



## Lower Rio Grande Valley Water Management and Quality Virtual Conference

Environmental Equity Through Stormwater  
May 2021

Jason Yoho, Chief Commercial Officer

[jason@2ndnaturewater.com](mailto:jason@2ndnaturewater.com)

 JasonYoho





2NDNATURE Software has a vision to deliver actionable science to support sustainable (water) resource stewardship, healthy ecosystems, and community resilience.

We give communities an easy way to understand opportunities to use their stormwater programs (compliance) to demonstrate a return on investment in their community.



# The Stormwater Opportunity

Clean Stormwater = Healthy Cities



**Jason Yoho**

Chief Commercial Officer

2NDNATURE Software

[jason@2ndnaturewater.com](mailto:jason@2ndnaturewater.com)

Santa Cruz, California

### **Peter Mel rides the wave of a lifetime at Mavericks**

JANUARY 11, 2021 | SURFING



**Peter Mel rode one of the biggest and most perfect waves ever surfed at Mavericks, Half Moon Bay, California.**

Jan. 29, 2021 | Updated: Jan. 29, 2021 10 p.m.



# About 2NDNATURE Software, Inc.



2NDNATURE scientists are **innovators and stormwater experts** who apply **peer-reviewed science and patented methodology**.



Founded in 2016 to infuse cutting edge science in an enterprise cloud solution – **the first purpose-built commercial SaaS platform for stormwater water resource management, planning and reporting**.



Our partner ecosystem spans a breadth of **municipal, state and federal agencies, resource conservation non-profits and consultants** including Esri, Nature Conservancy and others.



## 115,233+

Stormwater Assets Under  
Management

## \$7B

Value of Assets Under  
Management

## 56

MS4  
Customers

## 13

States

# Digital Service Delivery Model: Stormwater as an Asset

## Stormwater Assets

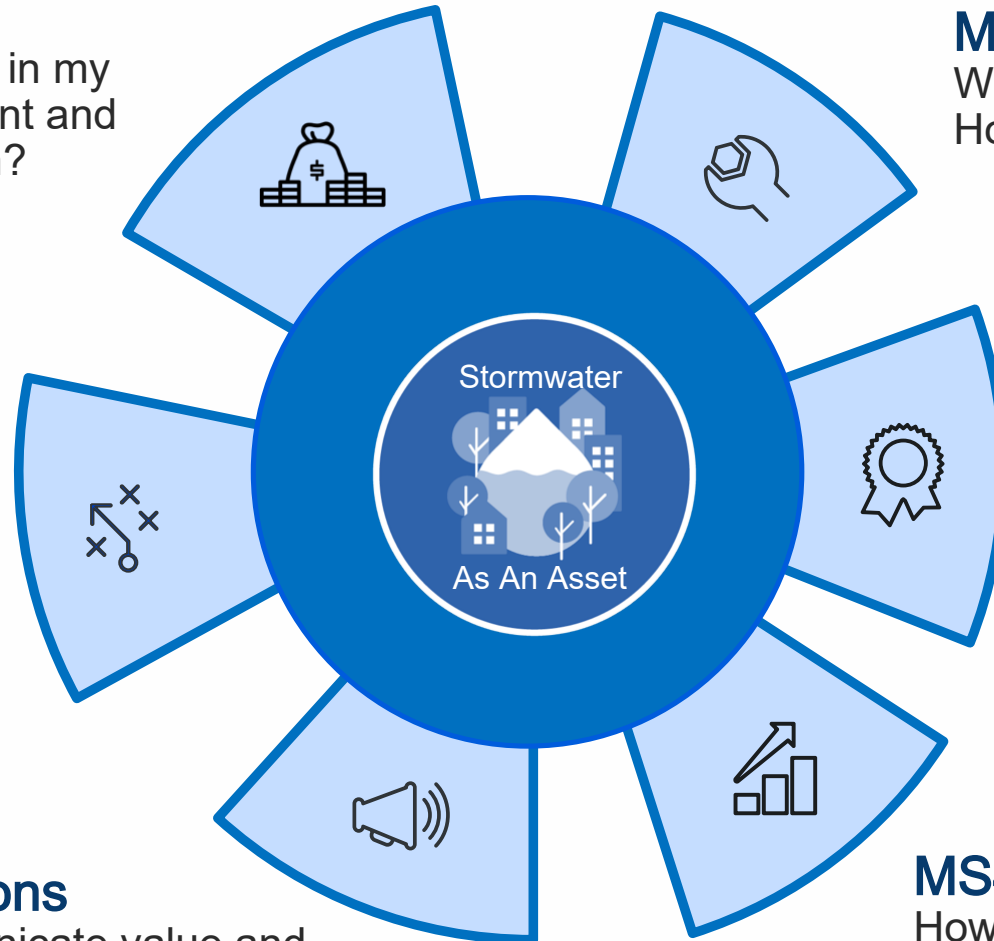
What stormwater assets are in my municipality that treat, prevent and reduce urban water pollution?

## Strategic Planning

Where are my priorities for greatest ROI and associated funding strategy for achieving long-term sustainability and healthy cities?

## Communications

How do I communicate value and impact of stormwater program to community and change their behavior?



## Maintenance

What condition are my BMPs in ?  
How do I prioritize maintenance?

## Asset Management

What are life cycle costs both short and long term to sustain program effectiveness (load reductions)?  
What is my annual program ongoing funding need?

## MS4 Program Effectiveness

How are my BMPs performing? How do I demonstrate that my best management practices are delivering clean stormwater and other benefits to the community?

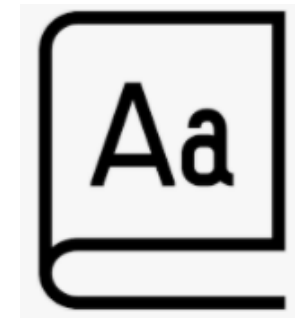
# Terms

**Social equity** , a concept also known as **environmental justice** , is the fair treatment and involvement of all people and communities—regardless of race, gender, national origin, or income level—in the development, implementation, and enforcement of **environmental** laws, regulations, and policies.

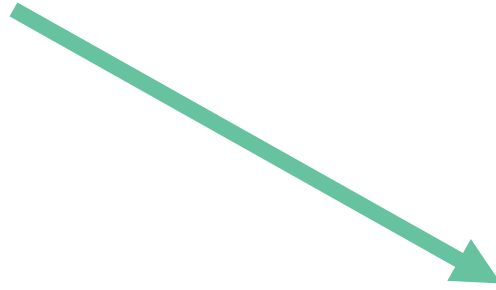
[climate.gov](https://climate.gov)

Allowing children and families of all races, abilities, and income levels to live in the best possible **environment** .

[sandag.gov](https://sandag.gov)



# Best Definition



# Why Stormwater Can Help: Big Dollars



## 2020 Stormwater Program Spend

\$18 billion Program Spend Annually  
Running Program

\$24 billion Infrastructure Spend  
Planning, Design, Build, O&M

**Total: \$42B Annually**

\$8 billion annual gap to achieve compliance driving cost saving and efficiency needs

*Source: 2NDNATURE Software Data and [https://wefstormwaterinstitute.org/wp-content/uploads/2021/02/WEF\\_MS4\\_Needs\\_Assessment\\_Survey\\_Full\\_Report\\_2020\\_Final.pdf](https://wefstormwaterinstitute.org/wp-content/uploads/2021/02/WEF_MS4_Needs_Assessment_Survey_Full_Report_2020_Final.pdf)*

2030 projection  
40% increase  
in spend

# Once in a Lifetime?

## Biden Administration

“Science is back”

\$2.3T Infrastructure Plan

Environmental Equity

Climate

Paris Accords

“The President ordered 40 percent of the benefits from federal climate action go to disadvantaged communities”

Scientific American, Feb 2021

“Biden infrastructure plan tackles historic racial inequities”

E&E News



## What the digital transformation means for Stormwater

1. Need to know where
2. Need to communicate
3. Need to demonstrate benefit over the term of that investment

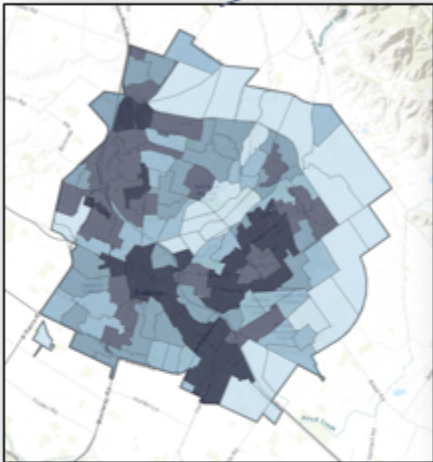
**Where:** 10X-100X Acceleration in site selection

**Communicate** : Digital access to dynamic data and information

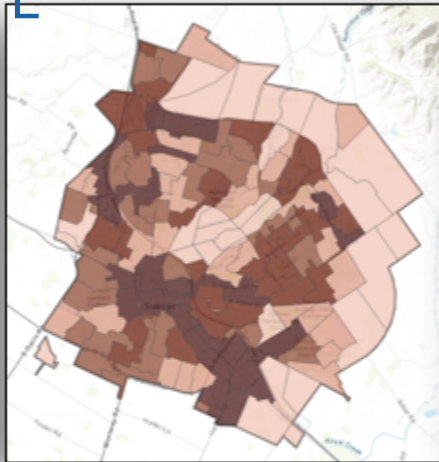
**Return on Investment** : Quantify Compliance: Regulation and Funding Requirements

# Mapped Priority Opportunities

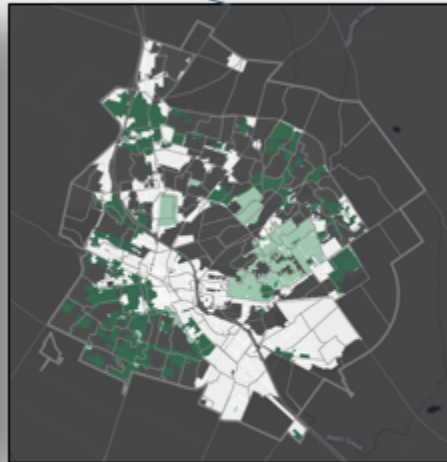
## ENVIRONMENTAL



**SW Runoff  
Volume**  
(5,643 afy)



**SW Particulate  
Load**  
(612 ton/yr)



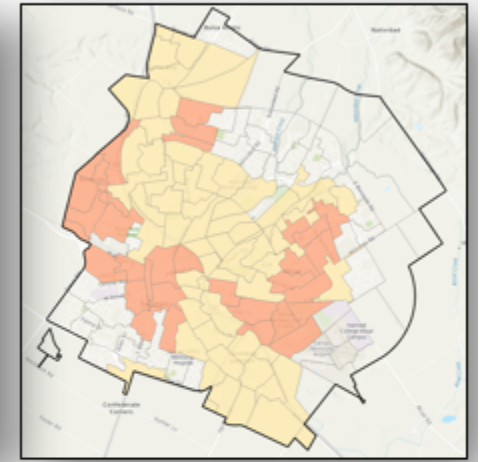
**Trash Priority  
Land Use**  
(6,595 acres)

## COMMUNITY



**Park Condition**  
(355 acres  
3% good condition)

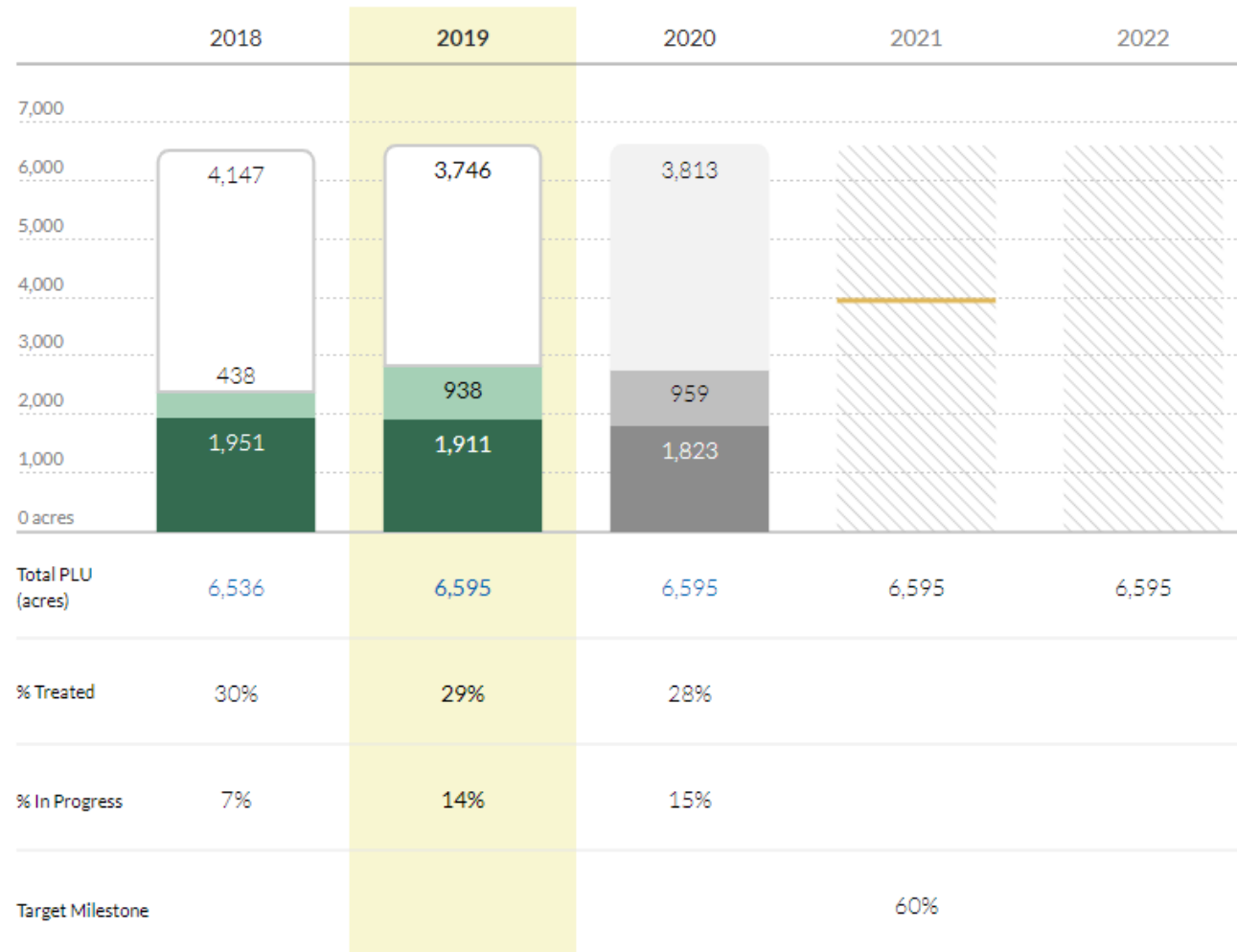
## SOCIOECONOMIC



**Disadvantaged  
Communities**  
(47% disadvantaged;  
20% severely)

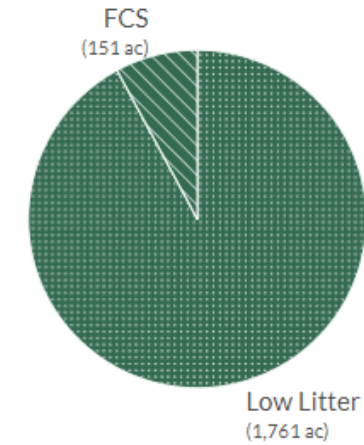
# Track Program Progress

Aligned



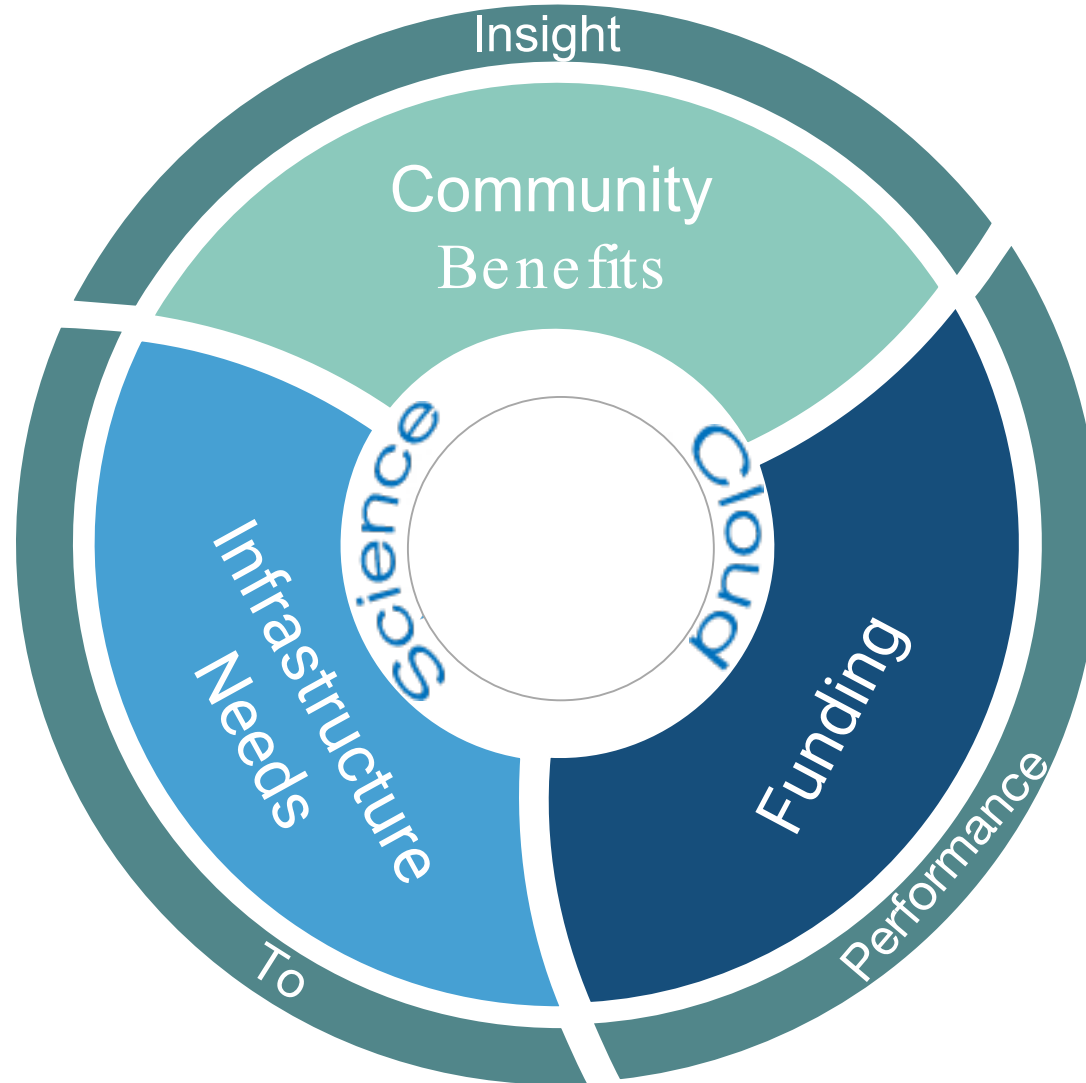
■ Treated PLU
 ■ In Progress PLU
 ■ Untreated PLU
 — Target Milestone

2019 Acreage Reductions



Treatment Type	Acres Treated
Low Litter	1,761 ac
Full Capture Systems	151 ac
<b>TREATED PLU</b>	<b>1,911 ac</b>
<b>% TREATED</b>	<b>29%</b>

# Aligning Goals



# Break Down Digital Silos

**High Cost**  
Compliance requirements, reporting and pollution mitigation costs continue to grow..



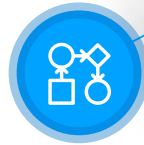
**Organizational Silos**  
Data, teams and workflows are siloed, ultimately hindering effectiveness.



**Resource Intensive**  
Municipalities require significant resources to compile annual reports.



**Complexity**  
Compliance uncertainty with misalignment between expectation and effort.



**Program effectiveness?**  
Is my stormwater program curbing pollution?



Ineffective implementation of the **Clean Water Act and sprawling urbanization** has led to the continued degradation of US waterways.

Over **60%** of US waterways are on the EPA 303(d) impaired water body list.

**100%** of communities within the United States have some stream segments that are impaired and do not meet beneficial uses.\*

# Partnering

Bring in partners

