

Delaware Wetland Conference

January 20, 2010



The Ditch Diggers





Wooden V-drag with metal cutting edges being used to dig a drainage ditch in Minnesota in 1924. (USDA photograph from Quincy A. Ayres and Daniel Scoates, *Land Drainage and Reclamation* [New York: McGraw-Hill, 1928], 132)

Marshyhope Tax Ditch

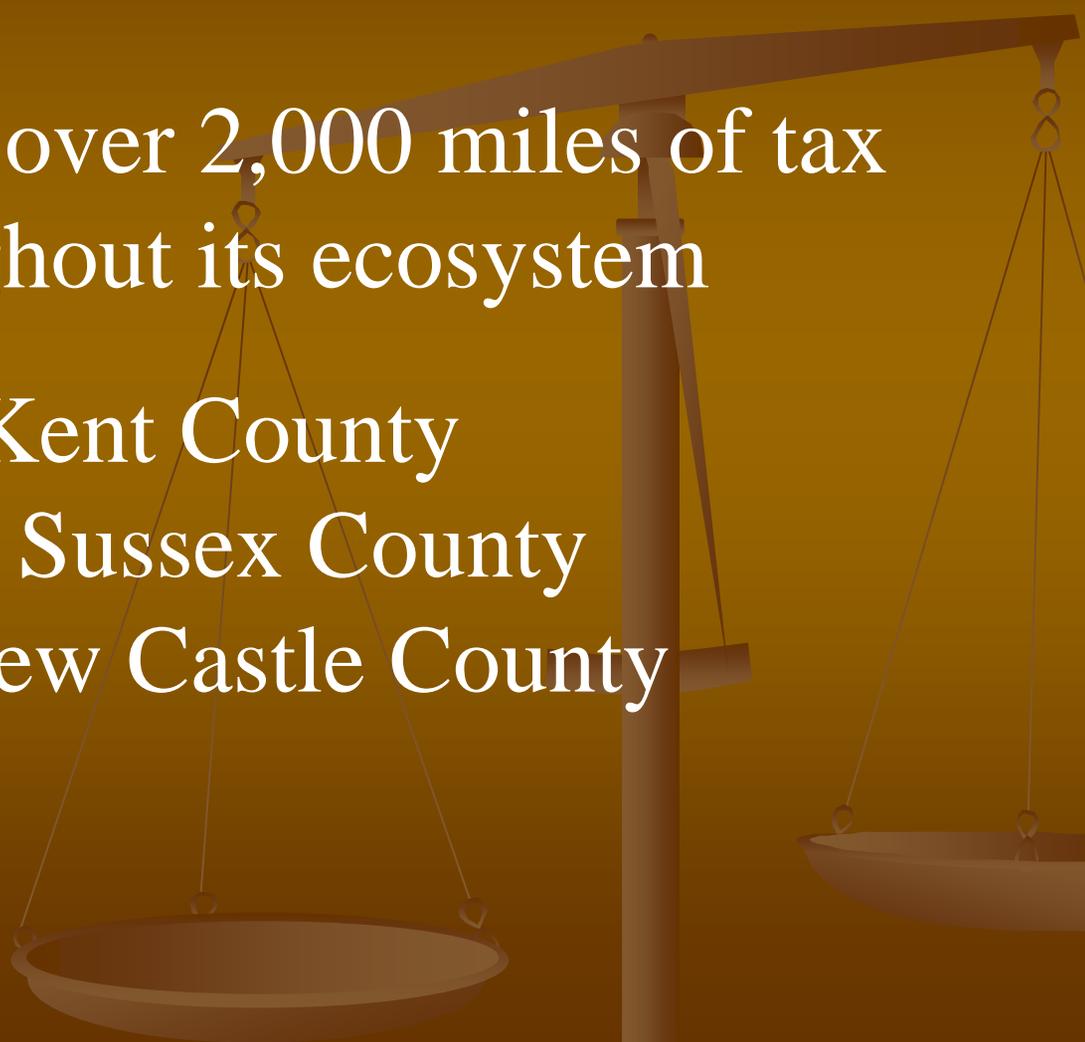








Tax Ditches

- Delaware has over 2,000 miles of tax ditches throughout its ecosystem
 - 746 Miles in Kent County
 - 1270 Miles in Sussex County
 - 54 Miles in New Castle County
- 

“Tax Ditches”

Traditionally have a “very bad”
name with Environmental
Groups and Agencies





Deep open ditch, constructed with a dragline, provided the drop needed for draining many acres of wetlands near Hannah Lane in Carter County, Kentucky.



Natural Resources Impacts?



Principles and Guidelines for Planning, Constructing, and Maintaining Drainage Ditches in the State of Delaware

- Developed BMP Manual to promote Ecosystem Restoration within our drainage systems



State of Delaware
Department of Natural Resources
and Environmental Control
Division of Soil and Water Conservation

June, 1995



One Sided Construction







Maintenance Performed the “Tree Hugger Way”











11:11







Petersburg Tax Ditch – Haines

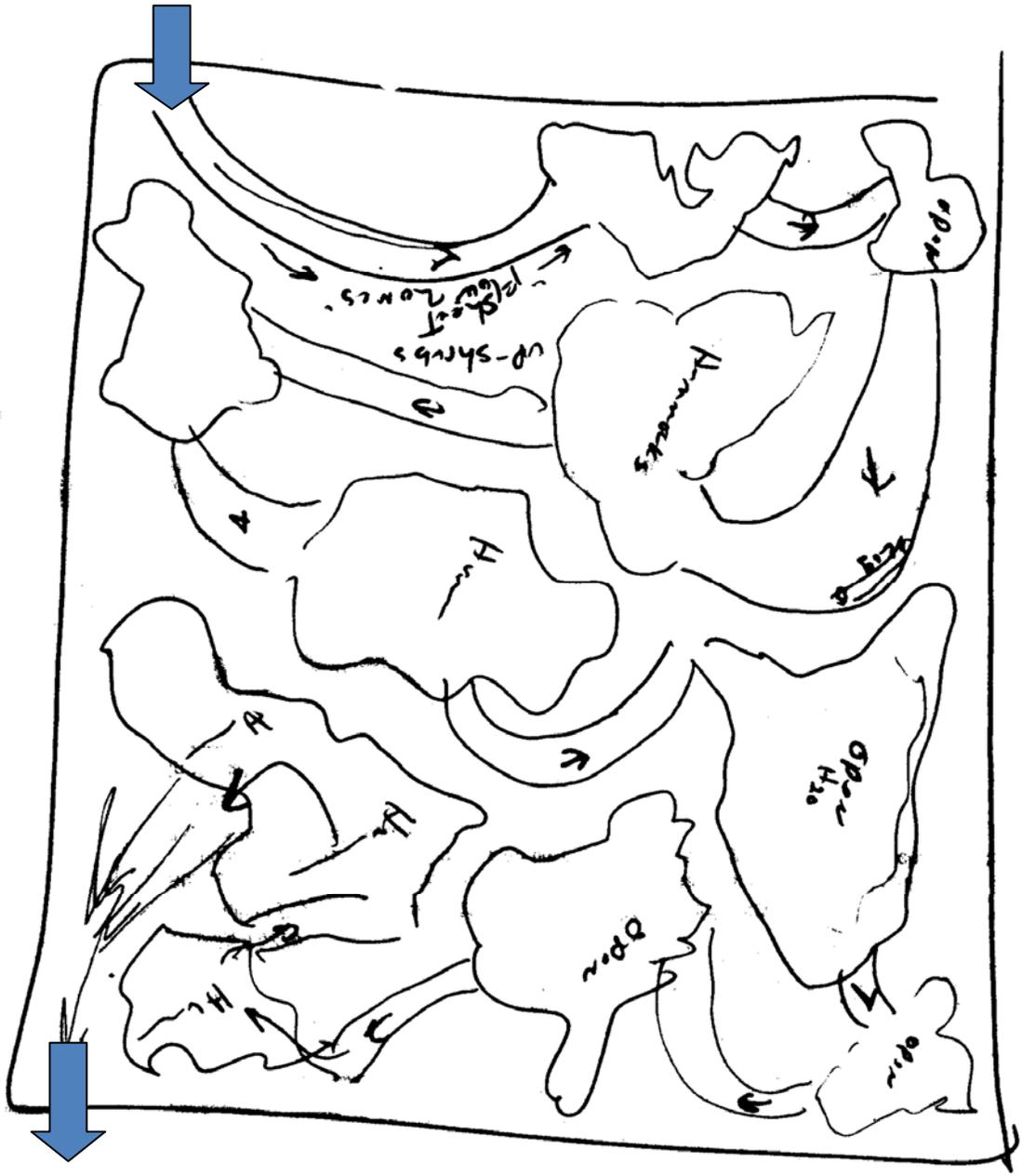






Heron Drain Tax Ditch





Conceptual Plan



USGS Quarter Quad is:
Name: WYOMING NW
NAD 83 Delaware State Plane
Coordinate in feet at Center of Map is:
60 1478, 388803
Date of Photo if shown: March 2002



Heron Drain Tax Ditch Wetland Creation Site



















5-22-2012

Marydel Tax Ditch (Prong B)



LEGEND
 Adjacent Low Bank
 Control Point
 Existing Ditch Bottom
 Channel Bottom
 Change in Grade
 Soil Boring

NOTE: Log of Soil
 Office of the
A S D

MARYDEL
 KEY
U. S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE

Designed D. W. LIQYR
 Drawn GARY A. Cello

MARYDEL TAX DITCH

COURT ORDER CHANGE NO. 8

WHEREAS, the present owners of Property Nos. 8, 8A, and 9 of the Marydel Tax Ditch desire to eliminate the actual tax ditch right-of-way of Prong B from Sta 0+00 to its terminus at Sta 17+00 and to reduce the acres to be assessed in this Tax Ditch; and

WHEREAS, Property No. 8 is developing a stream corridor restoration project for this Prong; and

WHEREAS, all affected upstream landowners agree to said proposed stream corridor restoration project; and

WHEREAS, the individual properties' assessment bases will be reduced to reflect the elimination of actual tax ditch right-of-way and the reduction of acres to be assessed; and

WHEREAS, no other landowners are involved;

NOW, THEREFORE, we the undersigned, the present landowners of Property Nos. 8, 8A, and 9 of the Marydel Tax Ditch hereby agree to the elimination of actual tax ditch right-of-way of Prong B from Sta 0+00 to its terminus at Sta 17+00 and to the reduction in acreage to be assessed in the Marydel Tax Ditch as shown on the drawing attached hereto and made a part of



Diverse Wetland Complex



Processing Nutrients









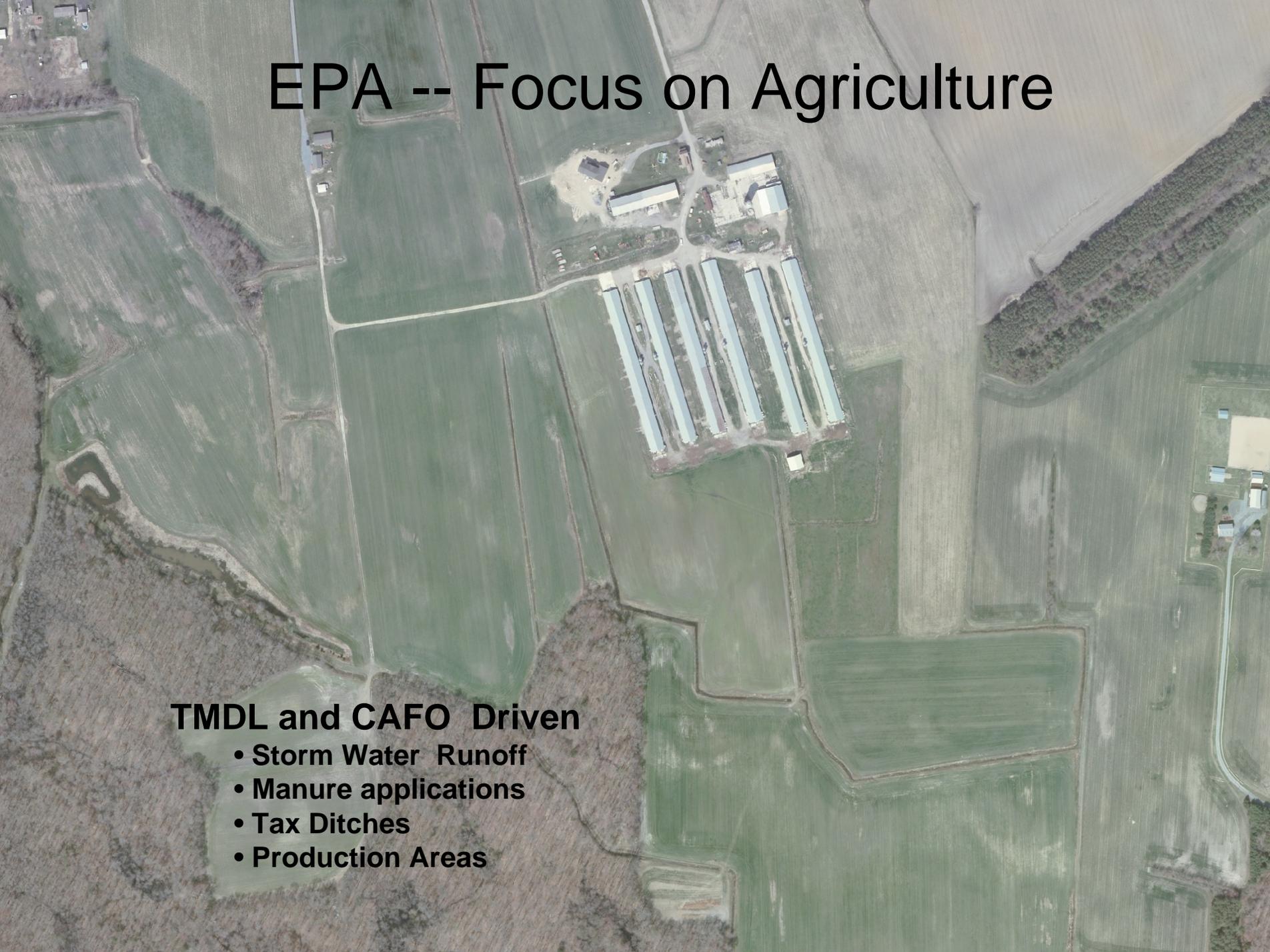








EPA -- Focus on Agriculture

An aerial photograph of a large agricultural facility. The central part of the image shows a cluster of several long, parallel buildings with light-colored metal roofs, likely used for livestock housing or processing. To the left and right of these buildings are various green and brown agricultural fields, some with distinct patterns suggesting different crops or stages of cultivation. A road or path runs through the center, connecting the buildings to the surrounding fields. The overall scene depicts a typical large-scale farming operation.

TMDL and CAFO Driven

- **Storm Water Runoff**
- **Manure applications**
- **Tax Ditches**
- **Production Areas**



Animal Production Areas University of Delaware











Poultry Production Areas



Ditches and Structures







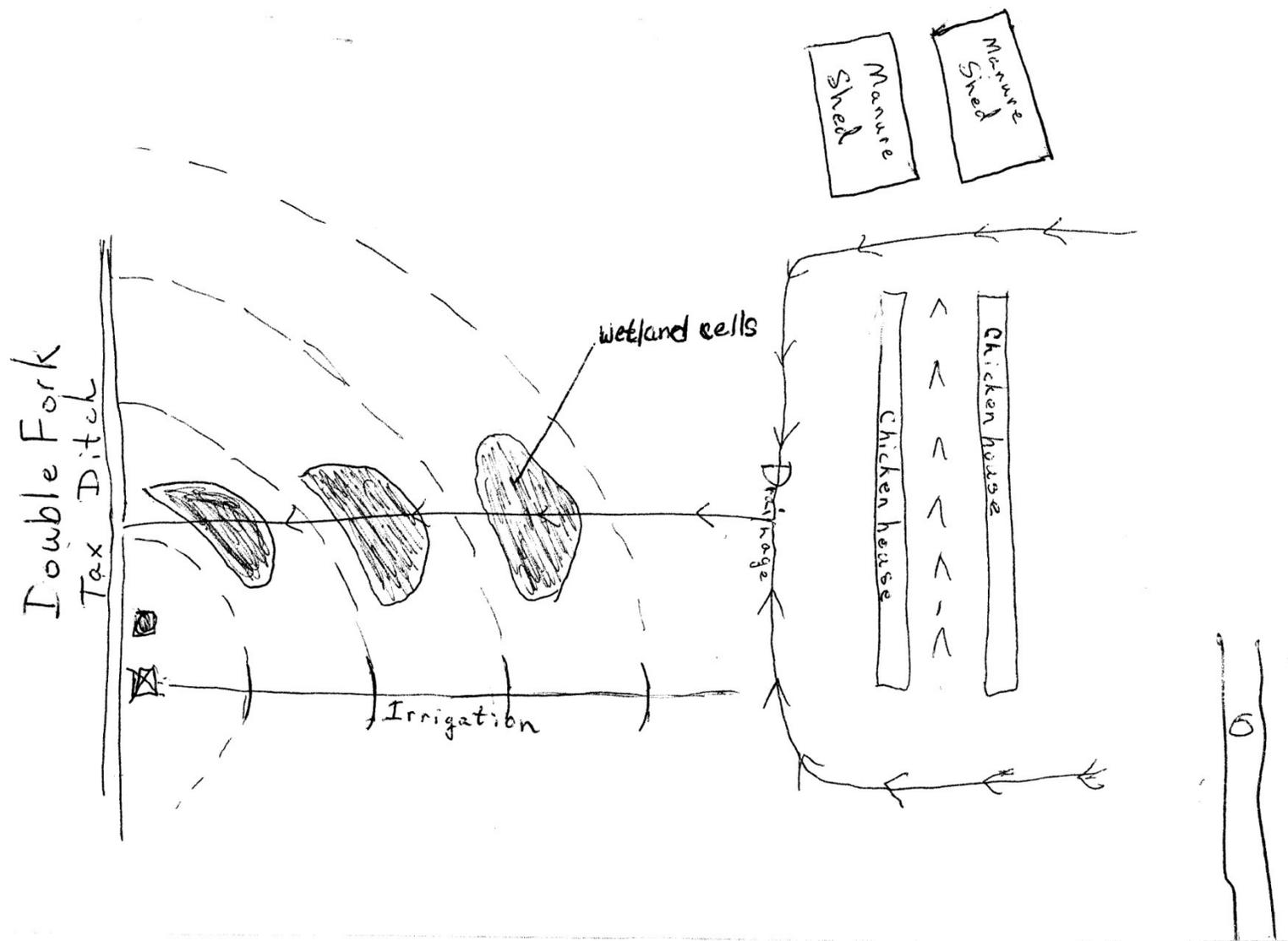




JOHN DEERE

obile

Doug's Sketch





SCALE 1"=150'



SCALE 1"=150'

An aerial photograph of a rural landscape. The terrain is a mix of green fields, brown soil, and some buildings. A callout box with a black border and orange text points to a specific area in the lower-middle part of the image. The text inside the box reads "Potential Wetland Cell". The area being pointed to is a small, irregularly shaped patch of land, possibly a wetland, located near a larger green field and a brown soil area. The overall scene is a typical agricultural or semi-rural environment.

**Potential
Wetland
Cell**





Potential
Wetland
Cell

It's All About the Chicken



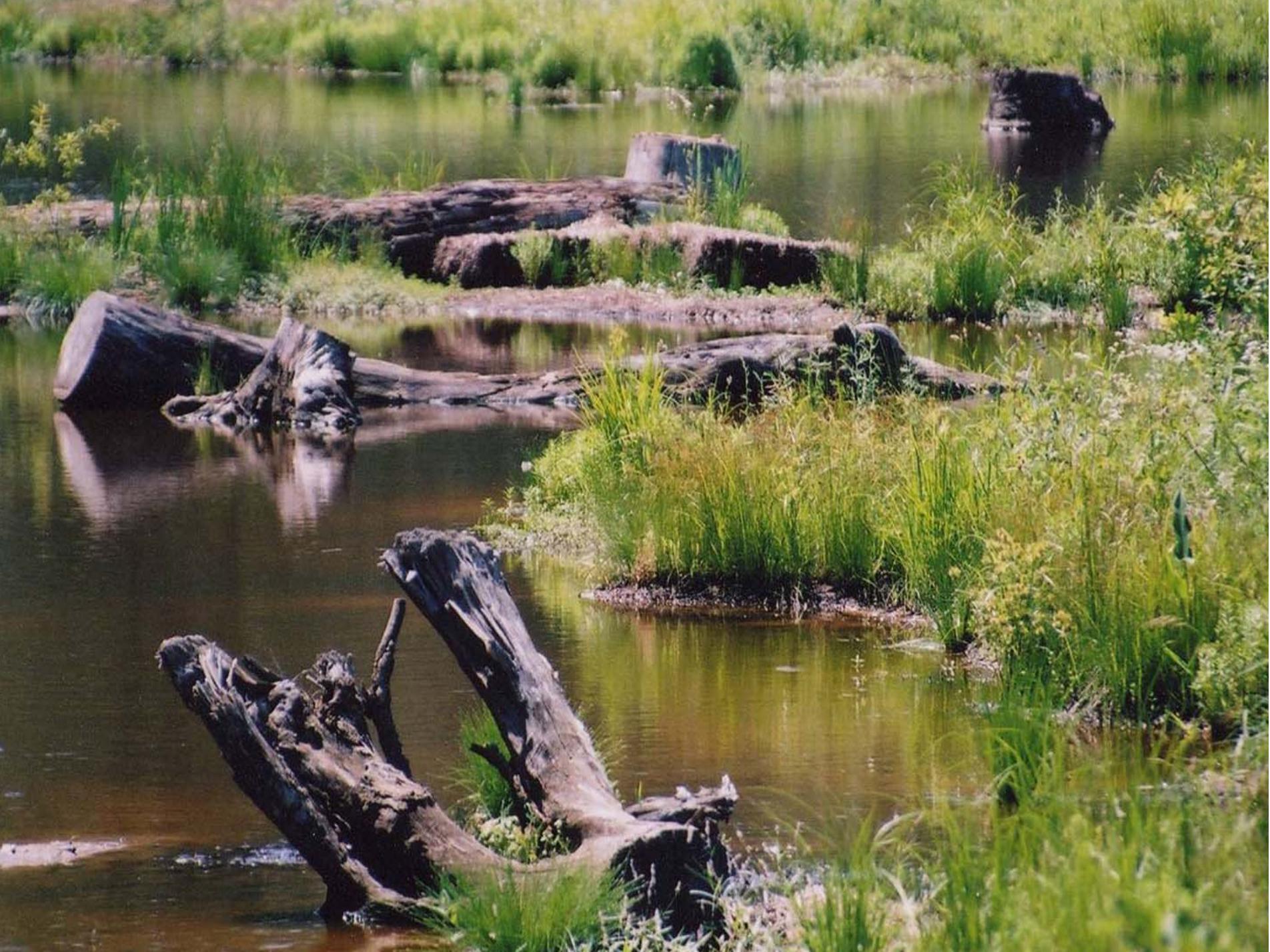
Well-- It's Not all Chicken













26 9'04



15 10'04





27 40









26 9'04







8 11 03





Thank You

