

UNIQUE COMPONENTS OF THE WEST BRANCH WETLAND RESTORATION AREA DUPAGE COUNTY, ILLINOIS



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Background

- City of Chicago implemented the **O'Hare Airport Modernization Program**
 - The Airport contained **155 acres** of **wetland and waters** in Cook and DuPage Counties Illinois
 - All onsite wetlands and waters to be impacted
 - **440** acres of wetland mitigation overall

AIRPORT WIDE IMPACT

 Jurisdictional
Wetlands

 Isolated
Wetlands

County Line 



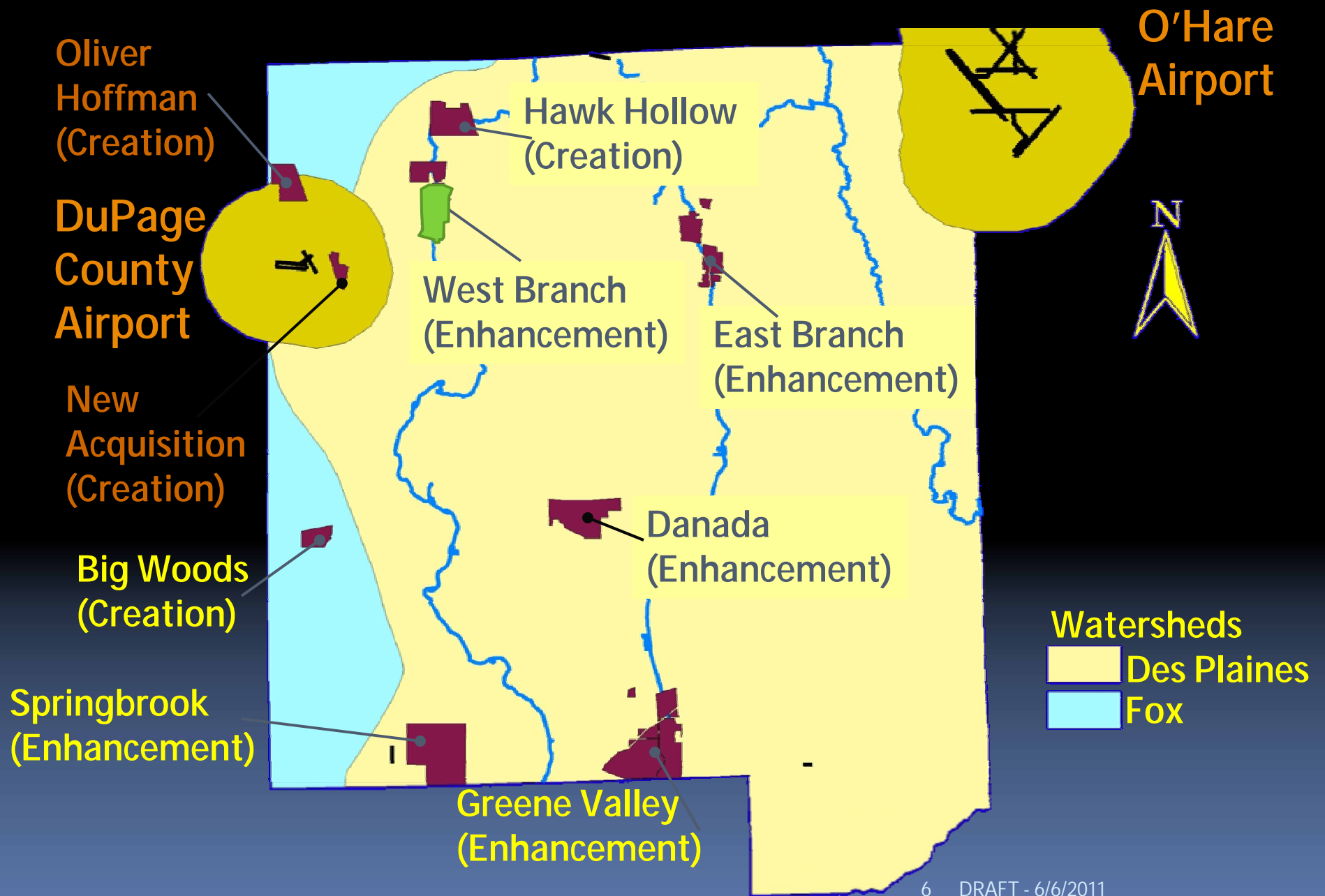
Background

- +/-67 acres of the 155 acres total are in DuPage County
- DuPage County requires in county mitigation at 1.5:1 replacement ratio = 90 acres of mitigation.
- O'Hare paid DuPage County to complete mitigation on their behalf

Background

- Intergovernmental Agreement between DuPage County Forest Preserve District (FPD) and DuPage County to allow mitigation on FPD properties

18 FPD SITES Evaluated



West Branch Forest Preserve

West Branch Forest Preserve was selected due to likelihood of success.



Preserve Limits

350 acre
Restoration area

Forest Preserve District Vision

- The District took **a holistic** view.
- The O'Hare wetland creation **would intrude** into the southern portion of the preserve,
- **Complete that intrusion once;**
- **Restore to native habitat the entire southern portion** of the preserve.
 - **+/-350** acres of the preserve would be restored
 - **+/-120** acres of wetland created
 - **90 acres** of wetland mitigation credit generated to mitigate for the O'Hare airport wetland impacts

DuPage County Responsibilities

- DuPage County would be responsible for areas designated for:
 - wetland creation and restoration,
 - wetland buffer and
 - a portion of the river restoration, along with
 - tree and brush removal within those specific areas

Forest Preserve District Responsibilities

- Responsible for:
 - restoration of remnant fen, river and upland prairie
 - tree and brush removal in the non-wetland and buffer areas

Existing Conditions

- The site was originally farmed and was purchased to provide flood control and open space
- The existing onsite wetlands are dominated by reed canary grass (*Phalaris arundinacea*)
- Uplands are dominated by old field Brome and goldenrod (*Solidago*)
- Remnant fen and woodlands are dominated by buckthorn (*Rhamnus cathartica*)

Existing Condition

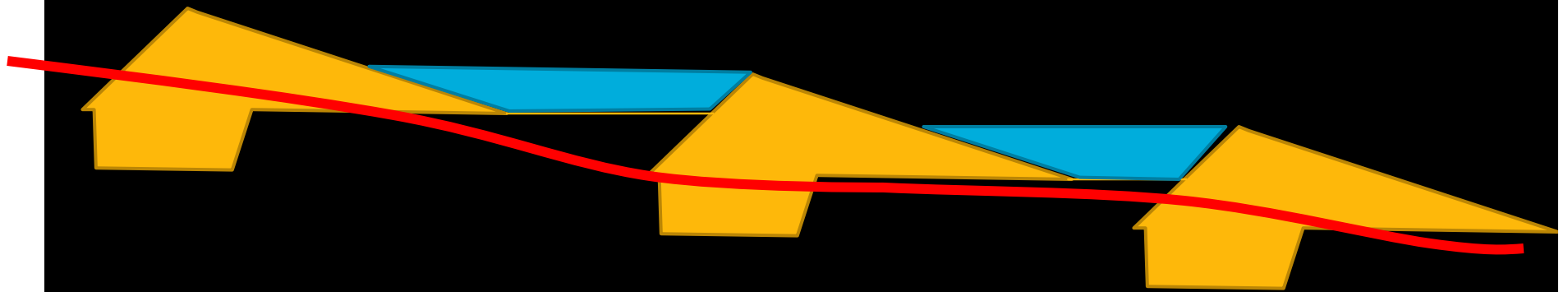
- The River:
 - Is channelized
 - Is deeply incised from past excavation
 - Acts as a sump to surrounding flood plain by artificially lowering the water table
 - Allows field tiles to free flow into the river draining entire site

Component 1: River Restoration

- Raise 6,000' of Stream Bed $\pm 2.5'$
- Drown Field Tiles
- Add Structure
 - Can't meander horizontally
 - Meandered vertically
 - Riffles and Pools
 - Root wads
- Improved Habitat



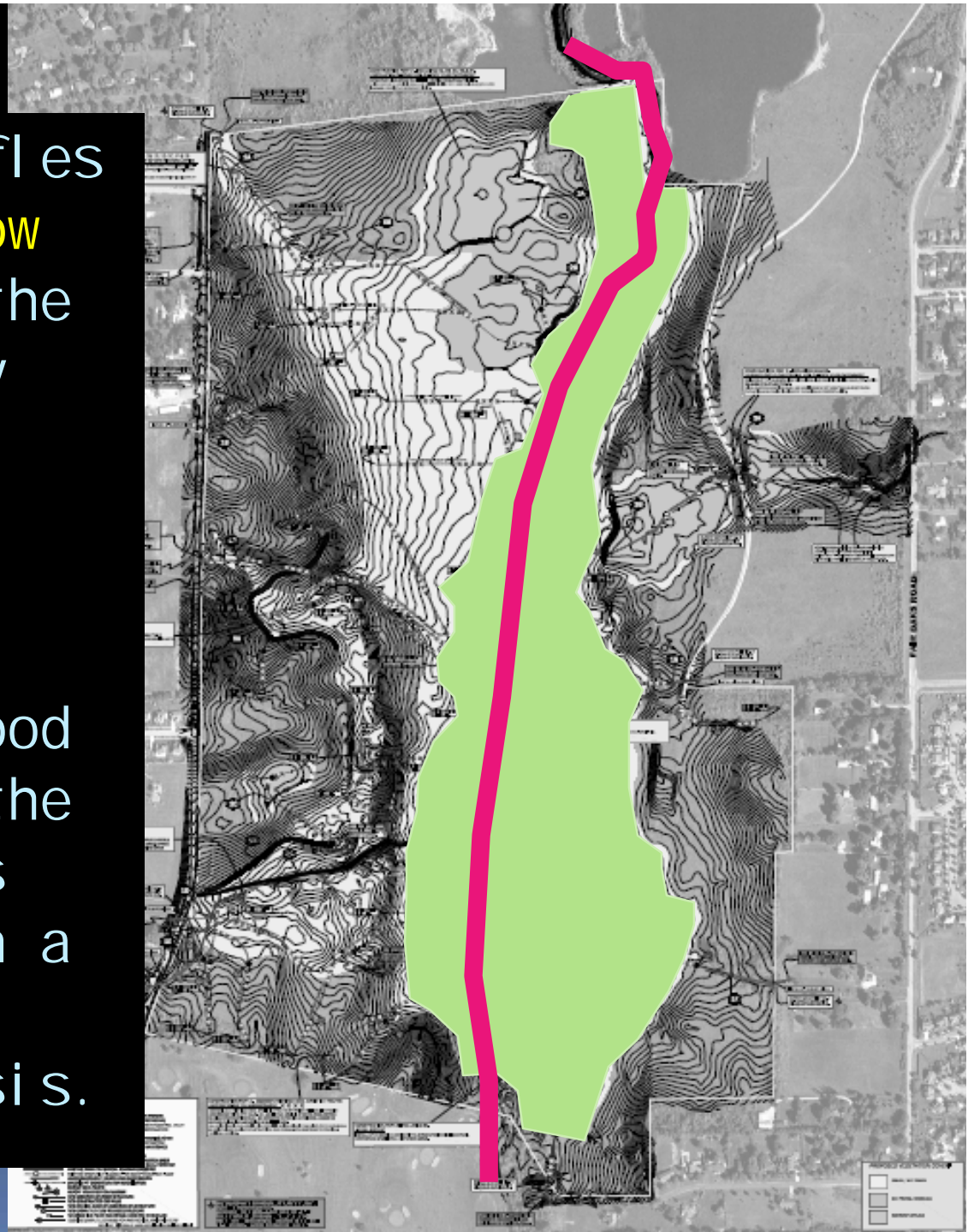
Pools and Riffles



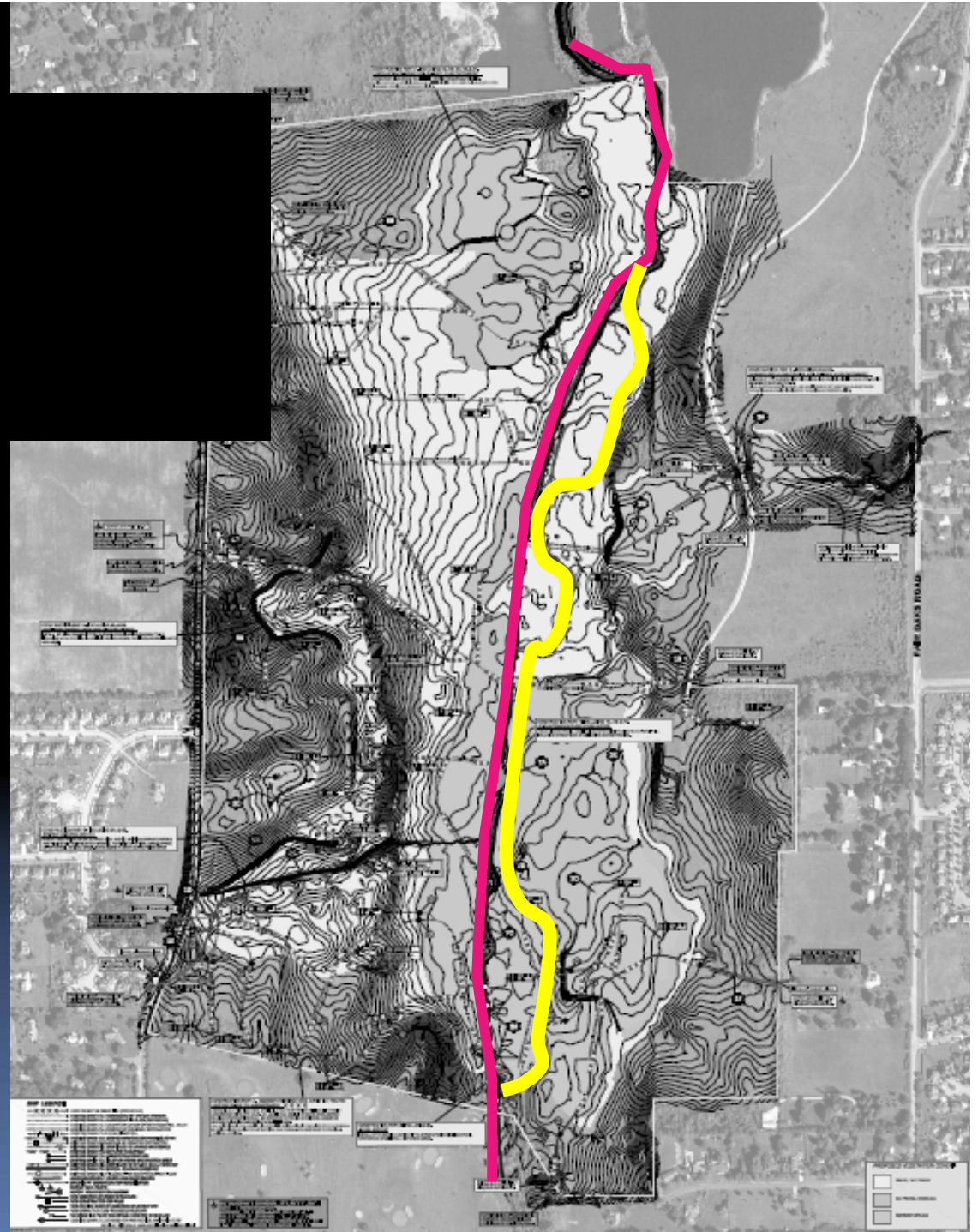
100-year storm events flood heights will be unchanged by modification of stream bed elevation.

The Pools and Riffles raise the base flow elevation across the site approximately 2.5'.

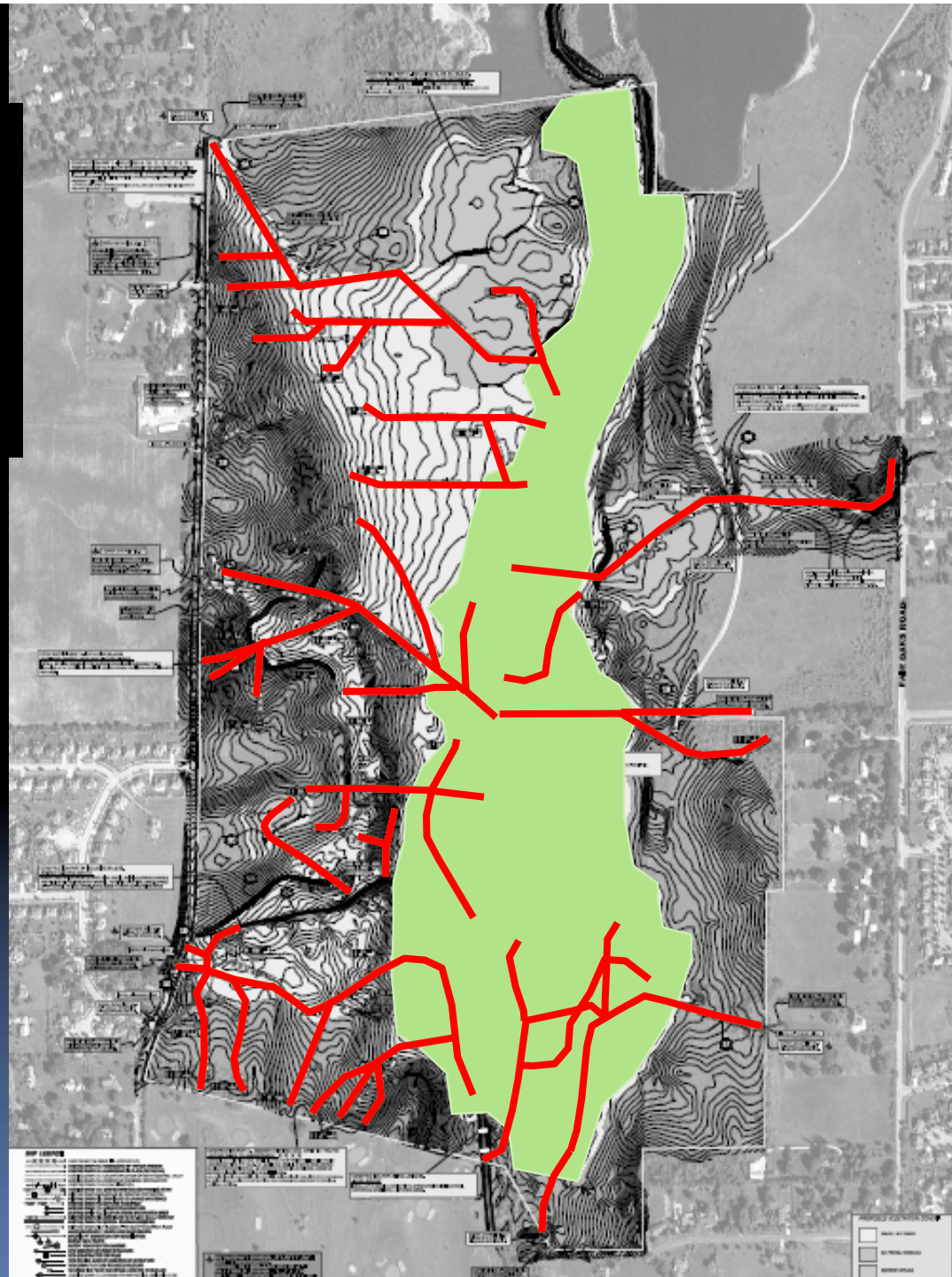
Which raises the water table throughout the flood plain and allows the river to re-access the flood plain on a more frequent rainfall event basis.



Component 1a: Re-access Remanant Meanders

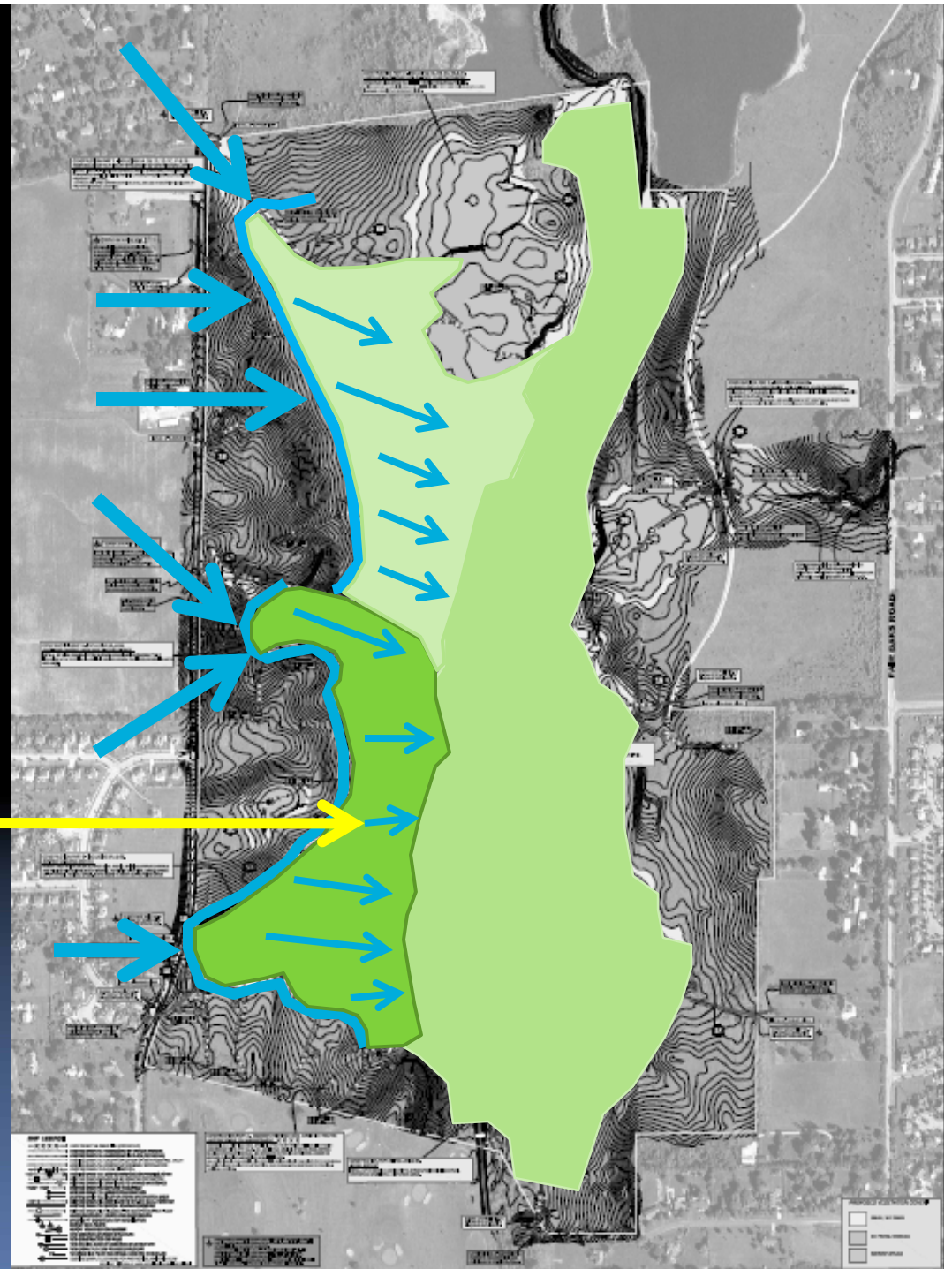


Component 2: Field Tile Removal



Component 3: Infiltration Pipes

Remnant Fen



Component 4: Closing Depressions

Raising saddle
points between
depressional areas



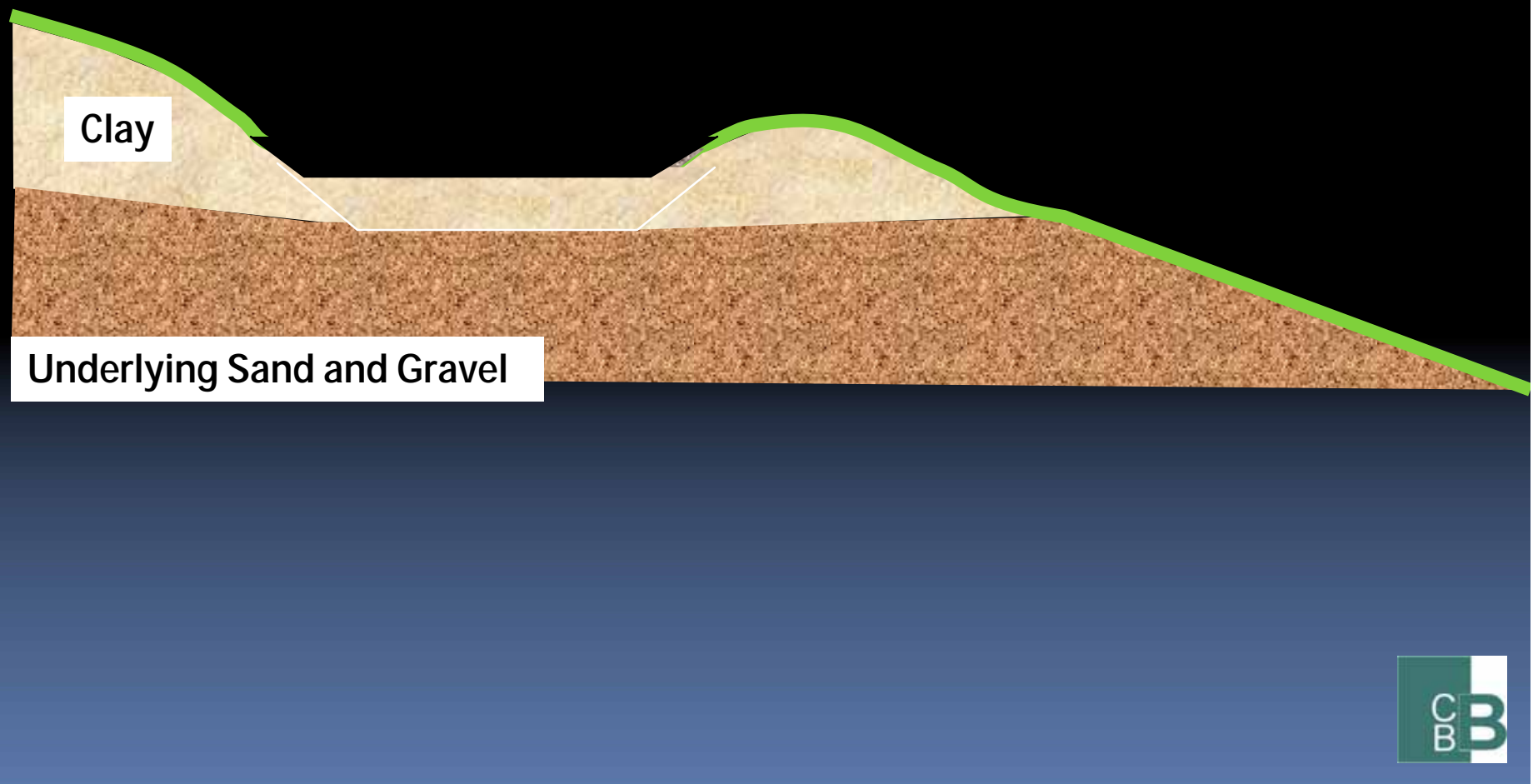
Component 5: Infiltration Ponds



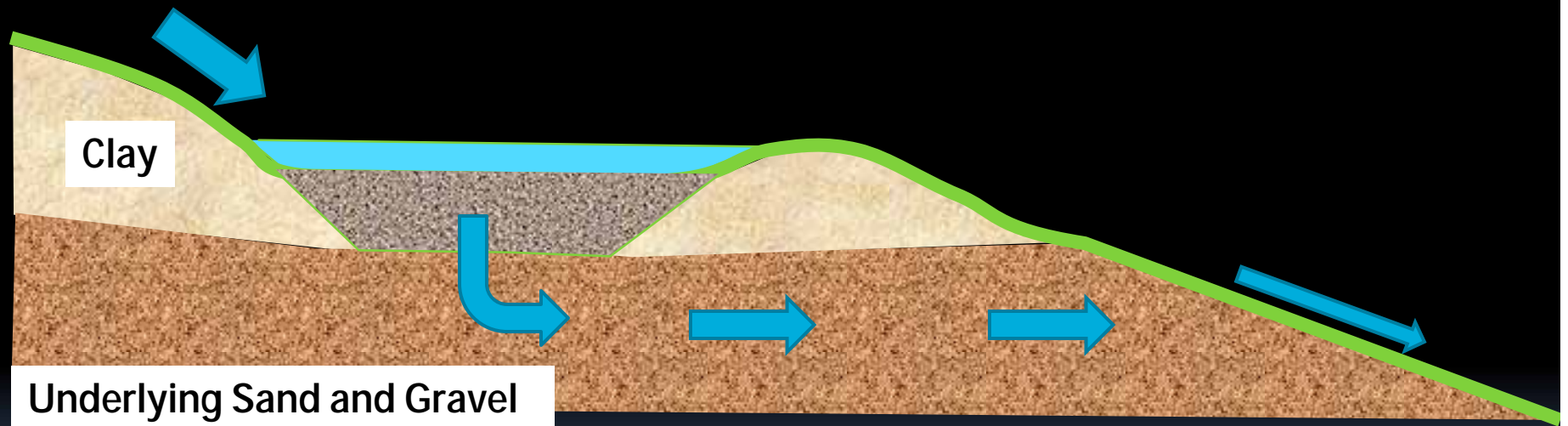
Infiltration Ponds



Infiltration Ponds

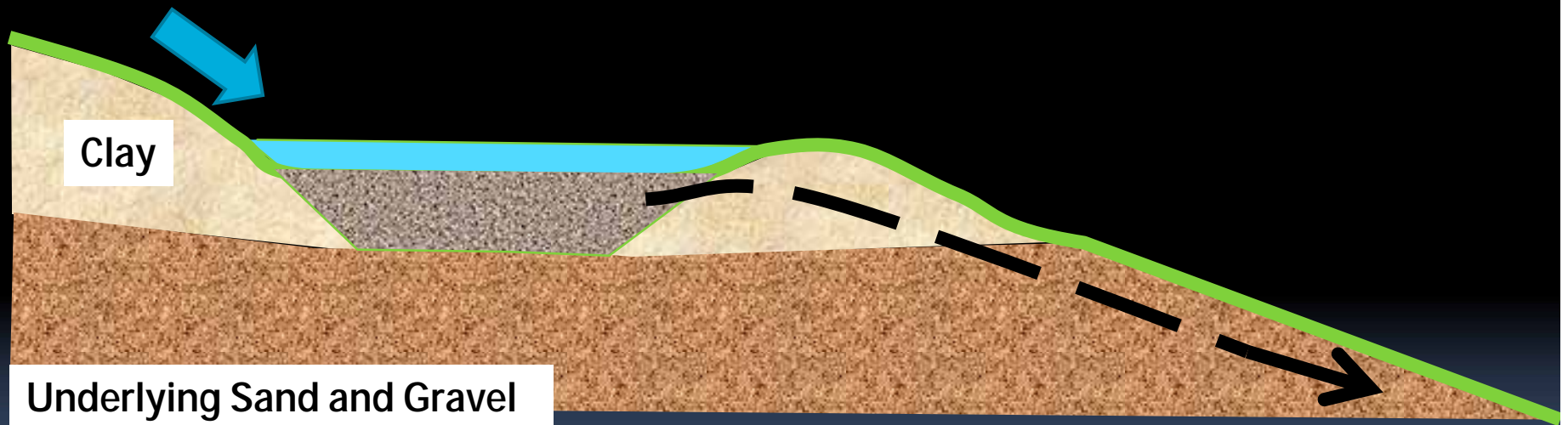


Infiltration Ponds



Infiltration Ponds

Excess water passes through a pipe downhill to prevent erosion



SECRET



SECRET



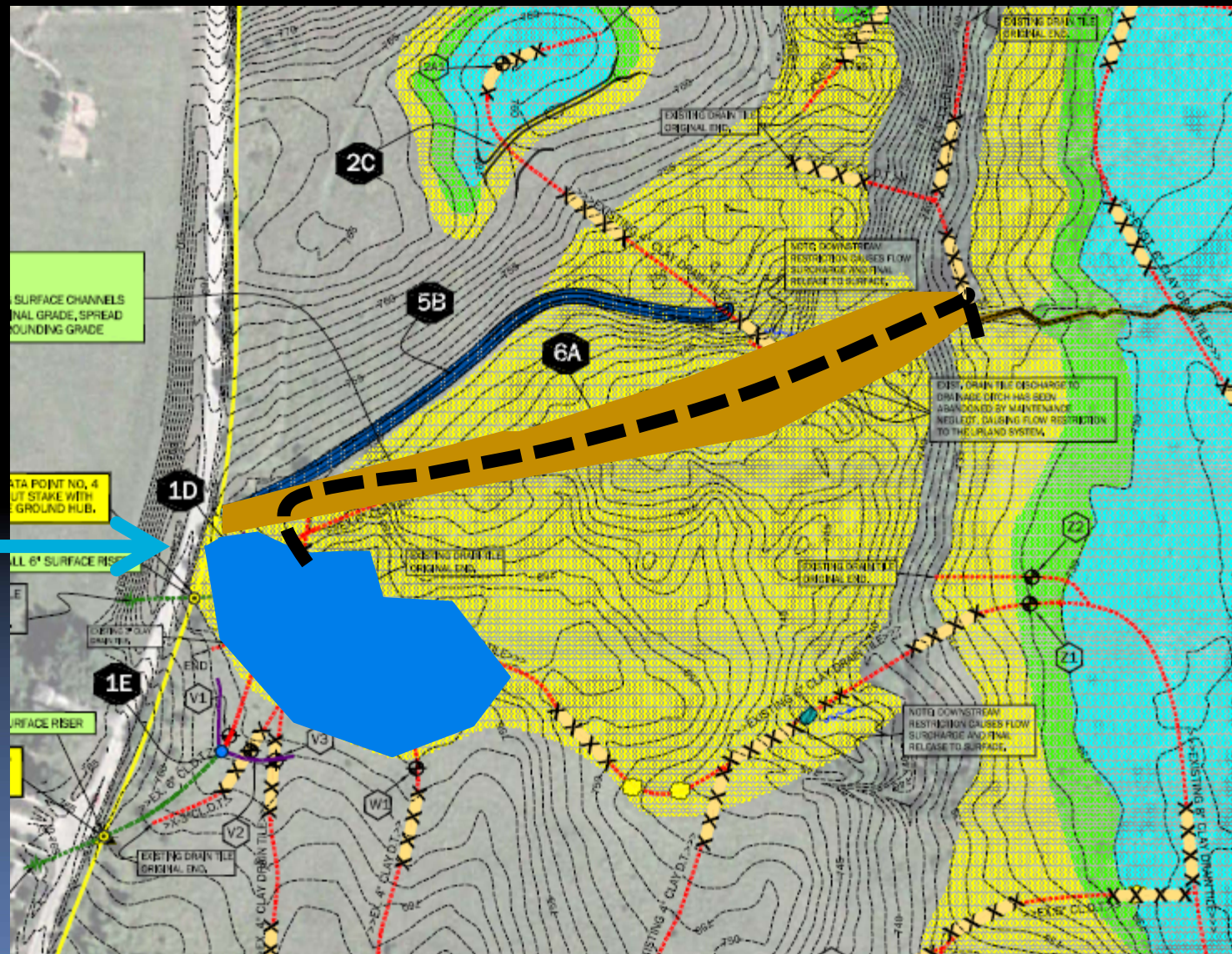
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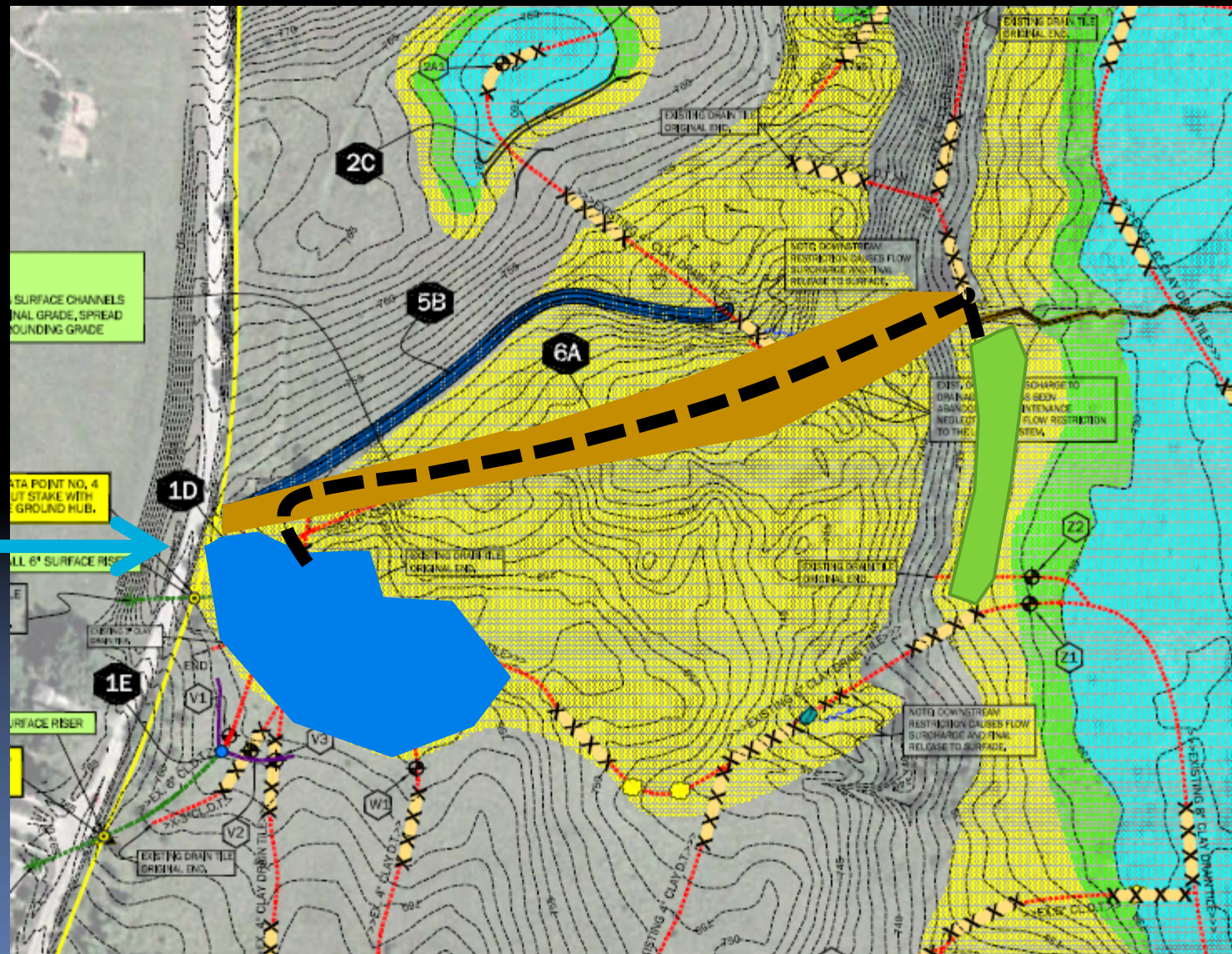
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Backup Plan




Backup Plan



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Thank you to:
DuPage County
DuPage County Forest Preserve District,
and EWRI

Questions?

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