

StormStore™

A Pilot Stormwater Credit Trading Market for Cook County, IL



March 8, 2022

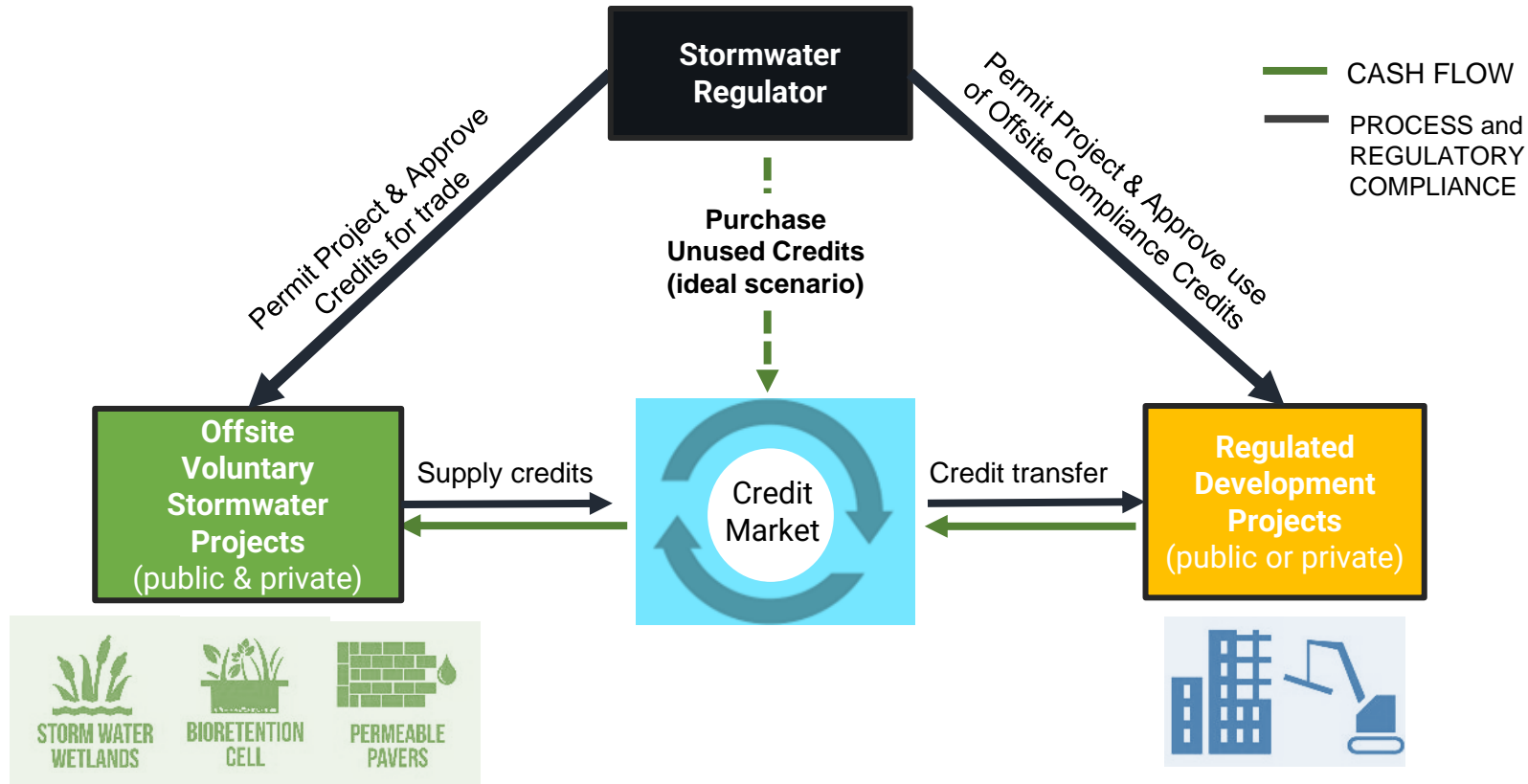
Metropolitan  Planning Council

The Nature
Conservancy 

Take-Aways

- What is stormwater trading? What are the benefits?
- Why stormwater trading in Cook County, Illinois?
- Intro to Cook County's stormwater trading pilot program
- Intro to StormStore™ - a stormwater trading marketplace
- Cook County Trading Pilot and StormStore™ market outlook

How Stormwater Credit Trading Markets Work



Drivers behind Stormwater Credit Trading Markets

a **policy** that provides flexibility for developers to meet stormwater management requirements

a **watershed approach** to solving local flooding issues by decentralizing stormwater management

an **economic tool** that encourages placement of stormwater controls where it is most needed and provides greatest benefit

a **market-based incentive** to accelerate investment in voluntary, greener stormwater infrastructure

Trading allows more communities to experience the economic, social, and environmental benefits from building decentralized, nature-based solutions for stormwater management



Source: NRDC, [How to: Stormwater Credit Trading Programs](#)

Requirements for a Stormwater Credit Trading Market

a **stormwater ordinance** that allows for some degree of offsite stormwater mitigation

sufficient demand from (re)development to ensure that enough properties will trigger stormwater mitigation requirements

sufficient supply from properties within the market boundary that have the potential to be developed into stormwater solutions

adequate incentives and clear program design that encourages early and ongoing participation

continuous program improvement that is responsive to market conditions and stakeholder feedback



Policy and Regulatory Review

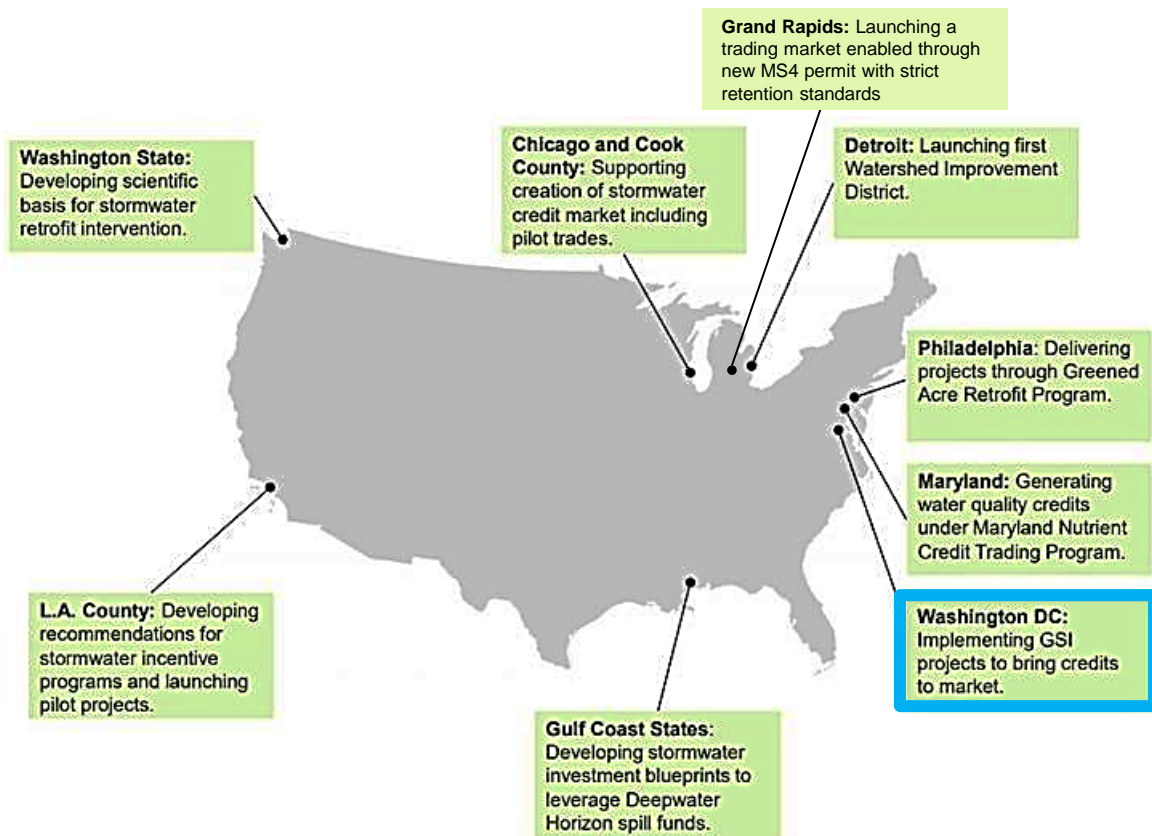
Demand-side Analysis

Supply-side Analysis

Market Administration Analysis

Program Design

Others Exploring Trading Markets & Credit Incentives



Stormwater Management in Cook County

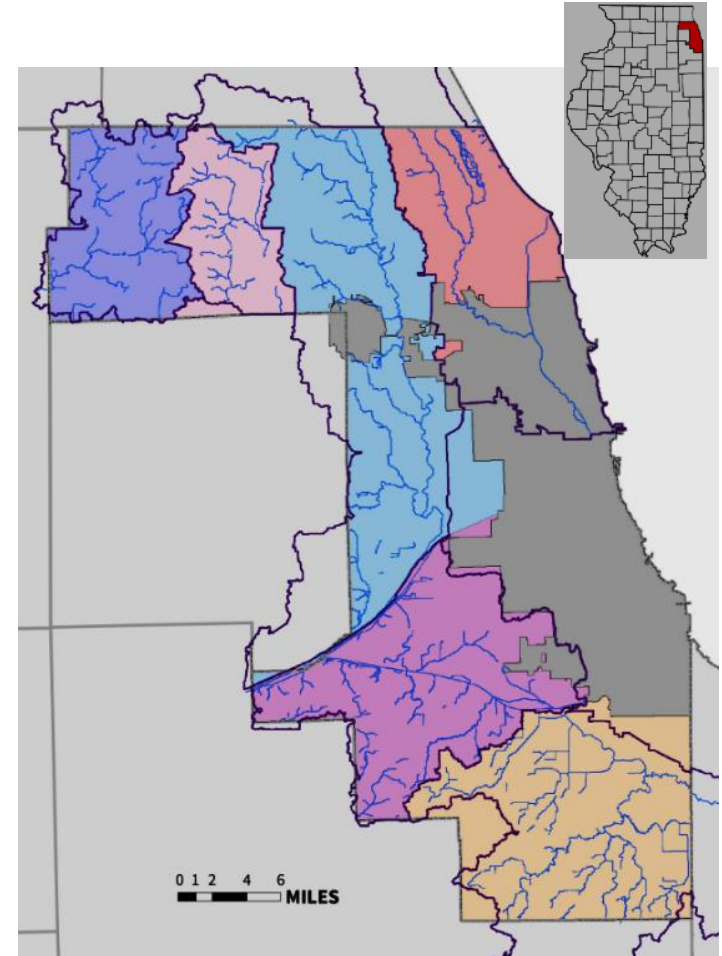
- regulates six major watersheds
- manages 882 sq mi of sewershed
- serves 5.25 million residents across Chicago + 128 suburban communities



- County boundary
- City of Chicago
- MWRD watersheds
- Streams

Watershed Planning Areas

- Calumet Sag Channel
- Little Calumet River
- Lower Des Plaines River
- North Branch Chicago River
- Poplar Creek
- Upper Salt Creek



Regional Stormwater Challenges in Cook County



Why Stormwater Trading for Cook County, IL?

As of today, **MWRD has invested over \$3.8 billion in reducing pollution and mitigating flooding** through the Tunnel and Reservoir Plan (TARP) and local projects

In order to solve local flooding in Cook County it is estimated that it will cost another \$70 billion, even if a cost-effective blended green and grey approach was used

There needs to be more private sector investment in distributed and greener flood solutions



Source: MWRDGC

Managing Stormwater in Cook County



Requirements

MWRD's Watershed Management Ordinance (WMO) became effective May 1, 2014

Requires (re)development projects to manage stormwater onsite through retention, detention and runoff release limits

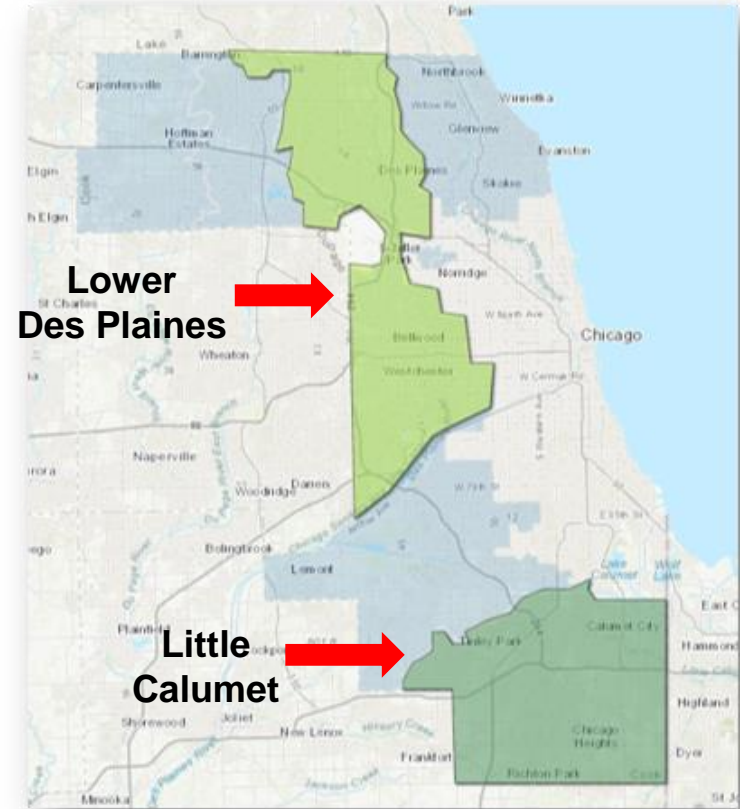
Challenges

- Cost of implementation
- Limitations due to site conditions
- Retrofitting legacy development
- Recent WMO updates (2020)
 - More strict release rates
 - Updated rainfall data

MWRD Stormwater Retention and Detention Trading Pilot

Starting May 2020 through January 1, 2025...

*“...projects located within [the **Little Calumet** and **Lower Des Plaines** watershed planning areas] do not need to demonstrate site limitations and constraints to be able to participate in detention and volume control trading.” - Watershed Management Ordinance (WMO)*



MWRD Stormwater Retention and Detention Trading Pilot

IF...

Developers provide **ONSITE** storage for:

Detention Volume for the 10-year, 24-hour storm event and
at least 50% of required **Volume Control**.



THEN...

Developers can use **OFFSITE** storage facilities for:

Remaining Detention Volume for the 100-year, 24-hour storm event and
Remaining Volume Control (up to 50%)

Benefits of stormwater trading

- Decouples stormwater management from development
- Reduces cost of development
- Encourages re-use of marginal land
- Reduces local flooding
- Enables optimal siting of solutions
- Incentivizes green infrastructure

In most Cook County communities, (re)development is driving construction of local stormwater improvements...

but what happens in those areas where (re)development is not occurring?



What does demand look like for the Cook County pilot?

Both public and private landowners can benefit from using credits to meet stormwater requirements.

Use of offsite storage facilities **decreases the overall cost of delivering stormwater management** by reducing construction costs and loss of opportunity costs associated with compliance.



Real Cost

+



Opportunity Cost

What does supply look like for the Cook County pilot?



Private/Public
Permeable
Parking Lots



School Gardens
& Playground
Retrofits

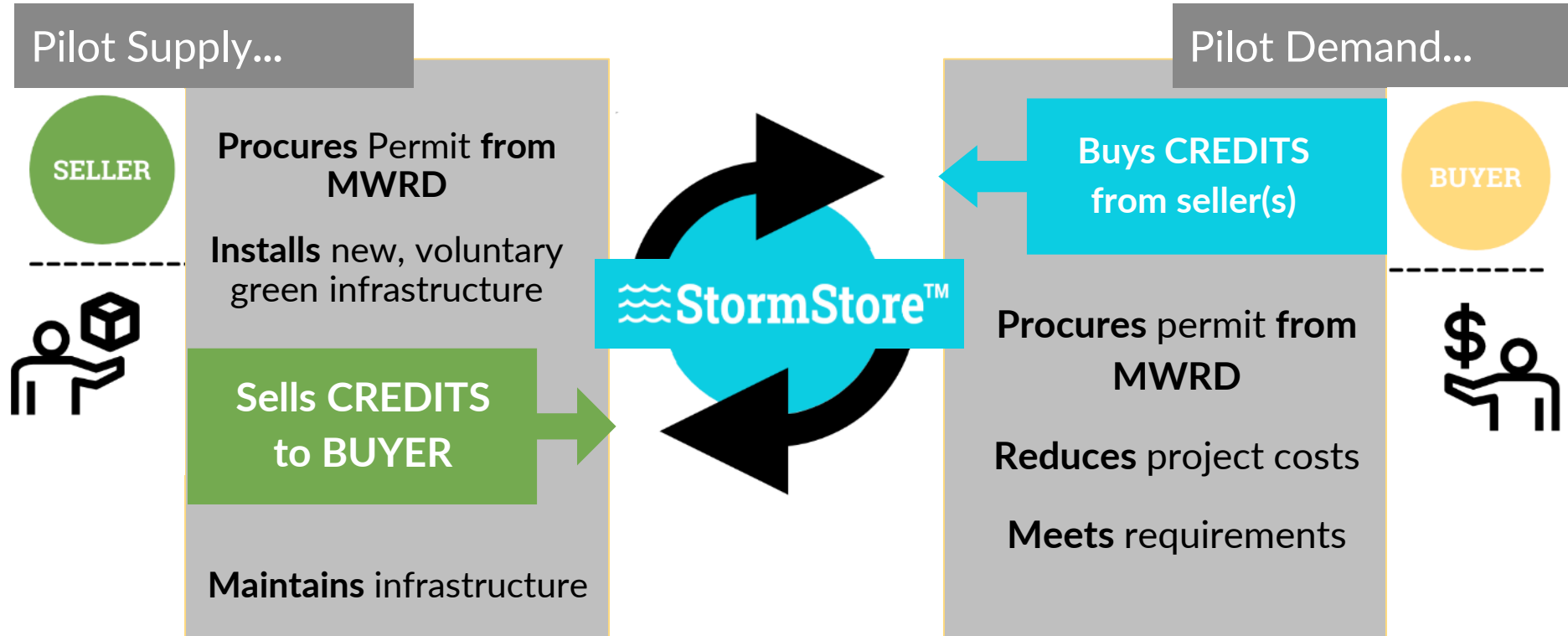
Green
Infrastructure or
detention in
Parks or on
Private Parcels



Streetscape
Improvement
Projects



What is StormStore™ and how does it work?

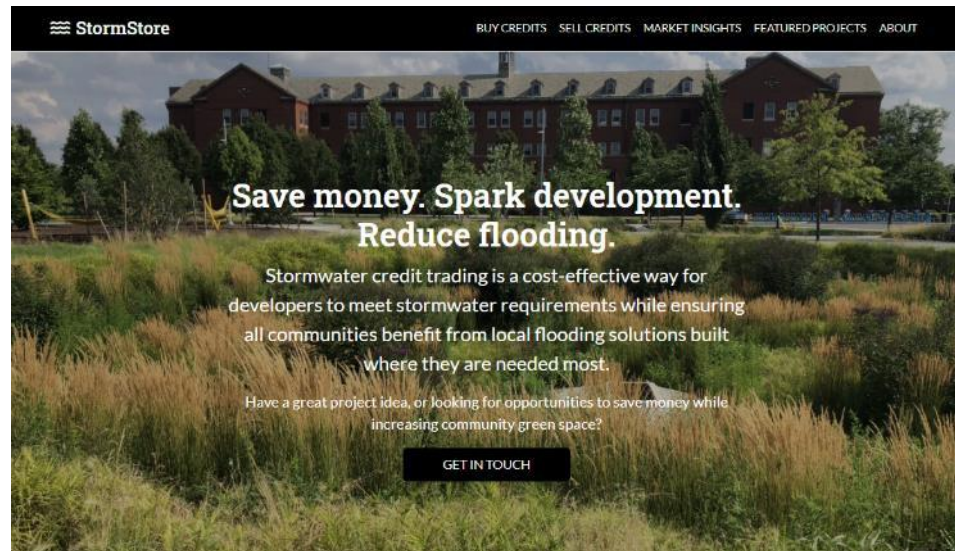


Where the Cook County Pilot and StormStore™ stand today...

No trades have occurred, but credit supply projects are being permitted by MWRD

MWRD continues to modify ordinance to increase flexibility as part of the 5 year study

The StormStore™ team recently launched [StormStore.org](https://stormstore.org) to increase awareness and facilitate future trades



StormStore™ Outlook for Cook County

BUYER



26
Projects

Projects on average per year would benefit from using off-site stormwater facilities --allowing for new, voluntary facilities to be installed across the pilot watersheds

\$175k
savings

for an average project in pilot watersheds if using credits to meeting a portion of their compliance through StormStore

.70
Acres

of developable space saved by purchasing stormwater credits through StormStore.

StormStore™ Outlook for Cook County

13

Projects

of new, voluntary stormwater facilities could be developed annually to help solve local flooding problems

\$1.2 M

Revenue

Revenue generated annually for suppliers through StormStore credit sales to be put toward new projects or O&M

9

Acres

of new stormwater management infrastructure created annually across both pilot watersheds



What we do...



Convene and educate stakeholders around stormwater trading



Review projects



Help municipalities identify local flooding hotspots



Locate new project opportunities



Connect buyers and sellers to facilitate trades



Review and advise on trading program design

To learn more connect with



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Jen Jenkins, PE | The Nature Conservancy
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www.stormstore.org



Update on Stormwater Trading Pilot Study



IAFSM

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MWRD Engineering Department

March 8, 2022



History of Offsite Stormwater Detention

- Watershed Management Ordinance has allowed since adoption in 2014
 - Offsite Detention allowable when a site limitation exists
 - Offsite Volume Control allowable when a site constraint exists



History of Offsite Stormwater Detention

2020 Amendment established pilot study

- Lower Des Plaines River and Little Calumet River watershed planning areas
- Allowed a portion of stormwater detention and volume control to be provided offsite without a site limitation or site constraint
- Board of Commissioners shall consider the pilot study in May 2025.



Current status

- Six WMO permits or permit revisions have been issued to create offsite supply
 - Two for offsite detention
 - Four for offsite volume control
 - Four permitted locations are in pilot study watershed planning areas
- One permit issued for development using offsite detention
- Numerous pre-application meetings with potential developers of offsite supply facilities