAL IMPACTS

Resulting From Wind Farm Construction

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This document is one of a series of reports and guides that are all part of the NYSERDA Wind Energy Tool Kit. Interested parties can find all the components of the kit at: www.powernaturally.org. All sections are free and downloadable, and we encourage their production in hard copy for distribution to interested parties, for use in public meetings on wind, etc.

Any questions about the tool kit, its use and availability should be directed to: Vicki Colello; vac@nyserdera.org; 518-862-1090, ext. 3273.

In addition, other reports and information about Wind Energy can be found at www.powernaturally.org in the on-line library under "Large Wind."

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Agricultural Impacts Resulting From Wind Farm Construction

The Department has observed the construction of three wind farms in New York and has identified several impacts to agricultural resources that can occur as the result of such projects. We have been sharing information about the agricultural impacts during and after construction with landowners who are considering participating in future wind farm projects.

Two types of agricultural impacts may result from the construction of wind farms on agricultural land. One impact is the permanent loss of productive land as a result of the installation of the access roads and turbine towers, as well as the facilities needed for the interconnection between the wind farm and an existing electric transmission line. The other impact is the damage to the soil resources in areas disturbed during construction. Both of these impacts can be minimized with proper planning and communication. The following presentation discusses the impacts to agricultural land and the appropriate mitigation.



Access road located along field edge to minimize disturbance to field and cropping pattern.



Trenches excavated for the collector system can cause significant impact to farm fields. This photo shows poor separation of topsoil and subsoil.



The contractor attempted to separate the topsoil (left side) from the subsoil material (right side). Some mixing did occur because of limited work space.



Significant volume of rock excavated from the hole for the foundation. Keeping this material separate from the topsoil is critical. The topsoil material is properly separated and temporarily stored on the left side.



Some rock material mixed with topsoil material. This type of mixing should be avoided. Careful separation of the material is required during restoration.



Seeding failed at the tower site because of lack of topsoil material on the surface. This photo was taken one year after the area was restored and seeded. Imported topsoil was required to establish a seeding.



This slide also shows soil compaction along the access road. The topsoil material should be stripped from any agricultural areas used for traffic or vehicle parking. Subsoil decompaction is needed during restoration.



Topsoil stripped from area adjacent to access road to prevent damage as a result of vehicle traffic and parking.



Seeding failed along the access road due to a lack of topsoil. Imported topsoil is needed to correct areas such as this.



Poor vegetation two years after restoration because of the lack of topsoil. Only a few weeds can be seen growing. Imported topsoil is needed to restore the area.



The connection between the substation and the transmission line can result in a significant impact to farm land. The addition of the guy wires and the access road results in a loss of productive farmland and a loss in efficiency during field operations.



Crushed stone should not have been dumped in the agricultural field. Some stone was left in the field after restoration causing damage to the alfalfa stand.



This slide shows the soil saturation problem caused in the field on the left side of the access road. These types of drainage problems must be corrected to prevent damage to the fields.