



Orange
Soil & Water Conservation District

Board of Supervisors

Monthly Board Meetings

When: 2nd Friday every month 3:30 PM to 5:00 PM

Where: Orange County Administration 201 Rosalind Ave Orlando

Board Members

Supervisor D1 Chair Chambers Supervisor D4 Vice-Chair Campbell

Supervisor D2 Dr. Moyer Supervisor D5 Grocholske

Supervisor D3 Dr. Olmstead Associate Supervisor Perez

Assisting Orange County Agriculture since 1945

July 1, 2025, Presentation at the Eatonville Town Council meeting
by Dr. Jim Moyer

Northwest Orange Soil & Water Conservation District 2 (SWCD) Supervisor

DISCLAIMER

**THE POWERPOINT SLIDES IN THIS PRESENTATION
REFLECT THE VIEWS OF THE ELECTED DISTRICT 2 SWCD
SUPERVISOR AND MAY NOT REFLECT THE VIEWS OF THE
ENTIRE ORANGE SWCD BOARD OF SUPERVISORS**

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Northwest Orange Soil & Water Conservation District 2 (SWCD) Supervisor

UNDERSTANDING SOIL AND WATER

CONSERVATION DISTRICTS (SWCDs)

A simple illustration of a shovel with a dark brown handle and a square head, stuck into a greyish-brown mound of earth. The shovel is positioned on the left side of the frame, angled upwards.

Dig into it

1862

- *US DEPT OF AGRICULTURE (USDA) CREATED
 - *1868 FDACS PREDECESSOR ESTABLISHED
 - FL SOIL AND WATER CONSERVATION LAW
 - “ADMINISTERED” BY FDACS
 - *US LAND GRANT UNIVERSITIES CREATED NATIONALLY
 - *UF-1862 AND FAMU-1891 IN FLORIDA
 - *SWCDs WORK WITH UF/IFAS RESEARCH AND EXTENSION
- US HOMESTEAD ACT CREATED LASTED UNTIL 1976
- 20% GREAT PLAINS, 15% US, AND 10% FL HOMESTEADED

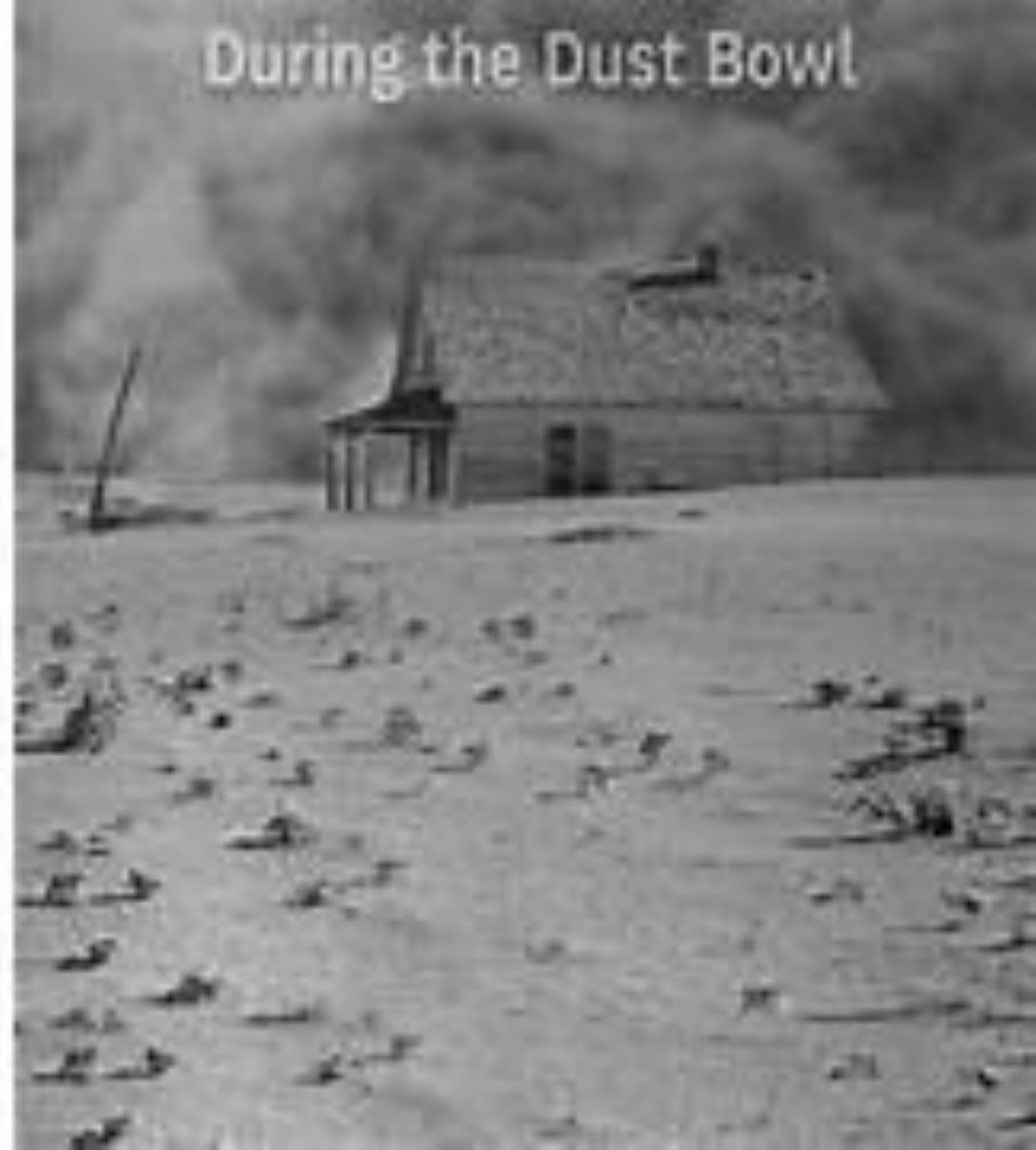
1914 -1935

- *1914-1918 WORLD WAR 1
- *GREAT PLAINS PRODUCED WHEAT FOR ALL ALLIES
- *HIGH WHEAT DEMAND, DAMAGED GRASSLANDS
- *1920s ECONOMIC BOOM, NOT ON GREAT PLAINS FARMS
- *GREAT PLAINS WHEAT DEMAND DOWN, HAVE EXCESS
- *GREAT PLAINS TECH INVEST = DEBT
- *RAIN AND TOO MUCH PRODUCTION LEFT NO TOPSOIL
- *1930s GREAT PLAINS DUST BOWL = NO RAIN, HIGH TEMPERATURES, STRONG WINDS
- *US GOVERNMENT AGREES SOIL CONSERVATION NEEDED

Before the Dust Bowl



During the Dust Bowl



1935-1965

*1935 USDA CREATES PREDECESSOR TO NATIONAL RESOURCES CONSERVATION SERVICE (NRCS)

*USDA CREATES STANDARD STATE SOIL CONSERVATION DISTRICT ACT (“ACT”)

*1937 PRESIDENT ASKS GOVERNORS TO PASS STATE “ACT”

*1937 FL ENACTED, NOW F.S. CHAPTER 582 ENABLES LOCAL SWCDs; ORANGE SWCD CHARTERED 1945

*1965 US WATER QUALITY ACT, CHAPTER 582 +AND WATER

*BY 1965 AND TODAY, 3,000 CONSERVATION DISTRICTS

1970 - PRESENT

*1970 US ENACTS ENVIRONMENTAL PROTECTION AGENCY

*1972 US CLEAN WATER ACT (CWA)

*1972 FL WATER MANAGEMENT DISTRICTS (WMDs), NOW PART OF FDEP

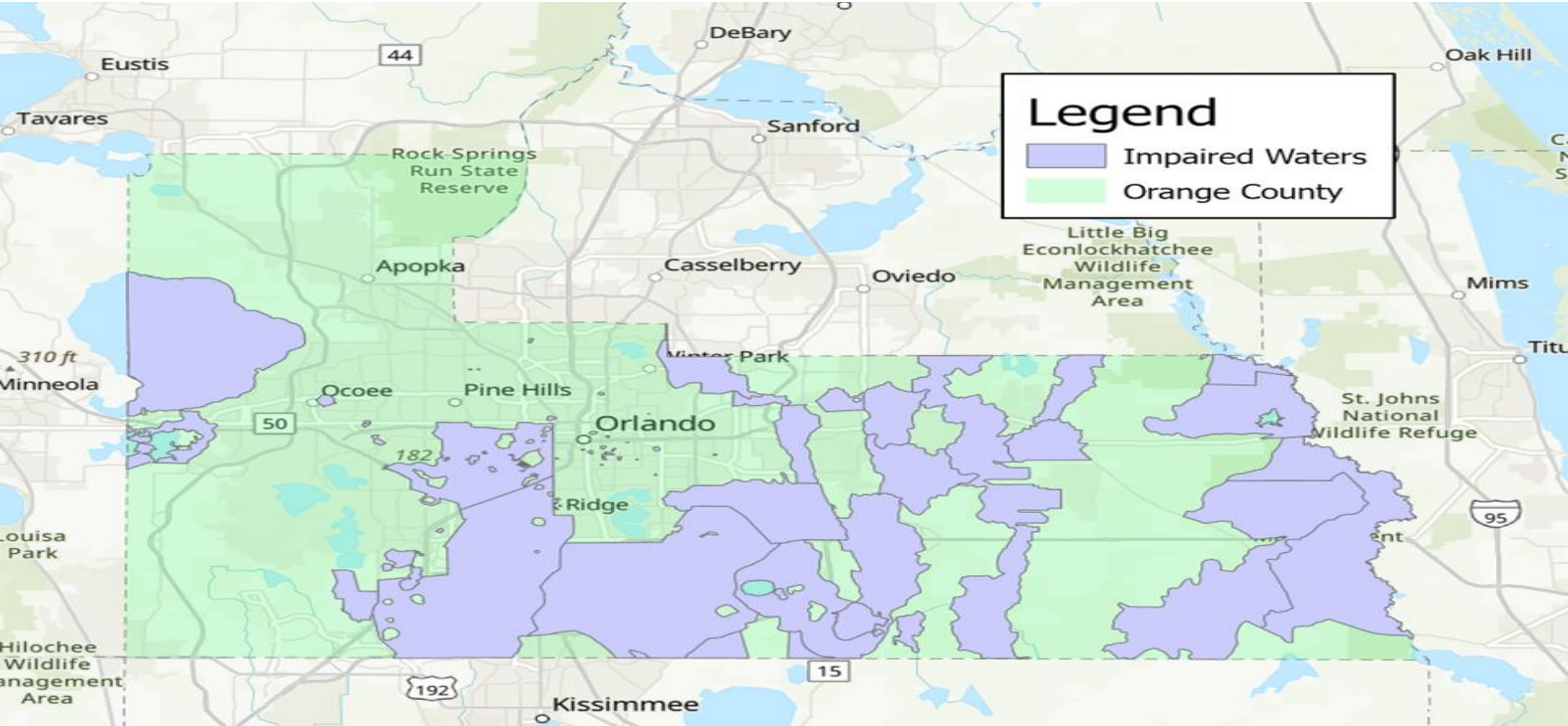
*SWCDs PARTNER WITH THE FIVE FL WMDs

*1999 FLORIDA *WATER RESTORATION ACT* (FDEP, FDACS FOCUS ON ELIMINATING WATERBODY POLLUTION/IMPAIRED WATERS)

*2020 US EPA PERMITS FL TO ISSUE CWA 404 PERMITS

ORANGE COUNTY IMPAIRED WATERS

(Impairments: West OC nutrients, East OC bacteria, some metals) JAN. 2024



ONE YEAR INDEPENDENT INVESTIGATION

SINCE THE 1999 *WATER RESTORATION ACT*, FLORIDA HAS FOCUSED ON CLEANING UP POLLUTANTS IN WATER BODIES. YET, AFTER A YEAR LONG INVESTIGATION THE TAMPA BAY TIMES "...FOUND HUNDREDS OF WATERWAYS HAVE SHOWN RISING CONTAMINATION OVER 25 YEARS." THE MAP IN THIS ARTICLE INDICATES THAT SOME WATERBODIES IN ORANGE COUNTY ARE IMPROVING, OTHERS MAINTAINING, AND STILL OTHERS WORSENING.

TAMPA BAY TIMES INVESTIGATION UPDATED 4/15/25 FLORIDA WATERBODY POLLUTION

FDACS AGRICULTURAL BMPs

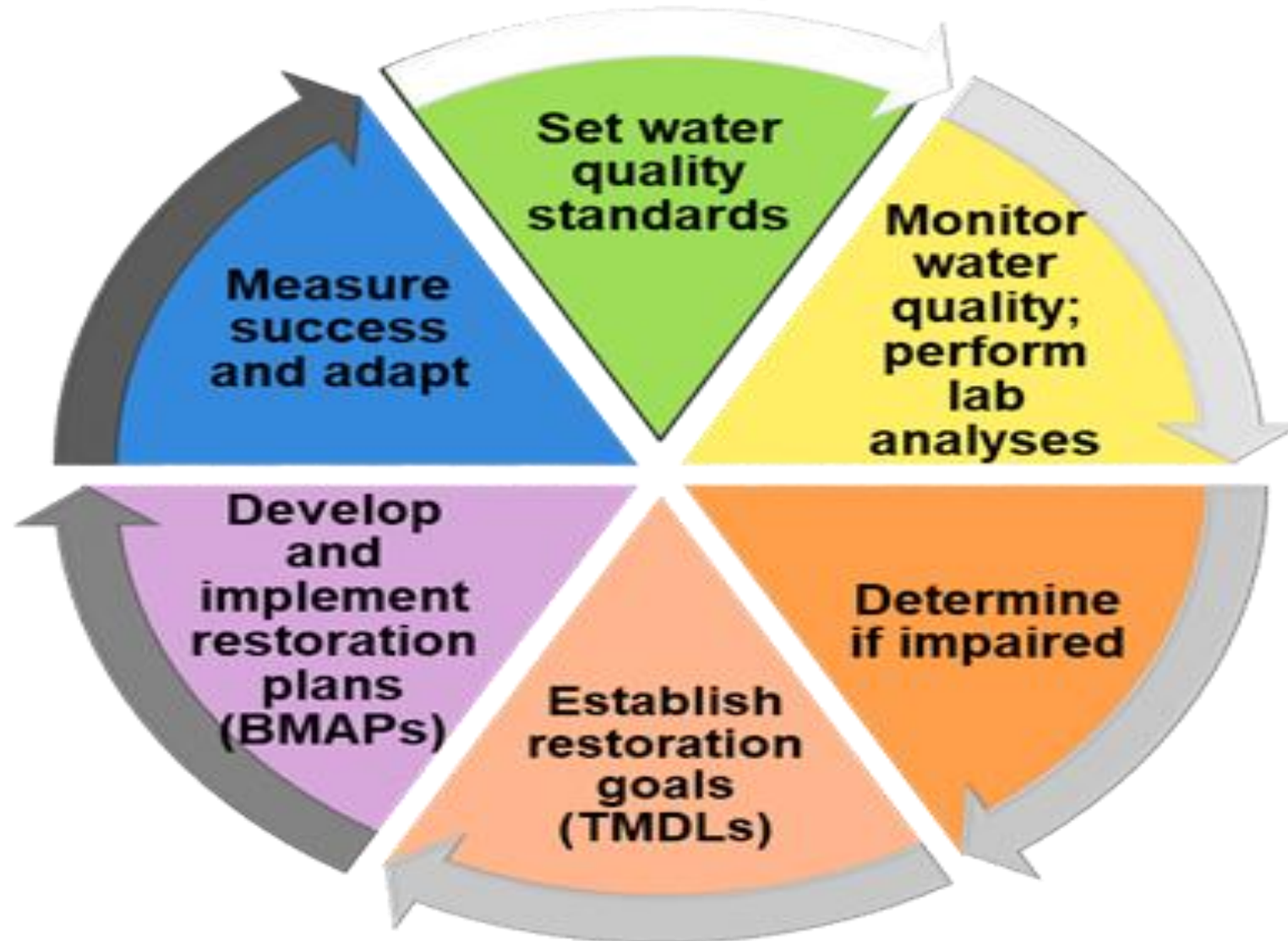
“FOR THE PURPOSES OF THE FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES’ BEST MANAGEMENT PRACTICES (BMP) PROGRAM, A BMP IS DEFINED BY LAW AS A MEANS, A PRACTICE OR COMBINATION ...DETERMINED BY THE COORDINATING AGENCIES BASED ON RESEARCH, FIELD TESTING AND EXPERT REVIEW, TO BE THE MOST EFFECTIVE AND PRACTICABLE ON-LOCATION MEANS, INCLUDING ECONOMIC AND TECHNOLOGICAL..., FOR IMPROVING WATER QUALITY IN AGRICULTURAL AND URBAN DISCHARGES....” (SEE F.S. CHAPTER 373.4595(2)(A))

FDACS OAWP & FL SWCDs

“THE OFFICE OF AGRICULTURAL WATER POLICY (OAWP) COLLABORATES WITH PARTNERS IN THE DEVELOPMENT, IMPLEMENTATION, AND EVALUATION OF STATEWIDE WATER POLICY....OWAP IMPLEMENTS STRATEGIES THAT PROTECT FLORIDA’S WATER RESOURCES WHILE PROMOTING THE SUSTAINABILITY OF AGRICULTURE,... OAWP ADMINISTERS A BEST MANAGEMENT PRACTICES (BMP) PROGRAM TO ASSIST PRODUCERS IN... REQUIREMENT* TO IMPLEMENT BMPs...HAVE BEEN ADOPTED TO RESTORE WATER RESOURCES WHERE THE WATER QUALITY IS IMPAIRED.

OAWP PARTNERS WITH SOIL AND WATER CONSERVATION DISTRICTS TO ASSIST...THE ADMINISTRATION OF THE BMP PROGRAM...” *REQUIREMENT BASED ON FDEP ASSESSMENT

Florida DEP – Waterbody Assessment Process





SAVE EARTH

You saving life

July 1, 2025, Presentation at the Eatonville Town Council meeting
by Dr. Jim Moyer

Northwest Orange Soil & Water Conservation District (SWCD) Supervisor

My Contact Information

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**Here to serve the landowners, land occupiers, and the
agricultural industry of Northwest Orange!**

APPENDICES

**WHY THE U.S. 3,000 CONSERVATION
DISTRICTS WILL BE NEEDED MORE
THEN EVER IN THE FUTURE, LIKELY
MORE THAN DURING THE DUST BOWL**

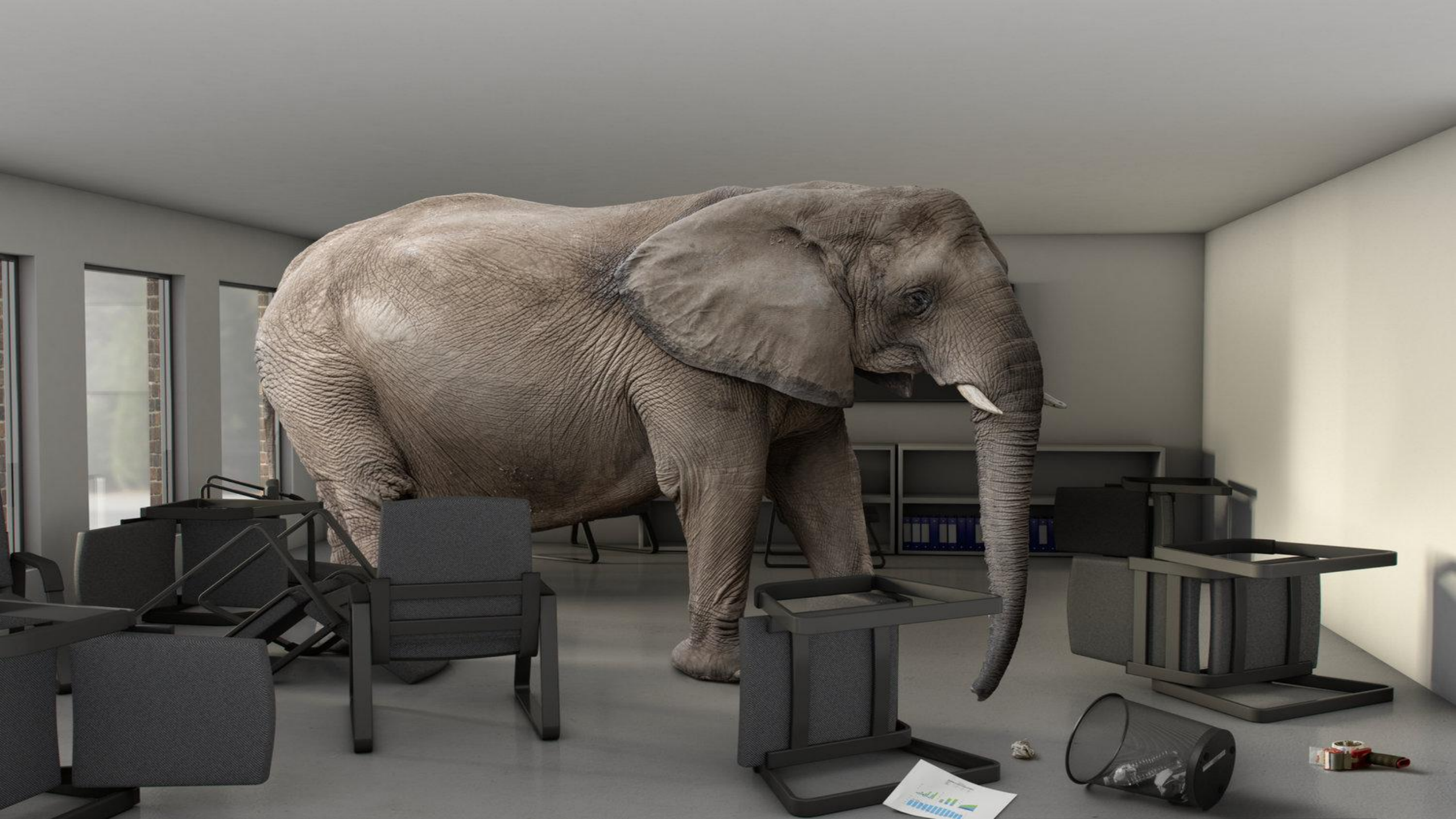
MISSION OF CONSERVATION DISTRICTS

GENERAL MISSION OF 3,000 CONSERVATION DISTRICTS:

“...IS TO COORDINATE LANDOWNER ASSISTANCE FROM ALL SOURCES—PUBLIC AND PRIVATE, LOCAL, STATE AND FEDERAL—TO DEVELOP LOCALLY-DRIVEN SOLUTIONS TO CONSERVATION OF HEALTHY SOIL, CLEAN WATER, AND OUR ENVIRONMENT.” (NATIONAL ASSOCIATION OF CONSERVATION DISTRICTS <https://www.nacdnet.org/>))

PURPOSE OF FLORIDA SWCDs

F.S. CHAPTER 582.02(4): “THE PURPOSE OF THE SOIL AND WATER CONSERVATION DISTRICTS IS TO PROVIDE ASSISTANCE, GUIDANCE, AND EDUCATION TO LANDOWNERS, LAND OCCUPIERS, THE AGRICULTURAL INDUSTRY, AND THE GENERAL PUBLIC IN IMPLEMENTING LAND AND WATER RESOURCE PROTECTION PRACTICES....”



U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

**“CLIMATE CHANGE IS REAL
AND HAPPENING ALL AROUND US.”**

THE HUMAN RACE MUST ADAPT!

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

“WHAT IS CLIMATE CHANGE?

CLIMATE CHANGE INVOLVES SIGNIFICANT CHANGES IN
AVERAGE CONDITIONS—SUCH AS TEMPERATURE,
PRECIPITATION, WIND PATTERNS, AND OTHER ASPECTS
OF CLIMATE—THAT OCCUR OVER YEARS, DECADES,
CENTURIES, OR LONGER.”

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

“IMPACTS TO SOIL AND WATER RESOURCES

CLIMATE CHANGE IS EXPECTED TO INCREASE THE FREQUENCY OF HEAVY PRECIPITATION IN THE UNITED STATES, WHICH CAN HARM CROPS BY ERODING SOIL AND DEPLETING SOIL NUTRIENTS.¹⁹

HEAVY RAINS CAN ALSO INCREASE **AGRICULTURAL RUNOFF** INTO OCEANS, LAKES, AND STREAMS WHICH CAN HARM WATER QUALITY.²⁰ RUNOFF CAN CARRY NUTRIENTS, FERTILIZER, AND PESTICIDES INTO NEIGHBORING WATER BODIES.”

“Navigating Climate Change in Florida Agriculture”

Navigating Climate Change in FL Agriculture

“EXTREME WEATHER EVENTS

IN FLORIDA, DEFINING CLIMATE CHANGE IS TOUGH BECAUSE OF ALL THE EXTREME WEATHER EVENTS. PEOPLE HERE ARE USED TO HURRICANES, WHICH CAN MAKE IT HARD TO SEE THE BIGGER PICTURE. WHEN BIG STORMS LIKE HURRICANE IAN FLOOD PLACES LIKE ORLANDO, WE MIGHT THINK IT’S JUST BAD LUCK NOT A SIGN OF CLIMATE CHANGE. BUT IF WE LOOK CLOSER, WE CAN SEE THAT CLIMATE CHANGE IS MAKING THESE STORMS STRONGER AND MORE FREQUENT...FARMERS...SPEND...MONEY FIXING THE DAMAGE FROM HURRICANES...BUT IF THEY USED MORE SUSTAINABLE METHODS, THEY COULD BREAK THE CYCLE AND SAVE MONEY IN THE LONG RUN.”

OUR PLANET NEEDS



**ALL HANDS
ON DECK**

ORANGE SWCD POTENTIAL CONSERVATION PARTNERS

USDA NRCS AGENT FOR OUR AREA-KISSIMMEE

FDACS OFFICE OF AGRICULTURAL POLICY (TALLAHASSEE)

UF/IFAS EXTENSION/4H-ORLANDO; R&D—APOPKA

ST. JOHNS RIVER WMD-APOPKA

OCPS-AGRICULTURAL PROGRAMS/FFA

OC PROMOTES AGRICULTURE/AG ADVISORY BOARD

OC FARM BUREAU SERVES OUR 600 OC FARMS

ORANGE SWCD PARTNERSHIPS BENEFIT ORANGE COUNTY

CURRENT STATUS OF FLORIDA SWCDs

FLORIDA CURRENTLY HAS 47 (2 RECENTLY DISBANDED)
INDEPENDENT SWCDs

FL MANDATED PERFORMANCE REVIEWS OF 49 SWCDs WERE
COMPLETED LAST YEAR. A SUMMARY AND INDIVIDUAL
SWCD REPORTS WERE ISSUED AS OF AUGUST 19, 2024

ORANGE SWCD IS ONE OF SEVERAL FL SWCDs THAT NEEDS A
LOT OF WORK. IT IS AN HONOR TO HELP DO THIS WORK

CAUSES OF THE DUST BOWL (HUMAN)

<https://drought.unl.edu/dustbowl/Home.aspx>

“Several actions in the 1920s also increased the region’s vulnerability to drought. Low crop prices and high machinery costs...meant that farmers needed to cultivate more land to produce enough to meet their required payments. Since most of the best farming areas were already being used, poorer farmlands were increasingly used. Farming submarginal lands often had negative results, such as soil erosion and nutrient leaching. By using these areas, farmers were increasing the likelihood of crop failures, which increased their vulnerability to drought.

These economic conditions also created pressure on farmers to abandon soil conservation practices to reduce expenditures. Furthermore, during the 1920s, many farmers switched from the lister to the more efficient one-way disc plow, which also greatly increased the risk of blowing soil. Basically, reductions in soil conservation measures and the encroachment onto poorer lands made the farming community more vulnerable to wind erosion, soil moisture depletion, depleted soil nutrients, and drought.”