



Overview of TNC - Opti Joint Venture: A Technology Solution to Improve Water Quality and Stimulate New Markets

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Global Context

Stormwater is the fastest growing and one of the largest sources of water pollution in the world. It pollutes our waterways with pesticides, bacteria, heavy metals, and other forms of harmful pollution. This can taint our drinking water, poison the fish that we eat, and destroy natural habitat that drives economic growth in real estate values, recreation opportunities, and commercial fishing.

Project Overview

Solutions to reduce stormwater runoff have typically been expensive and difficult to implement across large areas. To solve this problem, The Nature Conservancy (TNC) and Opti, a technology company, have formed a joint venture (JV) to increase the environmental benefits of existing stormwater ponds using innovative technologies, public-private partnerships, and impact investment.

Our JV's first projects are taking place in Maryland, in partnership with the world's largest retailer, Walmart. The State of Maryland's Department of Transportation (MDOT) is purchasing the benefits created by improving the performance of Walmart's stormwater ponds, and in turn meeting their regulatory obligations at a significant savings to taxpayers. These first projects represent an approach that delivers low-cost solutions to water pollution. The JV is also actively seeking additional landowner partners to scale and replicate this work nationally.

Conservation Significance

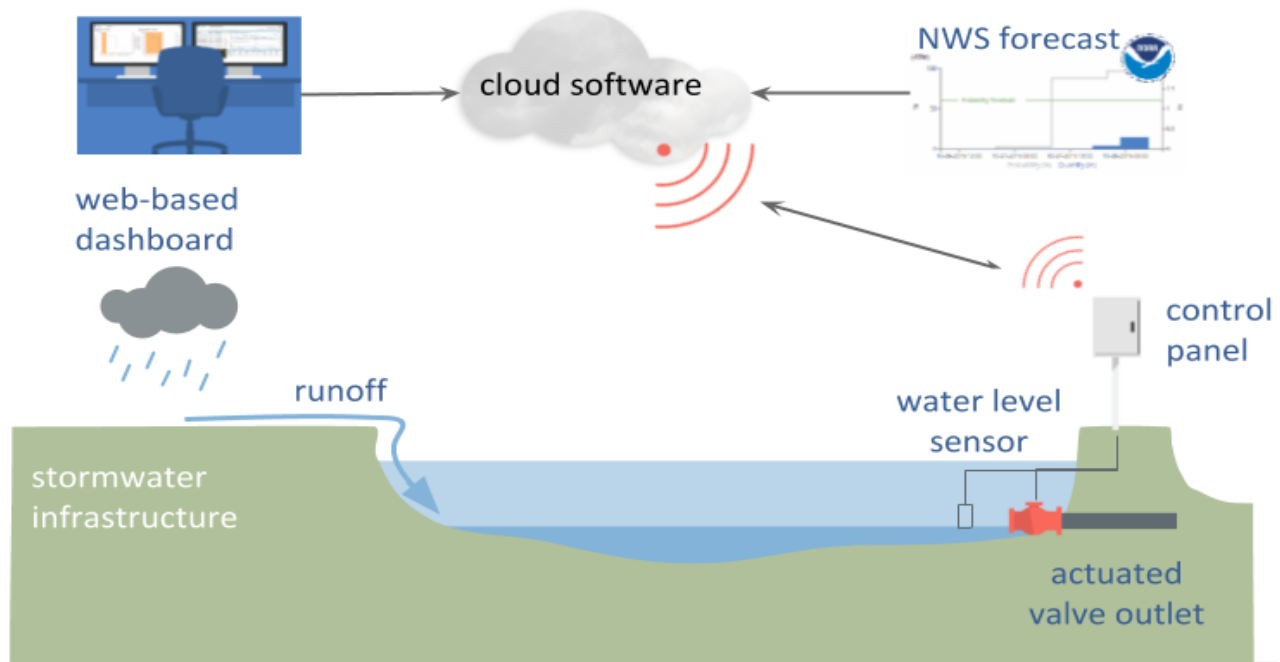
Prior to the trend towards green infrastructure, stormwater ponds were the most common form of stormwater management. Today there are more than a million ponds nationwide. While these stormwater ponds manage some urban runoff, the traditional design does not deliver high rates of pollutant removal.

The JV will work to make existing stormwater ponds "smarter" at a scale that achieves significant watershed benefit, including water quality improvements, infiltration enhancements, and flood control benefits. In turn, the JV's projects will influence public agencies, major landowners, and investors to rapidly implement retrofits nationally. To do so, the JV will initially retrofit Walmart's stormwater ponds in locations where we can achieve significant pollutant removal, while also demonstrating financial value to our governmental and financial partners.

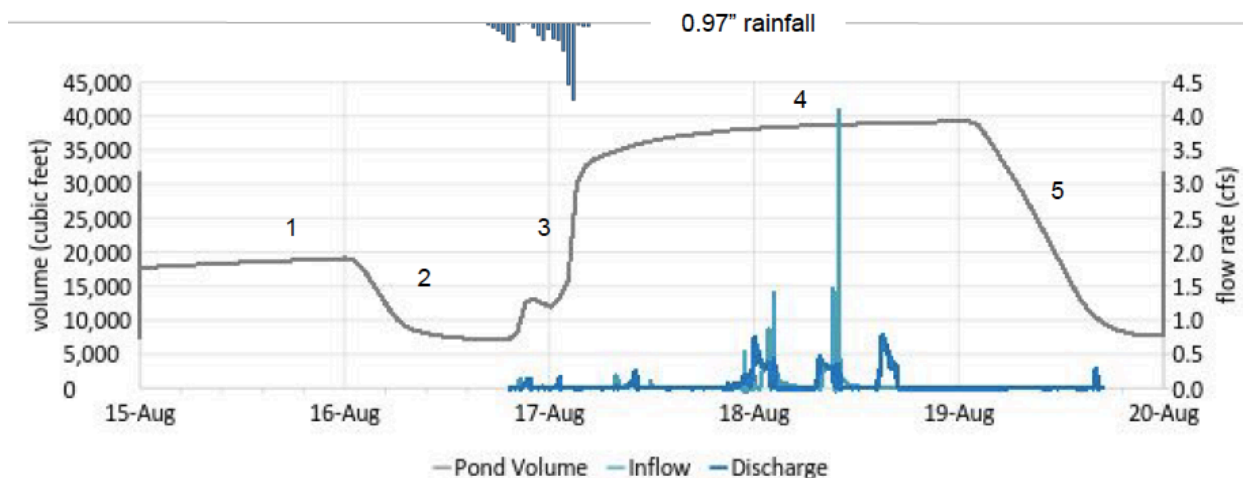
How Does the Technology Work?

Opti is a technology company focused on continuous monitoring and adaptive control of stormwater infrastructure to improve water quality, prevent flooding, and restore natural hydrology. Its technology uses real-time information to adaptively hold and release water in stormwater ponds to maximize water quality benefits and flooding reduction at a fraction of the

cost of other solutions. Opti has installed its products at over 160 installations across the U.S. and proven its effectiveness to regulators over its six-year operating history.



The hardware above is deployed at an existing stormwater pond and operated remotely with software to: 1) read the weather forecast, 2) prepare for incoming runoff, 3) manage discharge during wet weather, 4) meet retention and nutrient reduction goals, and 5) manage discharge to return to dry weather level. See graph below for each step.



Real-time control greatly extends average retention times in the pond, which results in additional particle settling. It also increases infiltration, evapotranspiration and nutrient uptake; in other

words, less pollution is discharged out of the pond to local streams and rivers and more water is recharged into existing groundwater supply.



The installation does not impact the aesthetic value of the pond

What's Next?

The JV is currently retrofitting three Walmart ponds, generating roughly 70 water quality credits on behalf of MDOT. The JV is providing MDOT a complete, turn-key solution for compliance via credit generation and is responsible for finance, design, build, operations and maintenance of its credits over a 20-year timespan, at a fixed price. Construction and credit certification will be completed by December 2020. To finance these projects and others that may enter the pipeline, the JV has secured a revolving finance facility from Prudential.

Expanding our Efforts

The JV's ambition is to retrofit hundreds of ponds over the next few years, across multiple states. To meet these goals, the JV will require the partnership of landowners beyond Walmart. The value proposition to the landowner is simple: Turn your stormwater ponds into climate-adaptive assets that provide water quality and flood resilience benefits to the community-at-large.

We work with all of our landowner partners in the following manner:

The JV is responsible for:

- 1) assessment of pond inventory for credit-generating opportunities, inclusive of technical, regulatory and policy analyses
- 2) financing, design, build, operations and maintenance services for the Opti technology
- 3) all permitting, certification, and outreach to credit buyers to secure credit purchase contracts
- 4) a leasing fee and/or royalty on credit sales to the landowner



The landowner is responsible for:

- 1) providing the JV with data on its pond inventory, including but not limited to ownership status and/or any easements or deed restrictions, date of construction, and other technical data, including design plans, specifications and hydrology reports
- 2) ongoing operations and maintenance requirements **not** related to the Opti technology (i.e., commitment to continue what is already happening onsite, including aesthetic and structural maintenance of the pond to regulatory standards)
- 3) access to site(s) during design, construction, and ongoing operations and maintenance through a site option agreement (JV must be legally able to operate facilities for duration of contracts)

How the Smart Pond Partnership Works

EPA Region III/Maryland
Department of the Environment



Credit program development and
regulatory guidance



Provides
government
relations, financing,
and conservation
support

Provides design/build
and O&M services
to JV. Manages JV
operations



**Project
Remuneration**
Royalties on
credit sales

**Option
Agreement**
To use/maintain
assets



Provides
IAT credits



**Credit Purchase
Agreement**

CREDIT PURCHASE CONTRACT

Payment from
provided credits

P&I

Debt financing



Prudential

For most people, stormwater ponds are often overlooked, or not thought of at all. TNC and Opti think of them as crucial pieces of infrastructure towards building a resilient community. With the right partners, the application of this technology can transform how we manage our most precious resource: water.