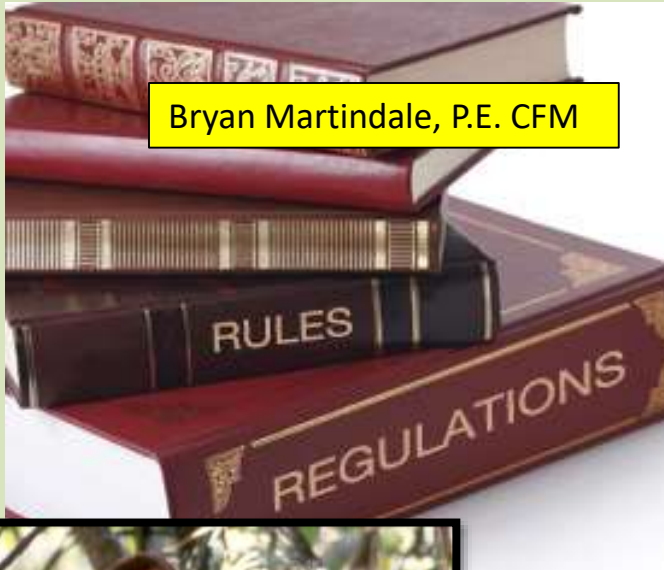


REGULATE, LITIGATE OR CAPITULATE



Bryan Martindale, P.E. CFM



Rodney Johnson, CFM



30 YEARS OF LEVEE DRAMA

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30 YEARS OF LEVEE DRAMA

Bryan Martindale, P.E., CFM

Rodney Johnson, CFM

LITIGATION DISCLOSURE

IDNR REGULATORY ENGINEER FOR 25 YEARS

PLAINTIFF EXPERT WITNESS



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WHY ALL THE DRAMA ? WHAT'S GOING ON ?

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Rodney Johnson, CFM

REGULATE	LEEVE CONSTRUCTION
LITIGATE	ILLEGAL LEEVE CONSTRUCTION
CAPITULATE	DAMAGES & PROPER INJUNCTIVE RELIEF



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REGULATE: PERTINENT CONSTRAINTS

- ILLINOIS LAW
 - 615 ILCS 5/23, 29a, 30 and 35
 - Rivers, Lakes and Streams Act
- ADMIN RULES
 - IDNR, OWR Part 3700 Rules
 - “Downstate Floodway Rules”
- STANDARDS
 - Section 3700.60 “Department Standards”
 - **Absent contrary evident** – no more than 0.5 ft. increase in WSE
- VIOLATION
 - **4 ½ Miles unauthorized levee creates FEET of backwater causing failure of other levees**



REGULATE: PERTINENT CONSTRAINTS

- **FEDERAL FLOOD EASEMENTS**
 - Lake Carlyle
- **STANDARDS**
 - No loss of flood storage
 - **No construction of structures including levees**
- **VIOLATION**
 - **Unauthorized levee on federal purchased easement ground**



REGULATE: OVERVIEW

- LOCATION
 - “PECAN ISLAND”
 - SOUTH CENTRAL ILLINOIS NEAR VANDALIA
- PARTIES INVOLVED & IMPACTED
- HISTORY
 - 30 YEARS OF FLOODING FRUSTRATION
- ADMINISTRATIVE INVOLVEMENT AND DECISIONS



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REGULATE

LOCATION

PECAN ISLAND

FAYETTE COUNTY

VANDALIA, ILLINOIS

70 MILES EAST OF ST.
LOUIS ON INTERSTATE 70



ST. LOUIS

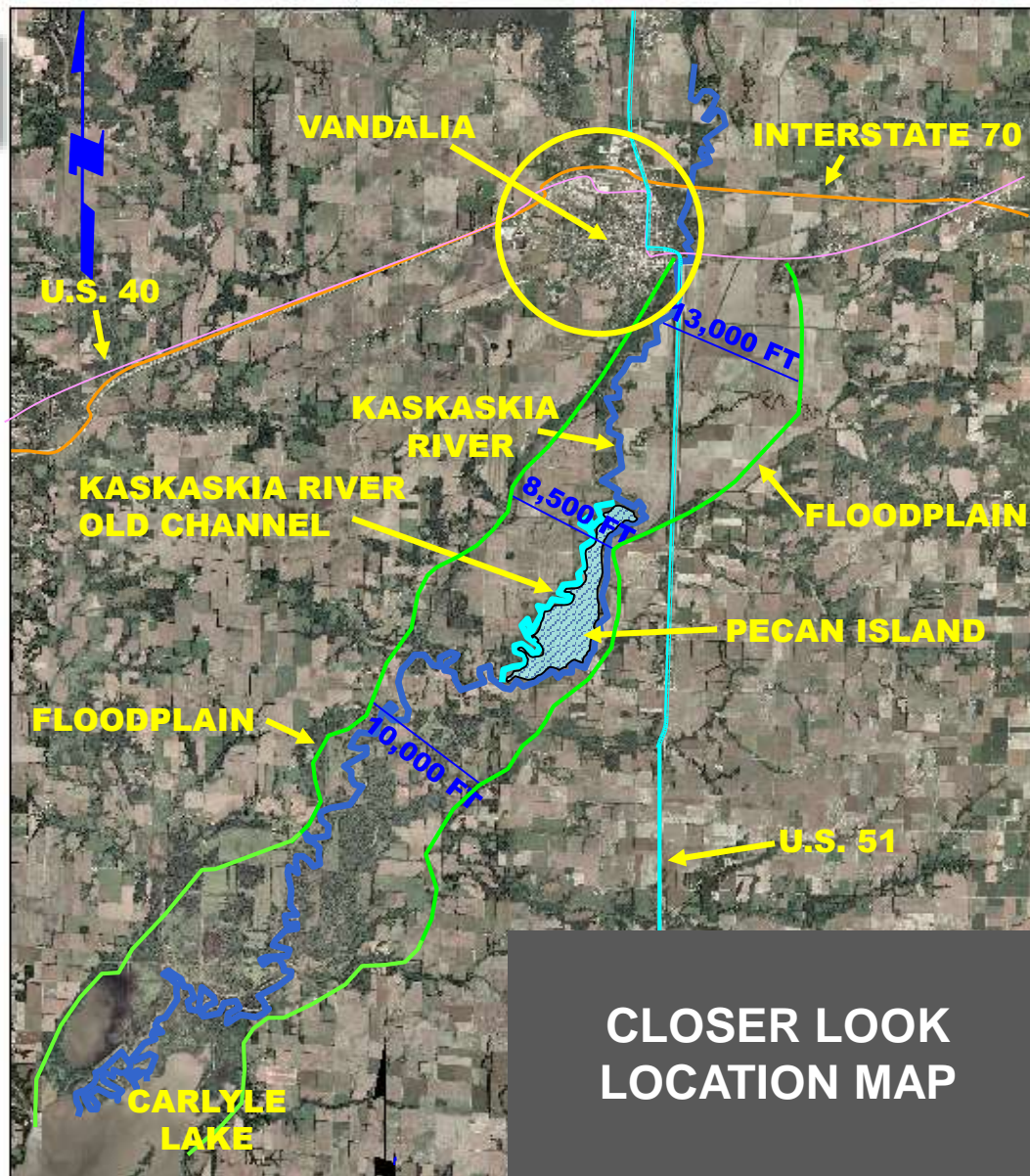
VANDALIA

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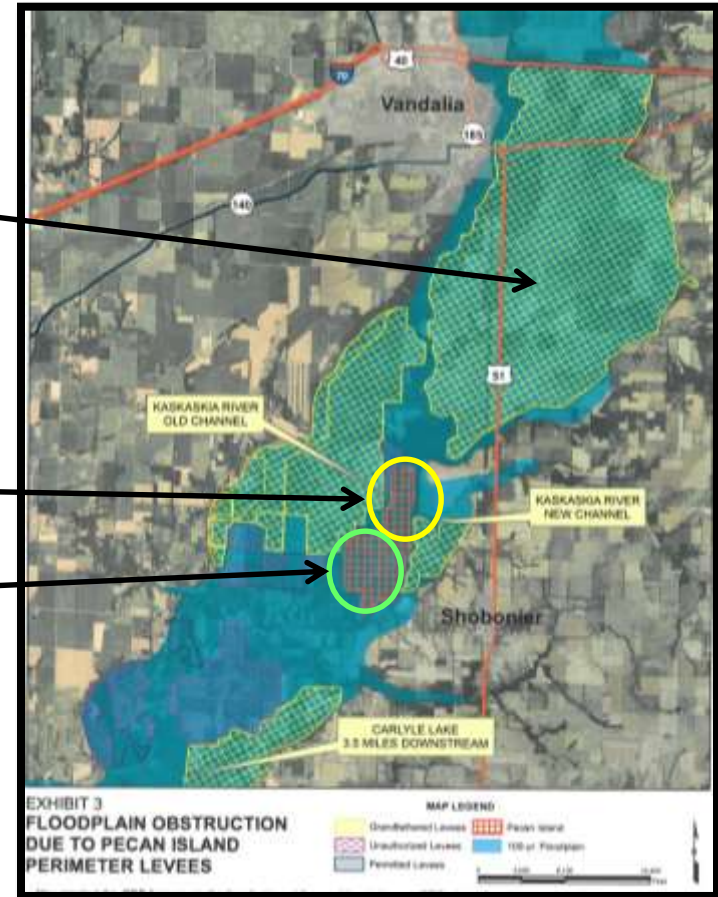
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PARTIES INVOLVED

- PLAINTIFF – VANDALIA DRAINAGE AND LEVEE DISTRICT
- DEFENDANTS
 - OUT OF STATE OWNER – UPPER AREA
 - NUMEROUS ENTITIES - LOWER AREA



HISTORY

- 1989 – Complaint filed with COE
- 1990 – “After-the-fact” application for permit filed for levees with DWR & COE
- 1990 – letter from COE - Levees not allowed on flowage easement land for Carlyle
- 1990 – First suit filed by other party – flowage easements
- 1990 – **COE subpoena to testify but sovereign immunity defense granted**
- 1991 – IDNR and COE issue permits for levees in the area but not for Pecan Island levees
- 1991 – 1999 Damages occur; complaints filed; IDNR requested to investigate
- 1998 – **COE STEPS AWAY; issues new policy for wetland berms**
- 1999 – Site inspection by BTM levees are “big”
- 1999 – IDNR study indicated levees are causing increased flood stages; sends letter obtain permit or remove
- 2000 – Plaintiff files suit
- 2001 – Defendant threatens lawsuit against IDNR
- 2002 – **BIG FLOOD**
- 2002 – Township files suit re Pecan Island levees
- 2002 – IDNR letter - 2.8 feet of increase at 10-year
- 2002 - **IDNR STEPS AWAY; wait for study money and application to be submitted; previous 1999 study not detailed enough to pursue any further investigations; all further inquiries go to Department Legal Counsel**
- 2003 – IDNR issues letter that detailed H&H is needed; COE should complete
- 2003 – 2008 – DD hires engineer to demonstrate impacts
- 2006 – IDNR completes gage analysis
- 2007 – IDNR surveys levees
- 2008 – Law suit filed by DD
- 2010 – First Trial in Circuit Court
- 2010 to current – **DETAILS LATER**



ADMINISTRATIVE DECISIONS

- POSSIBLE INCREASES DUE TO UNAUTHORIZED LEVEE BUT NEED TO STUDY MORE
- IDNR AGREES TO ASSIST IN FINDING ACOE FUNDING TO COMPLETE STUDY ~\$600,000 IF PARTIES AGREE NOT TO SUE
- ACOE REVISES FLOOD EASEMENT POLICY RE LEVEES NO STUDY \$\$ AVAILABLE = NO ENFORCEMENT
CREATION OF “BLACK HOLE”
- PLAINTIFF CONTINUES TO RECEIVE DAMAGE; DECIDES TO PURSUE LEGAL ACTION



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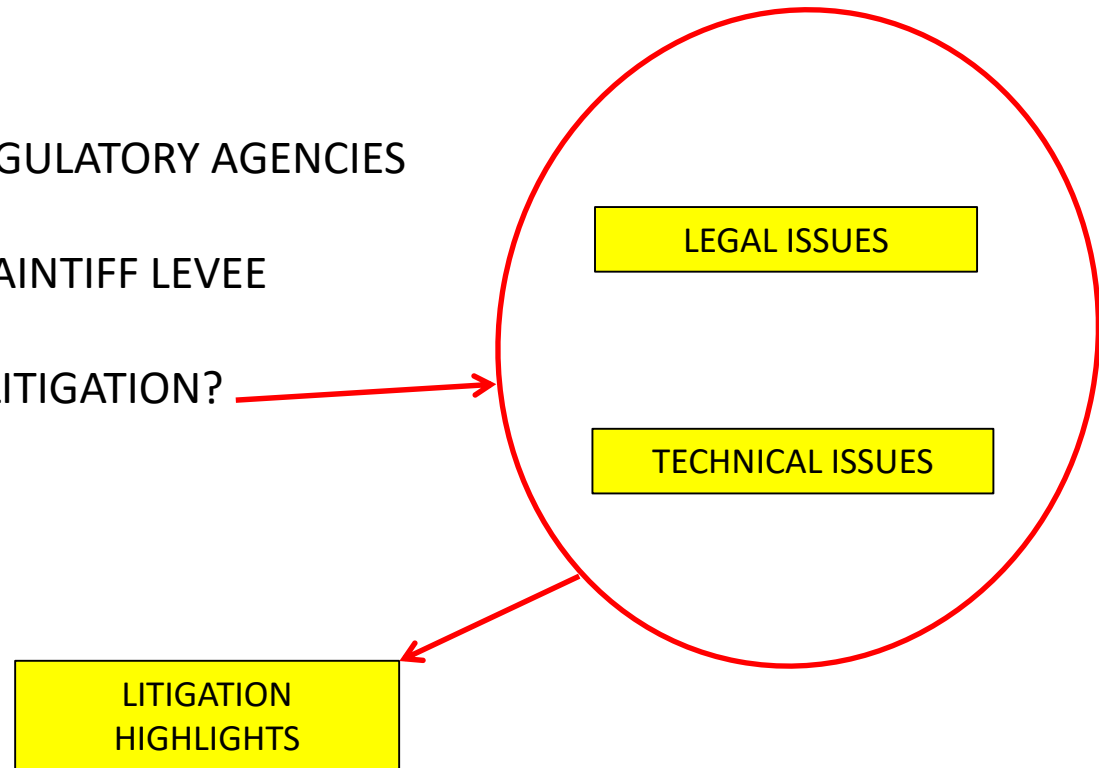


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WHY LITIGATE?

- LACK OF ENFORCEMENT BY REGULATORY AGENCIES
- CONTINUING DAMAGES TO PLAINTIFF LEVEE
- WHAT'S INVOLVED WITH THE LITIGATION?



PLAINTIFF ARGUMENTS

- OBSTRUCTION TO FLOW FROM DEFENDANT'S UNAUTHORIZED LEVEES
- MORE FREQUENT AND HIGHER FLOODING ELEVATIONS DUE TO DEFENDANT'S UNAUTHORIZED LEVEES

RESULTING IN:

- PLAINTIFF LEVEE FAILURES
- MASSIVE REPAIR COSTS FOR PLAINTIFF LEVEE



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DESIRED REMEDY

- INJUNCTIVE RELIEF
 - Remove all Levees (4 ½ miles)
- DAMAGES
 - Levee Failure Repair Costs



HISTORY OF TECHNICAL ISSUES

1999 HEC-RAS IDNR

“the results are indicative of a definite increase in water surface elevations caused by levees that have restricted the flood carrying capacity of the Kaskaskia River floodplain.”

2005 HEC-RAS PRIVATE

2006 HEC-RAS PRIVATE

2006 GAGE ANALYSIS IDNR

2007 DETAILED IDNR LEVEE SURVEY

2009 HEC-RAS PRIVATE

2016 HEC-RAS 1D UNSTEADY PRIVATE

2017 HEC-RAS 2D UNSTEADY PRIVATE



2002 SITE INSPECTION OF REBUILT BREACHED LEVEE

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MODELING COMPARISON

- GEOMETRIC CONFIGURATION
- HYDROLOGIC DATA
- ROUGHNESS COEFFICIENTS
- CROSS-SECTIONS
- SPLIT FLOW
- FLOW OVER LEVEES
- DURATION OF FLOODING
- OUTPUT

 * HEC-2 DATA EDIT PROGRAM *
 * VERSION 3.00 ASD 1978 *
 * 26/02/16. *

1-212

C
 C 1
 C 51925 USGS GAUGE DITCH CREEK AT LA PORTE
 T1 FLOOD PLAIN HYDROLOGY
 T2 HEC-2 OUTPUT ANALYSIS
 T3 DITCH CR 50-YEAR FLOOD
 J1 4
 J2 1 -1 722.3

ST	8	1000	2000	5000	8000	14000	16000	19000	
RC	.12	.12	.055	.2	.4				
SI	51500	34	465	510					18
SR	735.2	0	733.2	15	731.2	32	729.2	58	727.2
OR	725.2	110	723.2	188	721.2	195	719.2	205	717.2
OR	717.5	225	716.0	246	719.2	255	725	280	719.2
OR	717.2	315	715.2	335	713.2	465	711.2	474	709.2
OR	707.2	485	707.2	505	709.2	510	717.2	540	719.2
OR	721.2	580	725.2	605	725.2	645	725.2	740	727.2
OR	729.2	765	731.2	790	733.2	815	735.2	848	
SI	51700	0	0	0	1200	1200	1200	.8	.2
SI	51925	37	265	299	175	475	425		
SI	51950	0	0	0	1025	1825	1825	.91	1.05
SI	52050	0	0	0	1600	1600	1600	0.85	

1-1-17

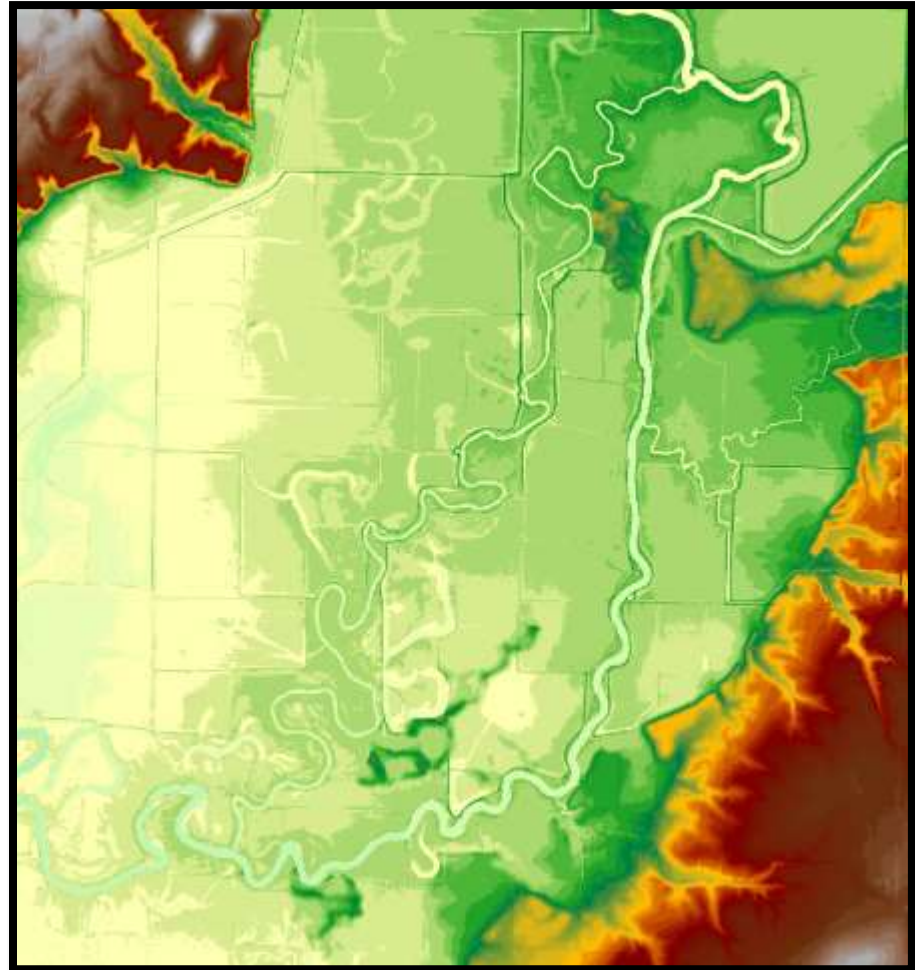


OLD SCHOOL

- Quad map
- Estimate of Levee Heights
- Survey Data (later)

STATE OF THE ART

- LIDAR

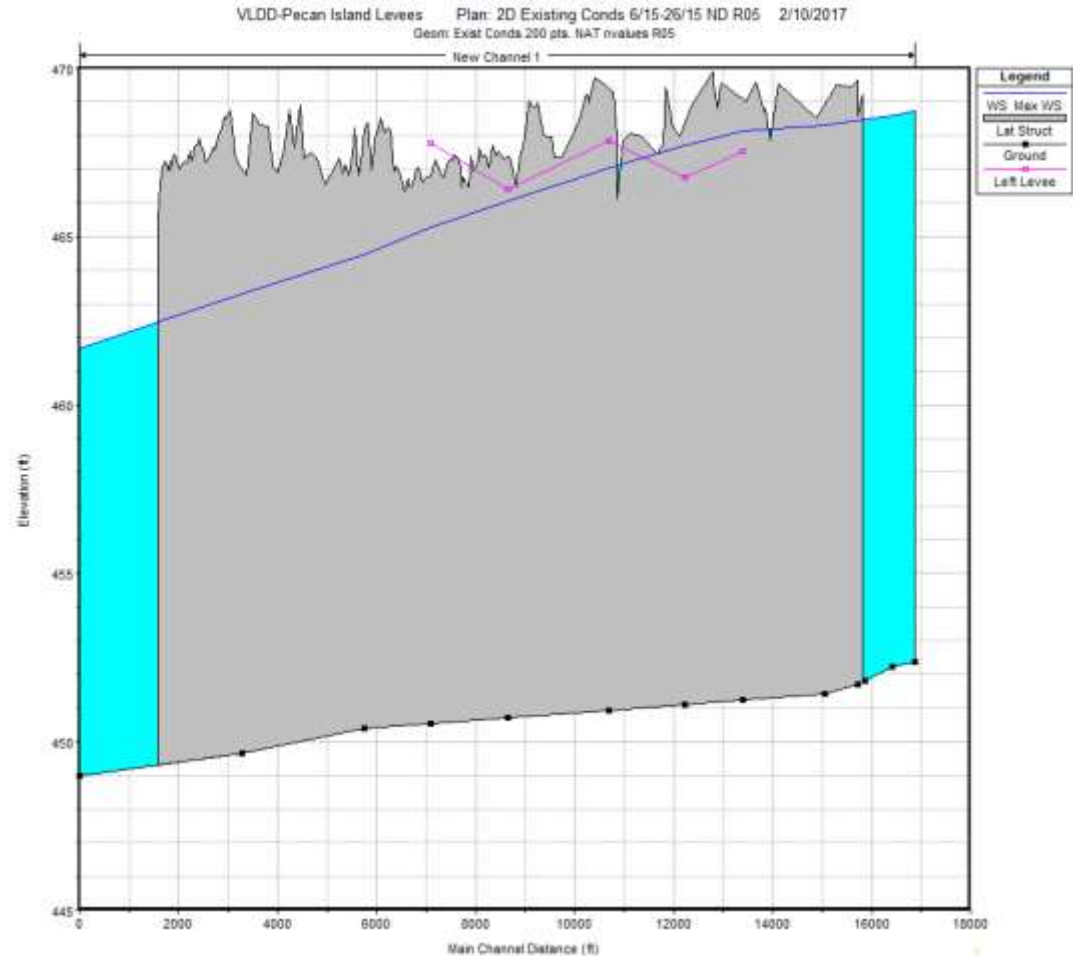


OLD SCHOOL

- Peak Q at top of levee elevation
(Worst-case Analysis per 3700 Rules)

STATE OF THE ART

- Storm Hydrograph
June 15-26, 2015
 - Gage Validation
 - Photo Validation
 - Overtopping Event



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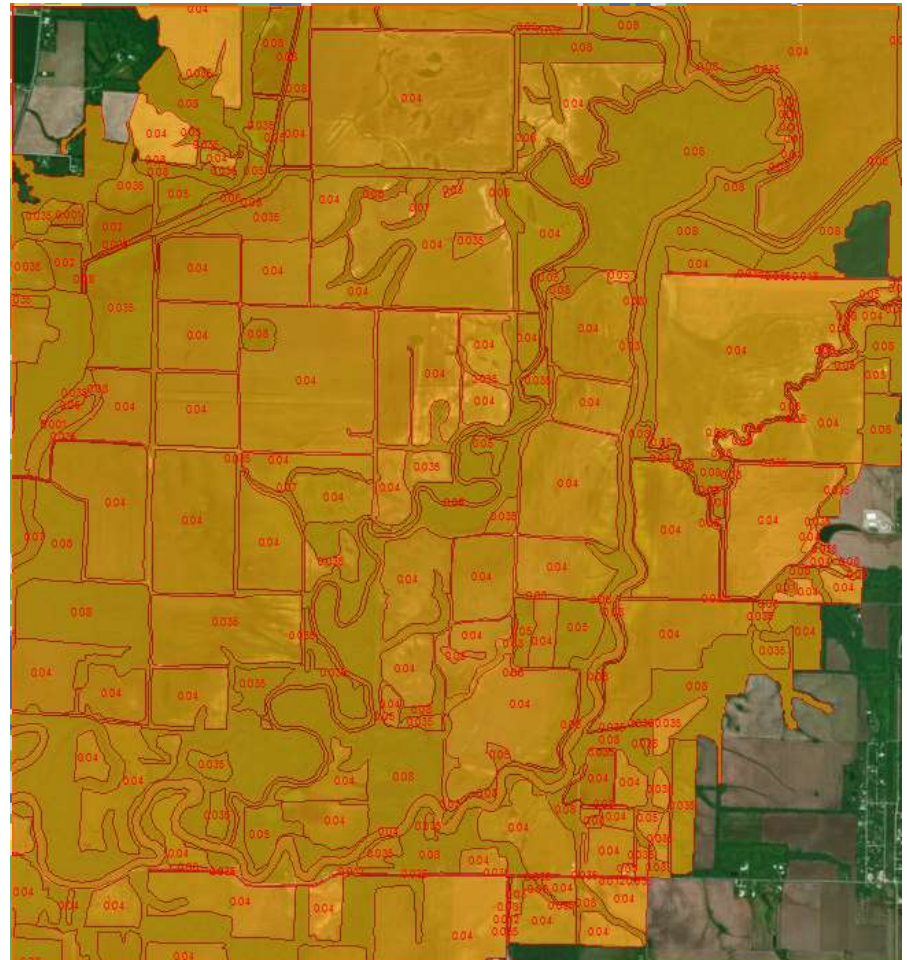
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OLD SCHOOL

- Field Observations
- Book Values

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- NLCD Raster (2006)
- Land Use Shape File



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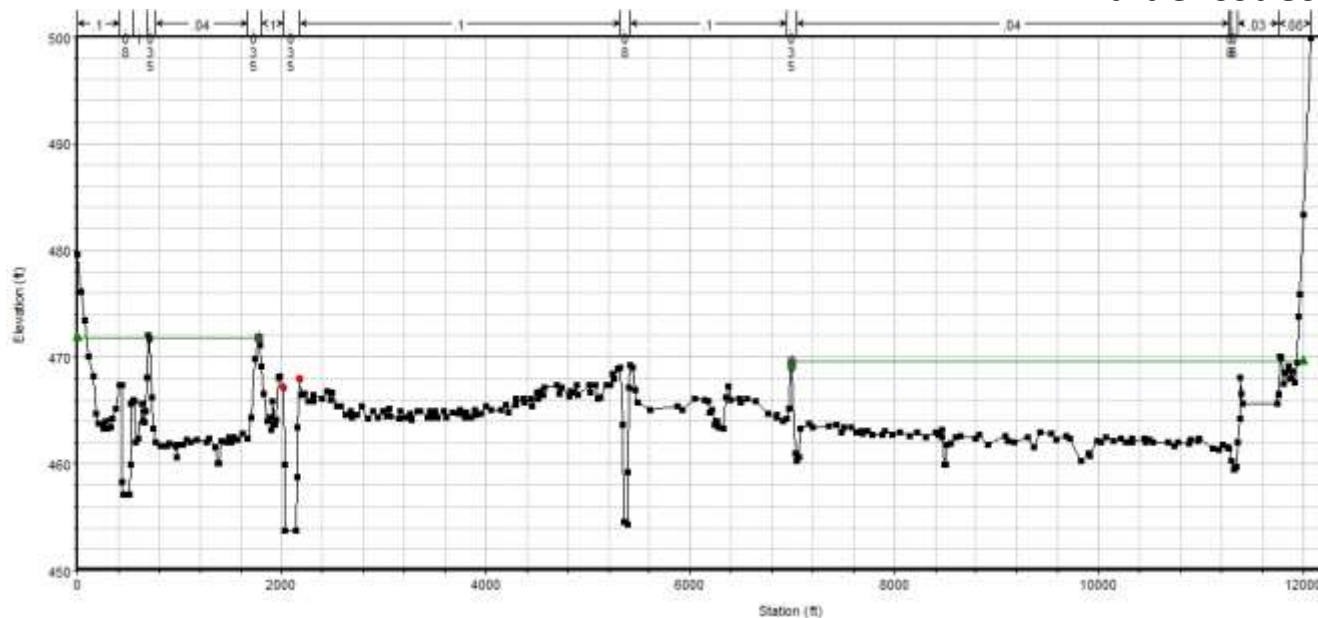


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- X-Sec point filter
- N Value issues

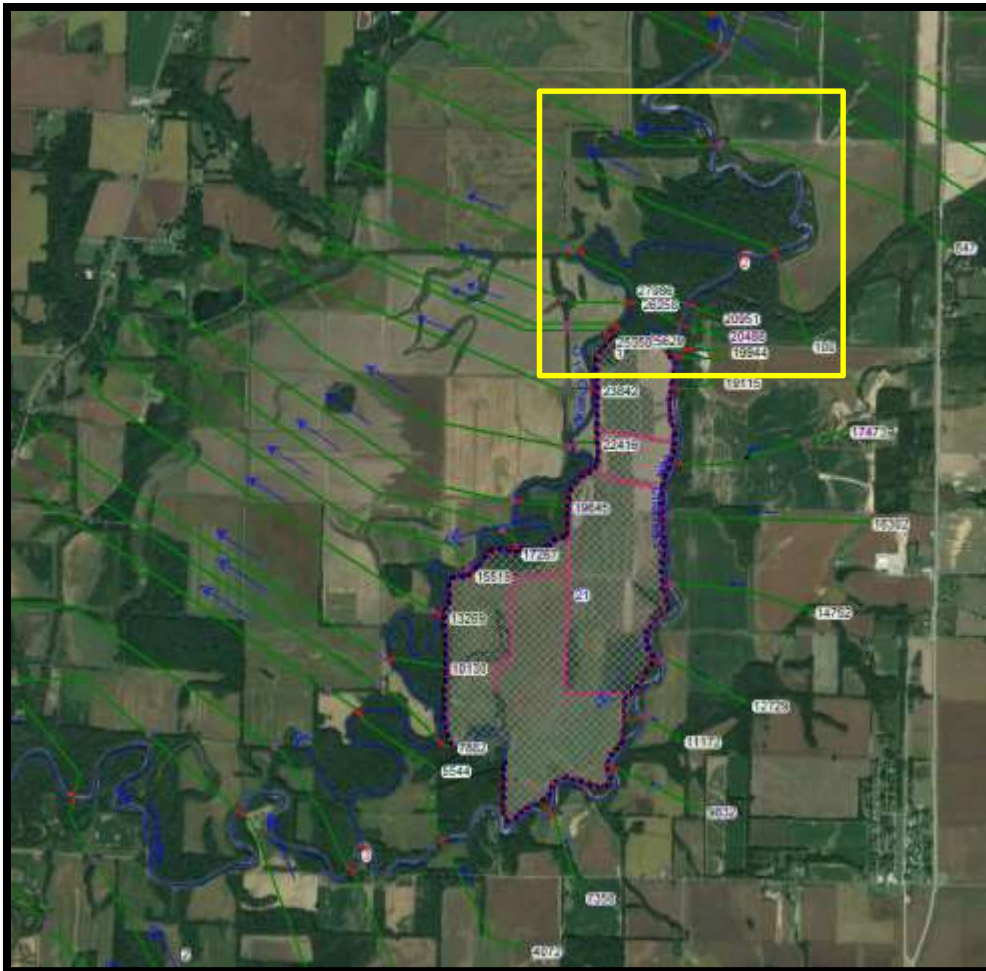


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- Stream Junctions
- Separate Reaches

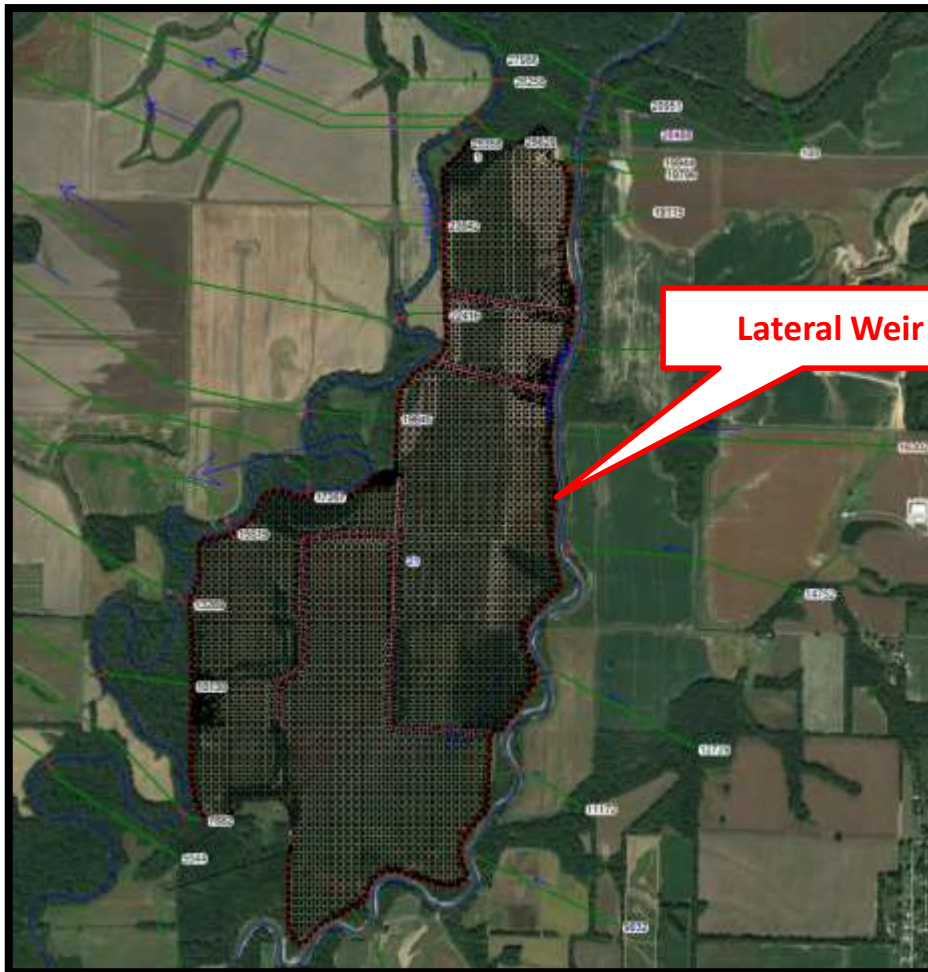


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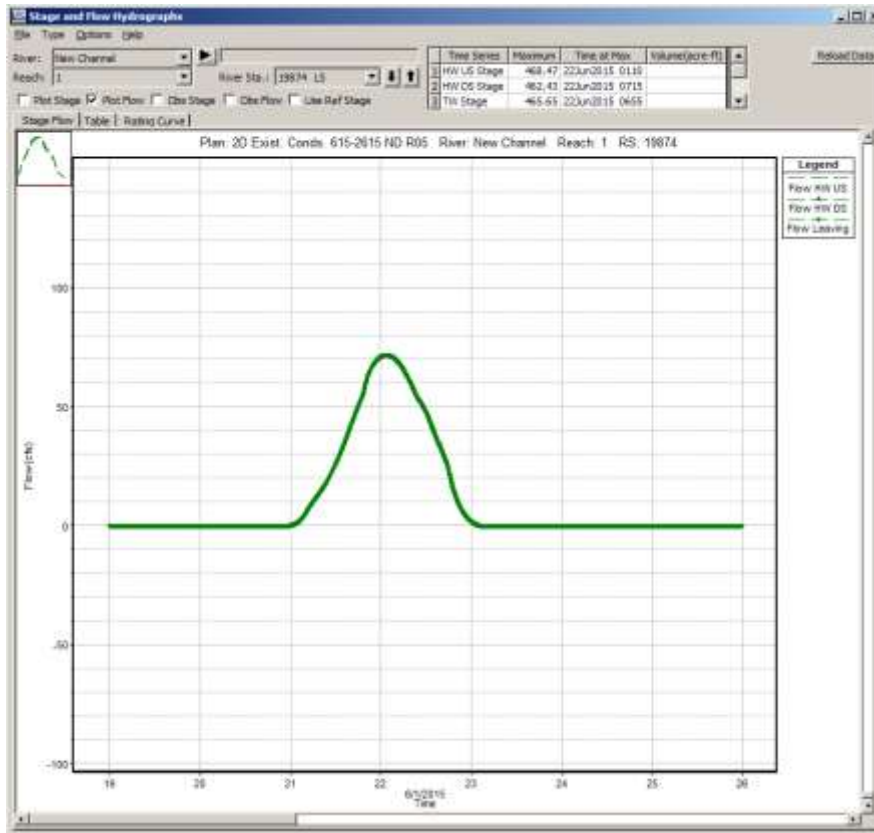
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STATE OF THE ART

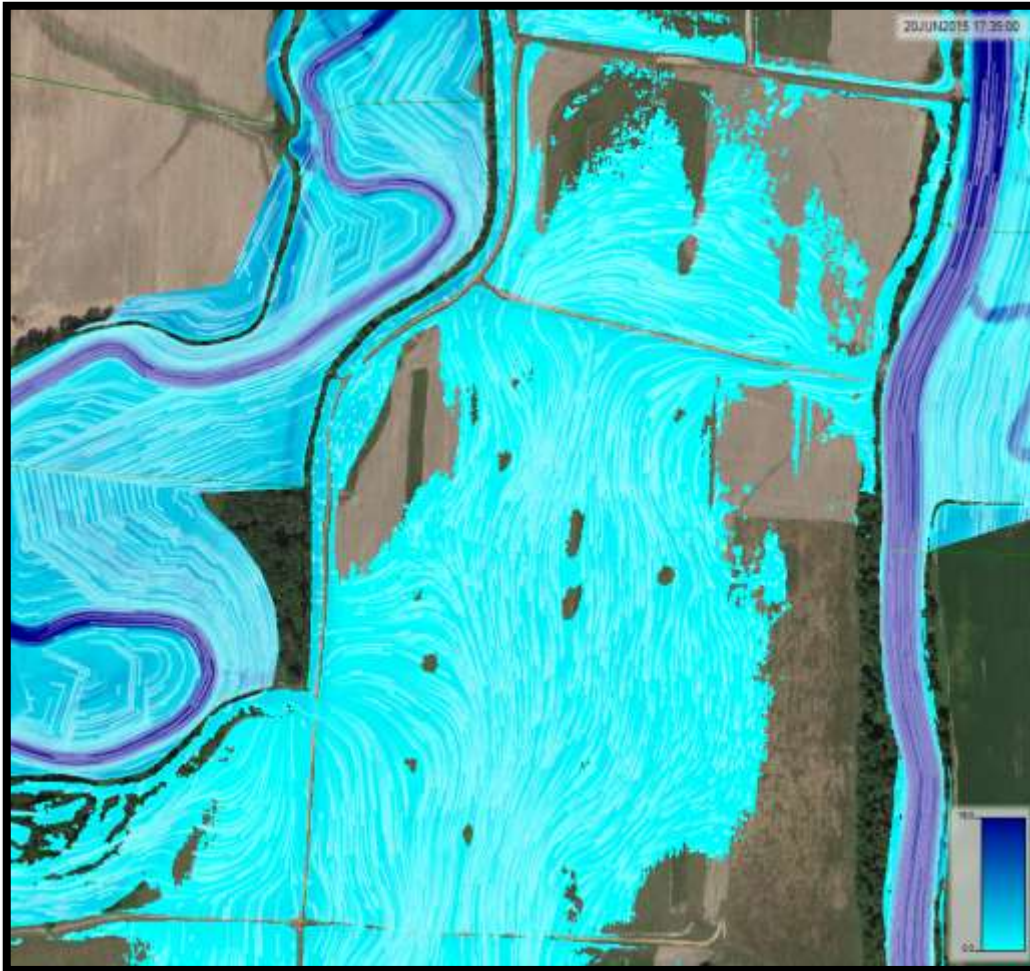
- 2D with Tailwater
- Weir Coefficient ?
 - With and Without Levee



STATE OF THE ART

- Stage/Flow Hydrographs**
- Duration above any desired Elevation





STATE OF THE ART

- Particle Trace
- Inundation Map

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MODELING COMPARISON RESULTS

SUMMARY OF PLAINTIFF MODELING – LEVEE IMPACTS					
Report Name	Date of Report	Type of Modeling	Topographic Information	Maximum Increase in Flood Elevation (ft.)	Court Record
IDNR Investigation	1999	HEC- RAS	Quadrangle Maps	2.8	No
Preliminary Study	2005	HEC-RAS Steady Flow	Quadrangle Maps	1.7	Yes
Supplemental Study	2006	HEC-RAS Steady Flow	Local field survey	5.7	Yes
Revised Modeling Study	2009	HEC-RAS Steady Flow	IDNR detailed levee survey	3.3	No
Comprehensive Pecan Island Levee Modeling Study *	2016 & 2017	HEC-RAS Unsteady 1D & 2D Flow	LIDAR data and detailed local survey	3.5 - 6/15 event 3.8 - 12/15 event	Yes
* Model also used to evaluate court ordered levee gaps					

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LITIGATION HIGHLIGHTS

- **2010 CIRCUIT COURT – BENCH TRIAL**

- IDNR (**REGULATOR**) called to testify
- Illinois AG tries to quash subpoena
- Judge denies request to quash



- ❖ **CIRCUIT COURT RULING**

- ✓ Levees can remain [**Plaintiff Loses**]
- ✓ Judge immediately retires!
- ✓ “Figures Lie and....”

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LITIGATION HIGHLIGHTS

- **2012 PLAINTIFF FILES APPEAL**

- Levees cause damage
- Plaintiff has prescriptive right to flood



- ❖ **APPELLATE COURT RULING**

- ✓ Overturns Circuit Court **[Plaintiff Wins]**
- ✓ Plaintiff has prescriptive right
- ✓ **REMOVE ALL LEVEES – 4 1/2 miles**
- ✓ Remanded to Circuit Court for determination of damages

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LITIGATION HIGHLIGHTS

In the mean time.....waiting for Circuit Court

- **2012 to 2014**
 - Flooding causes additional major levee damages
 - One Defendant is killed in an accident
 - One Defendant develops Dementia
- **2014 CIRCUIT COURT (“damages only!”)**
 - Allows hearing by Defendant’s heirs re applicability of suit
 - **Ignores Appellate Court Directive to Remove ALL levees**
 - Issues order for construction of small levee gaps



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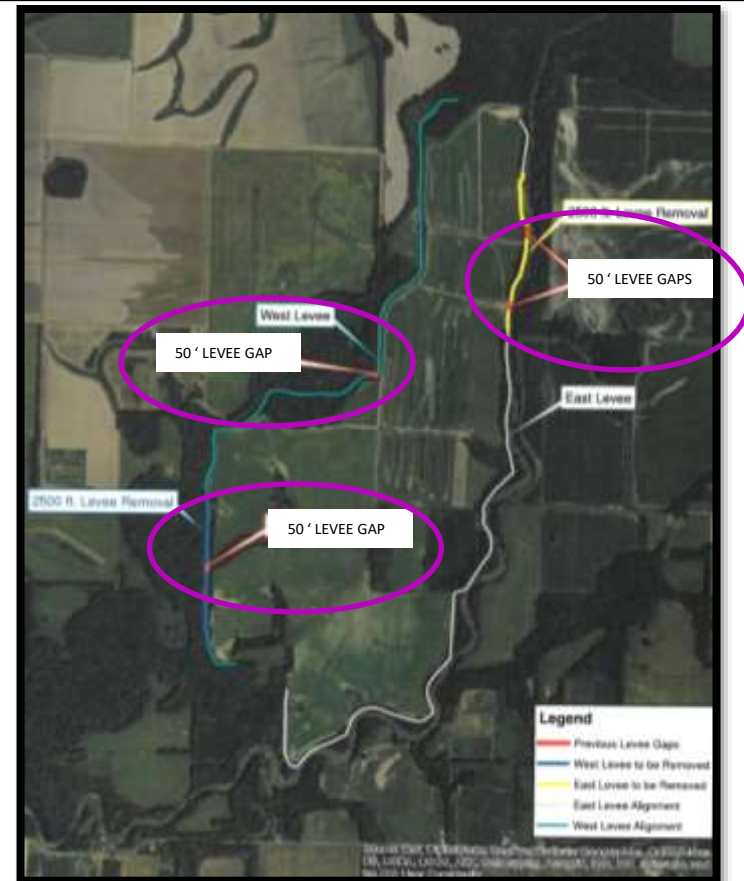


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LITIGATION HIGHLIGHTS

- **2014 CIRCUIT COURT**
 - Order by Circuit Court
 - 4 “gaps” at least 50 feet in width
 - No closer than ¼ mile to each other



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LITIGATION HIGHLIGHTS

- **2015 DEFENDANT FILES APPEAL**
 - Gaps not reasonable – levees are acceptable
- ❖ **APPELLATE COURT RULING**
 - ✓ Gaps must be constructed **[Plaintiffs Win]**
- **2015 DEFENDANT FILES REQUEST TO SUPREME COURT**
 - Take the case re gaps
 - Supreme Court declines
 - Defendants put gaps in levee



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LITIGATION HIGHLIGHTS

Litigation Lunacy.....

- **2017 DEFENDANT'S FILES "NEW" SUIT IN CIRCUIT COURT**
 - Levee gaps create a "taking"
 - Court is taking issue under advisement



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NEXT UP

- 2018 May through July – Depositions for Trial AGAIN !
- **2018 September – Bench Trial re damages** (maybe additional injunctive relief)
- 2018 December – Circuit Court Decision
- 2018 February – Appeals Filed
- 2019 August – Arguments in Appellate Court
- 2020 February – Appellate Decision
 - All levees removed (4 ½ miles)
 - Damages (\$2 million or more!)

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30 YEARS LATER.....

- DEFENDANTS HEALTH/DEATH
- ENORMOUS EXPENDITURE OF PRIVATE FUNDS
- IDNR FPM REGULATORY PROGRAM
 - VOLUNTARY COMPLIANCE
 - RULES MODIFICATIONS



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30 YEARS LATER.....

- PRIVATE LITIGATION - \$300K
- DAMAGES – \$2 MILLION
- 13 FIELD INSPECTIONS
- 12 HEARINGS
- 11 DEPOSITIONS
- 57 MOTIONS
- 7 DAYS OF TRIAL



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OFFICIAL LESSONS LEARNED

- **ENGINEERING**
 - BASIC LAWS OF PHYSICS PREVAIL
 - MODELING HAS EVOLVED BUT.....
- **LEGAL**
 - COURT RULINGS ARE NEVER PREDICTABLE
 - LEVEE REMOVAL VS. GAPS
 - JUDGES DON'T ALWAYS ABIDE BY THE RULES
 - JUDGES CAN BE ENGINEERING EXPERTS?
 - LITIGATION TAKES YEARS - LEGAL WINS ARE ELUSIVE
- **REGULATORY AGENCIES**
 - ENFORCEMENT IS NOT STRONG SUIT – DON'T COUNT ON THEM
 - LEGAL COUNSEL MUST BE ENCOURAGED TO PURSUE VIOLATIONS
 - NOT IMMUNE FROM POLITICAL INFLUENCE

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THOUGHT PROVOKING ISSUES FOR REGULATORY AGENCIES

- STRENGTHEN POLICY TO SUPPORT TAXPAYERS WHERE ILLEGAL FP ACTIVITIES ARE ENCOUNTERED
 - TESTIFY ON THEIR BEHALF; DON'T AVOID WHAT YOU KNOW....**DO YOUR JOB!!!**
- PENALTY FOR VIOLATIONS MUST BE MEANINGFUL
 - DITCH THE PAPER TIGER SYNDROME
- REGULATION MUST INCLUDE ENFORCEMENT
 - PROVIDE STAFF FOR SUCH
- DON'T MODIFY REGULATIONS CONTRADICTORY TO LOGIC
 - FIGHT FOR WHAT IS SOUND POLICY NOT POLITICALLY MOTIVATED



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QUESTIONS ?

**ASK MY LEGAL
COUNSEL!**



Proverbs 15:22

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