

Rethinking SWPPP Success

Advancing Sustainable
BMPs and EDPs in
Construction and Roadwork
Projects

Part 1:

*How BMPs, SWPPPs & EDPs work
together to set the new standard
for protecting our waterways*



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A LITTLE HISTORY...

In 2001 when home building was red hot, I became a constructor and took a job with one of the nation's largest home builders. On the weekends I spent time on Stillwater River in Ohio, canoeing and fishing and doing all the things that the river had provided for me.

What I didn't know back then when I was 24 years old is that I was a major polluter to that river - actually one of the biggest polluters. When I talk about myself being a polluter, I was basically involved in development practices in which the city would come out and jet our storm sewers that drained directly into that river. I contributed to turning that beautiful river into a color that looked like chocolate milk. *I DIDN'T REALIZE THE IMPACT AT THAT TIME!*

The enforcement was changing pretty dramatically. Fast forward a few years, and with a growing family I moved back home to northwest Indiana where I started a home building company with some partners.

While building homes with my partners, we were being challenged by a municipality on the practices that we're using for sediment and erosion control. We're getting corrective action requests to the point that some fines were incurred. And I started thinking...

WE'RE DOING THIS ALL WRONG.

“What I didn't know when I was 24 years old is that I was a major polluter to that river - actually one of the biggest polluters.”

LEVEL 1: BMPs

Our challenges provided us the learning that we were using one specific tool (BMP) instead of a treatment train of technologies to try to solve an issue and it was failing to be the total solution.

What we came to learn is the importance of planning how to integrate a series of tools and strategies to improve erosion and sediment control, while supporting long term sustainability. These practices are collectively called BMPs or Best Management Practices.

BMPs or **Best Management Practices** are defined as a set of physical, structural, and vegetative strategies used to prevent soil erosion and control sediment runoff from construction sites and other activities that disturb land. Their goal is to minimize the amount of sediment that leaves a site and pollutes water bodies.

Examples include perimeter controls, storm sewer protection and vegetation practices.

Simply stated - Best Management Practices are how we can optimize sediment and erosion control on a construction site by defining:

- What tools we use
- What methods we employ
- How we communicate with all trades on the site



BMP
Best
Management
Practice

LEVEL 2: BMP + SWPPP

Understanding what BMPs are and how they can work together at a high level is the first step in effectively managing the sediment and erosion control on a job site.

The next step - a Stormwater Pollution Prevention Plan (SWPPP) - gives us an outline of things we need to do from a regulatory standpoint and is truly intended as the road map for ensuring that the BMPs work together in the most efficient way possible.

A Stormwater Pollution Prevention Plan is defined as a site-specific, written document that identifies potential pollution sources from stormwater runoff and outlines the measures to be taken to prevent those pollutants from being discharged.

While it is a regulatory document that's required under the Clean Water Act's National Pollutant Discharge Elimination System (NPDES) program for construction projects that disturb soil, it is also the roadmap for the BMP treatment train that will maximize erosion & sediment control efficiency.

As we've learned more over time and now understand that not all erosion and sediment control practices happen in the most sustainable way, another layer is becoming part of the process.



A SWPPP is a documented roadmap for the BMP plan and maximizes erosion and sediment control efficiency.

UNDERSTANDING SUSTAINABILITY

Before we jump into the next layer, it's important to be aligned with what sustainability and sustainable practices mean by definition.

The US EPA¹ gave us a definition for **sustainability** and it's based on one simple principle:

Everything that we need for our survival and well-being depends either directly or indirectly on our natural environment.

Pretty simple, right?

They went on to say:

To pursue sustainability is to create and maintain the conditions under which humans and nature can exist in productive harmony together to support present and future generations.

Can we plan to support present and future generations? When we think about sustainability, what does that look like?

According to UCLA², one of the more common definitions of sustainability used worldwide is from the UN Brundtland Commission. They say sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. So put simply, sustainability is about our kids and our grandkids.



SUSTAINABILITY

Everything that we need for our survival and well-being depends either directly or indirectly on our natural environment

LEVEL 3: BMP + SWPPP + EDP

Now that we've clarified what sustainability means in this context, it's now time to look at what that next emerging layer to the overall plan is intended to address.

That leads us down the path of what's an EDP? At one point in my career, I had no clue what an EDP was. An EDP is an environmental development plan.

When we talk about an EDP versus a SWPPP, they sound very similar; however, an environmental development plan affects stormwater pollution prevention planning.

An Environmental Development Plan (EDP) is a proactive planning framework that looks beyond compliance. The EDP is not only looking at that construction site; it's also looking at a bigger 30,000-foot view at a municipality and asking questions like:

“Can we increase vegetation in our planning across the board?”

“Can we control runoff and impervious surfaces?”

“Can we implement low impact development standards?”

With this information as a baseline, let's take a look at how SWPPPs and EDPs differ specifically.



BMP
Best
Management
Practice

SWPPP
Stormwater
Pollution
Prevention Plan



EDP
Environmental
Development
Plan

SWPPP vs. EDP

SWPPP

- ✓ Designed for compliancy.
- ✓ Typically reviewed by a regulatory agency.
- ✓ Driven by enforcement.
- ✓ Relies on content: site maps, descriptions of activities, erosion and sediment control practices and devices.
- ✓ Inspection and maintenance requirements are spelled out.
- ✓ Record keeping and reporting obligations.
- ✓ Specific but often open to interpretation.
- ✓ Typically project-specific.
- ✓ Often short to medium term.

EDP



Focused on sustainable land use strategies.



Integrates energy and land resource management to reduce long-term environmental footprint.



Voluntary sustainability goals.



Low impact development principles.



Takes into account climate resilience, habitat considerations, changes over time, including weather patterns.



Often applied to an entire community region or multi-project level.



Long-term outlook.

THE END GOAL

While adding in this extra layer may seem like an overly onerous addition to what some perceive as a less than worthy phase of construction, our end goal should be preventing pollution in our waterways and focusing on long-term environmental sustainability. We should always be asking the questions:

- What does the lifecycle of development and land use look like?
- Can we develop around the water source or waterway?
- Would our development impact the water source?
- What does the waterway look like after adding impermeable surfaces?

If the planning is done ahead of time and we've thought through those impacts, we can create balanced sustainability for the future. I think one of the most impactful things to do to remember the difference between a SWPPP and an EDP, is to just remember this statement:

- A SWPPP will keep you compliant today. An EDP will ensure your project remains sustainable tomorrow.

EDPs promote energy efficient design, responsible land use, reduced environmental footprints, low impact development, and water conservation.

A SWPPP
FOCUSES ON

COMPLIANCE
TODAY.

AN EDP ENSURES
YOUR PROJECT
REMAINS
SUSTAINABLE
TOMORROW.



STRIKING A BALANCE

When we consider BMPs, SWPPPs and EDPs together, the question is whether we can find a balance of replacing tools and methods we use today at an equal replenishment rate.

This author says, yes, we can.

In fact, before sustainability was even a word, stormwater professionals were doing exactly that. We recognized that there was a building community. We created regulations that were tied to building through a permitting system from the federal level to a state level to a municipal level. We were sustainable before it was cool.

We were doing these things called stormwater pollution prevention plans, and we were protecting our resources from pollutants. We realized that these pollutants were causing major issues in our waterways, and we are far ahead of many other places in the world.

Are we doing it well enough? Can we continue to do this as the population grows?

The answer is yes, we can do it, as long as we understand the differences between a BMP, SWPPP and an EDP and focus on the appropriate level throughout the process.



According to Worldometer,³ there will be almost 9 Billion people on our planet by 2035.
ARE WE DOING ENOUGH TO PROTECT OUR WATERWAYS?

NEXT STEPS

Ready to Take the Next Step?

If you're ready to learn more about how to begin thinking about EDPs working together with SWPPPs and existing BMPs, then take a minute to download my 2nd part to this series.

Part 2: Updating Tools & Practices to Create More Sustainable Outcomes in Stormwater Protection

In it I cover:

- Taking Responsibility
- Recognizing Emerging & Ongoing Threats to Our Waterways
- How Current BMP standards are Adding to the Threats
- What Manufacturer's are Leading the Way with more sustainable options for BMPs



**Scan the QR Code to Get
Instant Access to Part 2 -or-
[CLICK HERE](#) to go directly to
the Download Page**

Remember that BMPs are tools and processes to use as part of a SWPPP, a SWPPP will keep you compliant today, and an EDP will ensure your project remains sustainable tomorrow.

And if you're not ready . . . just keep in mind

WATER IS A SCARE RESOURCE

**Approximately
2,250
people were born
while you read this.**



WE'RE NOT GETTING MORE WATER.

**THE TIME TO START PLANNING FOR A
MORE SUSTAINABLE FUTURE IS NOW.**

MEET THE EXPERT: JOE MOORE

As an avid outdoorsman with a deep belief in the Clean Water Clean World initiative, Joe actively works to protect waterways while enjoying the outdoor activities he loves. Whether casting a line while fishing, refining his archery skills, or coaching CYO girls' basketball, he brings together his passion for nature and his commitment to sustainability through his professional work and the companies he has founded. His dedication to environmental stewardship and inspiring a love for the outdoors makes Joe Moore a genuine ambassador for the balance between nature and recreation.

Professionally, Joe is the Founder and Chief Brand Ambassador of Erosion and Construction Solutions, which has earned a place on the Inc. Magazine Inc. 5000 list for three consecutive years. He plays an active role in advancing the stormwater community through service on several boards, including the International Erosion Control Association Board of Directors, the Indiana MS4 Partnership Board of Directors as Sponsorship Director, and the Northwest Indiana Stormwater Advisory Group. Joe holds certifications as a CPESC, MS4 CECI, and INDOT CSC. In 2024, he received the Michael Mang Award for leadership in stormwater management and water quality improvement in Indiana as well as his continued support of the Indiana MS4 Partnership. That same year, Joe and the Erosion and Construction Solutions team were honored with a Team Award from the Purdue University Society of Innovators for the development of the BioWorm™ product.

Joe is a highly sought-after speaker at conferences across the country. In 2025, he presented at events such as the International Erosion Control Conference, the Ohio Stormwater Conference, Pay Dirt, and the Quad Cities Stormwater Conference, as well as multiple sessions for Stormwater Week held virtually. He has also delivered numerous other in-person and online presentations throughout the year. Joe's expertise was recently featured in the Third Quarter 2025 issue of Environmental Connection magazine.



REFERENCES

1. EPA Definitions
2. UCLA Sustainability
3. Worldometer projections page