



**Indiana Association for Floodplain and Stormwater Management, Inc.**

115 West Washington Street, Suite 1368 South  
Indianapolis, Indiana 46204  
Tel: (317) 536-6721 Fax: (317) 632-3306

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To whom it may concern:

The Indiana Association for Floodplain and Stormwater Management (INAFSM) wishes to express its concern about certain provisions contained in EPA's proposed "Effluent Limitations Guidelines and Standards (ELGs) for the Construction and Development (C&D) Point Source Category". **Specifically, the INAFSM is opposed to any enforceable, numeric limit for turbidity. We believe the proposed 13 NTUs value is unattainable for most of Indiana based on reasons outlined in this letter. Additional funding will be needed to develop permitting processes, as well as, implement and enforce the proposed ELGs. Unfunded NPDES mandates have already created a tremendous burden on state and local governments and the proposed ELGs would present yet another hardship.**

The INAFSM is the leading resource for floodplain and stormwater management professionals in Indiana and was founded in 1996 by professionals interested in and responsible for floodplain and stormwater management in the State of Indiana. INAFSM members, in excess of 200, include federal, state, and local agency staff, engineers, consultants, planners, elected officials, members of academia, students, and floodplain residents. We are an organization dedicated to promoting sound and effective floodplain and stormwater management and to providing training for floodplain and stormwater managers. Many of our members represent communities regulated by the NPDES MS4 program.

The NPDES Stormwater program has made significant strides towards improving the regulation of discharges from construction sites resulting in improved water quality. As stormwater professionals, we agree that certain professional standards should be maintained in regards to protecting water quality during and after land disturbing activities. The INAFSM supports the use of erosion and sediment control best management practices (BMPs) as well as pollution prevention measures during active and post construction. However, we believe that EPA should also consider and implement alternative approaches in order to enhance existing NPDES program efforts. **We believe that EPA should first "fix what's broken" with the existing program before drastically escalating program coverage to that of mandated, federal ELGs which contain an enforceable, numeric limit.**

**OVERALL PROPOSED ELGs COMMENTS**

- Correct Problems with Existing Regulatory Programs – Over the period of time that EPA has delegated its authority of the NPDES Stormwater Construction program to states and tribal permitting authorities through-out the United States, those entities have been allowed to adopt their

own, local version of what the regulations should include. This has led to nation-wide as well as state-wide INCONSISTENCY of program implementation. The proposed ELGs do not address this issue. The INAFSM believes that EPA should require the following via mechanisms other than the ELGs:

- *Notice of Intent (NOI) submittal which should be reviewed and approved by the permitting authority prior to the start of construction activity;*
- *The submittal and review of a Stormwater Pollution Prevention Plan (SWPPP) which should be reviewed and approved by the permitting authority prior to the start of construction activity;*
- *Permitting authorities to adequately staff and fund their NPDES stormwater programs;*
- *Permitting authorities to conduct and follow up on milestone inspections of active construction sites during the various phases of construction activities; and*
- *Permitting authorities to conduct effective compliance and enforcement of the regulations.*

- Need to Address Construction and Post-construction – The proposed ELGs address construction stormwater runoff only during active construction and do not consider the impacts from post-construction stormwater runoff; but they should address both programs. EPA should help convey the message and demonstrate by example that construction and post-construction practices are very closely linked. Since pre-planning is such a vital component of post-construction, looking at only the active construction phase in isolation does not promote concepts such as Low Impact Development.
- Need to Consider Existing MS4 Construction Programs – During the development of the proposed ELGs, EPA did not consider the significant, positive contribution that MS4 community construction and post-construction programs have had on reducing off-site sedimentation as well as reducing pollutants after sites are stabilized. In Indiana, there are numerous MS4s who have implemented more stringent requirements than those required by Federal and State guidelines. Not only do local authorities have extensive knowledge of sites in their jurisdiction, but also typically have more manpower than at a State and Federal level. MS4s will also typically have a more detailed process that C&D site applicants must work through before their permit is even issued such as reviews by Drainage and other types of Boards that give approvals before construction activities can begin.
- Require MS4 Construction and Post-construction Programs to be at Least as Stringent as Permitting Authority Programs – The federal MS4 regulations do not specify what elements must be included in local construction or post-construction ordinances (or other authority). This creates another problem with state-wide INCONSISTENCY of program implementation. In Indiana, there are numerous MS4s who have implemented more stringent requirements than those required by Federal and State guidelines such as requiring 80% TSS removal for post-construction BMPs. Some MS4s in Indiana are currently reviewing and revising their standards to include requirements for channel protection volume designed BMPs, BMPs to adequately address and remove multiple pollutants, as well as, implementing post-construction BMPs to the maximum extent practicable.
- Individual versus General Permit – Currently, construction sites are mostly regulated by general NPDES permits which include flexibility in establishing BMPs specific to each site. These proposed ELGs would more closely mimic individual permits that might require certified operators, approval for polymer applications (water treatment additives) to surface waters, and strict effluent limits for storm water discharges. Is the intention of this regulation to eliminate the general permit process? Would the implementation of an ELG automatically imply the issuance of an individual permit? If so, the INAFSM believes this would be an unacceptable burden to place upon permittees and IDEM. It appears that EPA is attempting to apply wastewater standards to storm water applications. Outfall testing of a more isolated, separate wastewater

discharge is very different than the testing of a storm water discharge that is composed of runoff from various sources (potentially from on and off-site). EPA needs to consider how and if it is appropriate to apply water quality standards to wet weather discharges since those discharges are very different from those covered under other parts of the NPDES program.

- Sediment Control Measures – The proposed ELGs require that a six foot buffer be established below installed silt fence. This provision would potentially also apply to other erosion and sediment control BMPs so it seems out of place to make it a specific requirement pertaining only silt fence. The INAFSM believes this six foot buffer requirement may be too specific and should not be dictated at the federal level by EPA.
- Pollution Prevention Measures – We have a question regarding the proposed pollution prevention measure; “stormwater runoff would have to be prevented from contacting areas with uncured concrete to minimize changes in stormwater pH”. What is meant by “uncured”? Is there a specific number or range of hours? Please define “uncured”.
- Setting Arbitrary Thresholds – The INAFSM is very concerned that the thresholds of 10 acres, 30 acres, and 13 NTUs seem to be arbitrarily set by EPA and are not based on scientific data. With regard to the 30 acre limit; there will be clever developers that will go to extremes to avoid this threshold of 30 acres. The result of this threshold will be subdivisions that will be broken down into phases of 29 acres each or they will call each 29 acres of the subdivision by a slightly different name and possibly have different LLC’s established for each 29 acre parcel to avoid reaching this threshold. This will create more plans and more reviews for permitting authorities and MS4s while not accomplishing what EPA has intended.

The same thing will happen with the 10 acre threshold. This also increases the incentive for C&D site operators to be deceptive about the acreage of the project. Permitting authorities and MS4s typically do not go out to measure a site to see if it is indeed 10 acres or 30 acres disturbed. This is happening currently with 1 acre projects. Permitting authorities and MS4s have received more 0.9 acre disturbed ground projects than ever before.

## **PROPOSED SEDIMENT BASIN REQUIREMENTS COMMENTS (Part 450, Subpart B(b)(8)(i-v))**

- Need to CLARIFY the 5 proposed SEDIMENT BASIN REQUIREMENTS –  
(8) Since this section indicates 10 or more acres disturbed at one time, we assume this means that even if you had 20 acres draining to an outlet, but only 5 acres was being disturbed for your project, you would not need to install a sediment basin. Also, we assume that if you had 20 acres draining to an outlet and 5 acres was being disturbed now and 5 more acres was being disturbed at a later date, after the original 5 acres was stabilized, you would not need to install a sediment basin. Are these assumptions correct?  
  
(i and ii) Is the storage volume of 3,600 cubic feet per acre for the total watershed area draining to the basin, even off-site area that is not disturbed? Does the additional storage volume of 1,000 cubic feet per acre apply to the disturbed land area only? If you had 10 acres draining to an outlet, and all 10 acres was being disturbed, this would result in a basin a little over 1 acre-foot, which is pretty big (around 53’ x 212’ basin with an average depth of 4 feet, if you comply with the 4:1 length to width ratio). These volumes will be more than is currently used in Indiana guidelines for post-construction detention type BMP sizing. Currently, the post-construction BMP is sized for a water quality volume based on 1” of rainfall. These sections indicate that a basin would be sized for a 2-year storm. If you are going to require a sediment basin to be installed, then additional design criteria is necessary such as details for side slopes, embankment material, compaction, and top-width, as well as, those mentioned above.

(iii) This requirement is the same that Indiana currently uses for both dry and wet ponds. However, there is nothing in this section that talks about short-circuiting. This should be clarified by stating that the discharge into the basin should be at one end and the outlet should be at the other end, or that baffles should be installed to increase the length to width ratio to 4:1, if water is being introduced into the basin at a different location.

(iv) The term “skimmer” should really be clarified to define what this means and what types of devices or practices would be acceptable to EPA. If a skimmer is used to withdraw water from only the top of the water column, how is the basin to dewater so that it can be used again within 72 hours? It seems that some type of outlet will need to be provided at the bottom of the basin to completely dewater the basin for its next use. Clarification also needs to be added to the language to determine if the sediment basin is wet or dry.

(v.) This section seems to imply that analysis, based on the soil types, particle sizes, etc., will have to be completed to determine the dewatering time needed, but that the minimum dewatering time is 72 hours. Currently, Indiana guidance documents use a dewatering time more on the order of 12 to 48 hours for post-construction wet and dry basins. This section does state that the dewatering time could be specified by the permitting authority, but no less than 24 hours. So, generally speaking, the dewatering time seems a little longer than we currently use, but may be generally within the same range. Please clarify.

The INAFSM is very concerned about requiring a 72 hour dewatering time. With multiple rains within a 72 hour timeframe, there will not be enough time for the pond to dewater and the detention volume could essentially be decreased as the pond remains above normal pool. This may lead to requiring oversized ponds or a separate water quality basin and a separate detention basin, which would be an enormous cost burden. The 24 hour timeframe is better, but if EPA goes with 72 hours, this would be extremely difficult for C&D sites to comply with. Does this dewatering time specify a percentage of the water storage volume to remain? What is the percentage? For instance, in Indiana some MS4 communities require after the time of concentration plus 12 hours, there should be 75% of the Water Quality Volume left in the pond minimum. Also, will there be credit given for forebays before a pond or multiple ponds in a series?

INAFSM is concerned that the stringent criteria listed above will lead to narrow and very deep basins with steep slope walls that are a hazard for other reasons including drowning and embankment soil failure. The 72 hour dewatering time increases the chances for failure or overtopping of the basin. Maintenance requirements for the sediment basin are not addressed. Also, the sediment basin requirements do not include any information on how this active construction BMP could be turned into an effective post-construction practice. We believe this should be addressed and clarified.

## **PROPOSED NUMERIC TURBIDITY LIMIT COMMENTS**

- Various Parameters Influencing the Cloudiness of the Water – There are various parameters influencing the cloudiness or turbidity of the water. Some of these include sediments from erosion that occurs from sources other than construction activities, re-suspended sediments from the bottom of receiving waters which are frequently stirred up by bottom feeders like carp, as well as other sources which are not controlled by the construction site operator. Ambient stream turbidity (NTUs) values vary widely depending on time of year, temperature, rainfall, and other factors. Are the NTUs values from discharges from C&D sites to be measured against ambient levels? If so, which levels?

The 13 NTUs value is so low that construction site operators would have difficulty distinguishing

between these various sources if they would happen to exceed the 13 NTUs value. Also, a construction site operator could spend a large amount of money trying to fix and install BMPs and still have a scenario where they cannot meet the NTUs value because of background interference.

Most natural (not under construction disturbance) Indiana Watersheds (both urban and agricultural) would not even meet something an order of magnitude higher (or more) than the 13 NTUs. The INAFSM does not believe there is any way to meet the 13 NTUs value for Indiana soils without utilizing a wastewater treatment plant. The value represents the approximate discharge of wastewater treatment plants discharging to receiving streams with zero flow on 7 day, 10 year (7Q10) levels.

Some areas of the country will be hit harder by this requirement than other areas. Areas such as Allen County, Indiana where there is high clay content soils will have a tougher time getting the clay particles in the stormwater to settle out and not re-suspend than other areas where there are sandy soils. Allen County will be hit with a higher cost burden to get to this 13 NTUs requirement than say Lake County, Indiana where they have sandier soils. This is an unfair requirement that could give some areas cost advantages to do construction and grow economically over other areas.

- Indiana Applicability – The proposed numeric limit for turbidity is applicable to C&D sites that are 30 acres or more in size and in areas of the country that have an annual rainfall erosivity (R) factor of 50 or higher. R factor ranges for Indiana are from a value of 125 to 200. Therefore, most if not all of Indiana will be impacted by the proposed ELGs and again will be hit harder than other areas resulting in an unfair, higher cost burden which will adversely impact economic development in our state.
- Cost of Turbidity Monitoring – INAFSM is very concerned over the costs for turbidity monitoring for local governments (such as MS4s), permitting authorities (such as IDEM), and others who are responsible for compliance and enforcement with the proposed NTUs value as well as the financial burden which would be placed on the construction site operator. On the low end, a hand-held, portable Turbidimeter costs approximately \$800, the Cuvettes needed to hold the samples cost approximately 3 for \$40, and the required Calibration Set costs approximately \$200. If EPA decides it will not allow the use of hand-held monitors because of inaccurate results, then automatic, more sophisticated sampling machines would have to be utilized and the costs would significantly rise. In addition to equipment costs, the additional manpower needed to take samples would represent a significant cost.
- Mandated Use of Active Treatment System (ATS) BMPs – EPA states in the preamble that in order to meet the 13 NTUs value, construction site operators will have to use flocculants and coagulants plus filtration type BMPs. The preamble also includes a discussion of the various ATS and states that “the overuse of polymers may introduce toxicity or cause other adverse effects”. ATS technologies have not been widely used on C&D sites and there are a limited number of vendors for these products. INAFSM is very concerned about potentially requiring BMPs that do not have a “track record” or are not considered to be standard C&D site practices. Also, the position of EPA mandating the use of one type of BMP over another for regulated C&D sites is a radical, dramatic shift in EPA policy. EPA has regulated and is currently regulating C&D sites in its General Construction Permit by giving permittees options on which BMPs to chose since every site is unique.

Polymer assisted solids settling is an extremely sensitive, labor intensive, high-skilled certified operator activity. This operator does not exist currently on construction sites and would require a significant labor expense. Fish kill numbers of a coagulant assistance polymer for single digit parts-per-million (ppm) dosages discharged to receiving waters have been reported to be over

50%. Further, it takes extensive jar testing to match the correct polymer for the application—in this case, soil type. The jar testing can take a week or more, closely working with the supplier, to select products that can cost thousands of dollars per month for routine applications of single digit ppm dosages.

The risk assessment to water quality for failure of proper application of polymer assisted settling on the large number of construction sites in the state of Indiana likely exceeds the possible water quality benefits.

- Need to Clarify Turbidity Monitoring Points – The proposed ELGs are silent on exactly where turbidity samples would have to be taken and the exact location(s) of where the 13 NTUs limit would apply on a C&D site. Is it EPA’s intention to apply the limit to outfalls which would change for pre and post storm sewer/conveyance installation? Would this also apply to fissures, sheet flow, ponds (that may or may not have a discharge), sink holes, or any place on the C&D site where stormwater runs off the site? Do all outfall pipes have to be monitored or just the one(s) discharging to a receiving water (water of the state)? What about an outfall pipe coming from one pond that discharges to another pond? Do both ponds need to be monitored? What if the outfall pipe discharges to an adjacent property before it gets to a receiving water? Does the monitoring need to occur at the discharge point or at the receiving water? These points really need to be clarified. The INAFSM recommends that flexibility is given to State permitting authorities to make these decisions based upon EPA guidance.

Exactly when would the NTUs measurement for turbidity have to be taken? Does it have to be taken during a rain event, right after a rain event, or can it be taken after it hasn’t rained for a determined period of time? This also needs to be clarified.

#### **ADDITIONAL ITEMS TO CONSIDER/RECOMMENDATIONS:**

- The INAFSM supports the findings of the National Research Council’s “Urban Stormwater Management in the United States” (NRC) report. In our opinion, stormwater quality is directly related to stormwater quantity. The proposed ELGs do not appear to adequately address the quantity of stormwater leaving a site during and after construction.
- The NRC report also states that “the federal government should provide more financial support to state and local efforts to regulate stormwater” and the report points out that “the NPDES stormwater program still receives much less funding than the wastewater program despite having many more permittees”. Funding and/or alternatives for States and MS4s must be provided to ensure effective stormwater program implementation.
- The NRC report also recommends that “non-structural BMPs should be considered before structural BMPs because their use reduces the reliance on and need for structural measures”. We believe this recommendation supports the INAFSM position of addressing both active and post-construction BMPs in the ELGs.
- Requiring structural and non-structural BMPs to be designed to adequately protect stream channels and/or receiving streams would also help address the above recommendation.
- We believe that enforceable, numerical turbidity limits are not necessary or practical. Benchmark monitoring or a range of values with goal numbers for passive treatment systems would be adequate and should be considered, or a percentage of turbidity or NTU value. This could be used as a valuable tool which would give C&D sites as well as permitting authorities another method to determine if a site is in compliance and if BMPs are adequately minimizing off-site sedimentation.
- Clarification, guidance, and oversight from EPA will be necessary for the States and MS4s to implement the proposed ELGs and it would help towards improving the manner in which existing regulations are implemented.

The NPDES Stormwater program has benefited Hoosiers for many years. Sedimentation of receiving waters is one of Indiana's most widespread water quality threats, and the requirement of erosion and sediment controls as well as pollution prevention practices for construction activities is an important protection for our citizens and an important mitigation tool for preventing future water quality impairments. INAFSM hopes that any reforms to the construction program would strengthen it not make it unreasonable to comply with. Please do not hesitate to contact Lori Gates at 317-266-8000 or [sw@inafsm.net](mailto:sw@inafsm.net) if we can be of further assistance.

Very truly yours,

Stephen C. Fuchs, CFM  
Executive Board Chair

Lori Gates, CPESC, CPSWQ  
Stormwater Committee Chair