



February 26, 2009

The Honorable Michael Shapiro
Assistant Administrator for Water (Acting)
U.S. Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Mail Code: 4101M
Washington, D.C. 20460

Re: Effluent Limitations Guidelines and Standards for the Construction and Development Point Sources Category, Docket ID No. EPA-HQ-OW-2008-0465, 73 Fed. Reg. 72562 (November 28, 2008).

Dear Mr. Shapiro:

The U.S. Small Business Administration's (SBA) Office of Advocacy (Advocacy) submits the following comments on the Environmental Protection Agency's (EPA) proposed rule regulating stormwater discharges from construction and development sites. EPA has thoughtfully developed several options for consideration, but we respectfully urge the agency not to adopt its preferred option, as proposed. Small firms make up 97.7% of the construction and development industry.¹ EPA's preferred option is extremely costly to small construction firms, provides minimal environmental improvement, and adds thousands of dollars in costs to home prices, exacerbating the housing crisis and the overall economic situation.

We provide our views on two alternate approaches for successfully addressing stormwater discharges at a much more reasonable cost than EPA's preferred approach. In one of our alternate approaches, we modify EPA's preferred approach by allowing passive stormwater measures in addition to the advanced treatment system (ATS) specified by the agency.

Office of Advocacy

Advocacy was established by Congress under Pub. L. 94-305 to represent the views of small entities before federal agencies and Congress. Advocacy is an independent office within SBA, so the views expressed by Advocacy do not necessarily reflect the views of SBA or the Administration.

¹ U.S. Environmental Protection Agency, "Economic Analysis of Proposed Effluent Limitation Guidelines and Standards for the Construction and Development Industry", Table 8-1, Office of Water, November 14, 2008.

The Regulatory Flexibility Act (RFA),² as amended by the Small Business Regulatory Enforcement Fairness Act,³ gives small entities a voice in the rulemaking process. For all rules that are expected to have a significant economic impact on a substantial number of small entities, federal agencies are required by the RFA to assess the impact of the proposed rule on small businesses and to consider less burdensome alternatives.

Moreover, Executive Order 13272⁴ requires federal agencies to notify Advocacy of any proposed rules that are expected to have a significant economic impact on a substantial number of small entities and to give every appropriate consideration to any comments on a proposed or final rule submitted by Advocacy. Further, the agency must include, in any explanation or discussion accompanying publication in the *Federal Register* of a final rule, the agency's response to any written comments submitted by Advocacy on the proposed rule.

Advocacy Comments

A. Introduction

EPA evaluated three options in developing the proposed rule. The first option, Option 1, would establish minimum sizing criteria for sediment basins used at construction sites with 10 or more disturbed acres draining to one location. Under this option, permittees would be required to install sediment basins that provide either 3,600 cubic feet per acre of runoff storage, or be designed to store runoff from the local 2-year, 24-hour storm event. This option also includes requirements for implementing a variety of erosion and sediment controls (ESC) on all construction sites that are required to obtain a permit. This option is built upon the current Federal Construction General Permit, and includes several additional features.

Option 2 maintains the Option 1 requirements, but also incorporates a numeric turbidity limit on stormwater discharges for all storm events up to the local 2-year, 24-hour event for construction sites of 30 or more acres. The agency proposes a limit of 13 nephelometric turbidity units (NTU) for every measurement taken at the site. In Option 2, the turbidity standard would apply only to construction sites where the runoff erosivity factor (R-factor) is greater than or equal to 50 and the site soils contain 10 percent or more, by mass, soil particles smaller than 2 microns in diameter.

Like Option 2, Option 3 maintains the same sediment basin and ESC requirements as Option 1. Unlike Option 2, Option 3 requires that all sites with 10 or more acres of disturbed land, regardless of R-factor or composition of soil particles, meet a numeric turbidity standard for all stormwater discharges for storm events up to the local 2-year, 24-hour event. The table below summarizes each option.

² 5 U.S.C. § 601 et seq.

³ Pub. L. 104-121, Title II, 110 Stat. 857 (1996) (codified in various sections of 5 U.S.C. § 601 et seq.).

⁴ Executive Order No. 13,272, 67 Fed. Reg. 53,461 (Aug. 13, 2002).

	<u>Applicability</u>	<u>Requirements</u>
Option 1	10 or more disturbed acres	Installation of sediment basins ESC
Option 2 <i>(in addition to Option 1)</i>	30 or more acres, R-factor ≥ 50 , Soil contains 10% or more particles smaller than 2 microns in diameter	Numeric turbidity standard
Option 3 <i>(in addition to Option 1)</i>	10 or more disturbed acres	Numeric turbidity standard

EPA has proposed Option 2 as the best available technology economically achievable (BAT), and estimates its annual costs as \$1.89 billion per year with sediment reductions of 2.6 billion pounds per year. With nationwide coverage, Option 3 generally doubles the costs and sediment removed of Option 2. Option 1 costs considerably less at \$132 million per year with 670 million pounds per year removed, according to EPA. The table below summarizes the cost-effectiveness of the options according to EPA (Table XII-1 from the preamble).⁵

Table XII-1--Cost-Effectiveness of Options

	Option 1	Option 2	Option 3
Compliance Cost (millions 2008\$)	\$132.2	\$1,891.0	\$3,796.5
Sediment Removed (million lbs/yr)	670	26,426	50,413
Cost per Pound Removed (\$/lb)	\$0.20	\$0.07	\$0.08

As discussed below, EPA has seriously underestimated the Option 2 costs and much more substantially overestimated the sediment removals. We estimate that thousands or more small construction firms will face substantial economic hardships. After correcting for these errors, we suggest two regulatory alternatives that produce substantial sediment reductions almost identical to the reductions in EPA's preferred Option 2, but without the exorbitantly high compliance costs. Those are Option 1 with some small but significant enhancements (hereafter Enhanced Option 1) and Option 2 with "action levels."

We estimate that Enhanced Option 1 will achieve more than 80% of the true Option 2 reductions at a small fraction of the cost. Enhanced Option 1 allows the states and localities to build on existing programs, at minimum expense, and facilitates the use of low impact development (LID) that is favored in the new National Research Council

⁵ 73 Fed. Reg. 72562, 72597 (November 28, 2008).

(NRC) Report.⁶ The NRC notes, “Several monitoring studies have documented a major reduction in stormwater runoff from development sites that employ ... LID in the United States.”⁷ In addition, NRC states that, “the idea of LID arose to offer a way to achieve actual avoidance or at least minimization of discharge quantity and pollutant increases reaching far above predevelopment levels.”⁸ Although LID falls outside of EPA’s legal authority, state and local LID requirements can provide a better solution to stormwater management than controlling site runoff through treatment. EPA’s ATS-centric approach is at odds with the best current thinking for addressing stormwater pollution, and therefore, should be replaced by strategies that accommodate sound land use planning by state and local authorities.

In order to encourage and facilitate use of LID, we recommend that EPA exclude from this ELG permits that include LID requirements. Those programs may well achieve far more reductions than the proposed ELG or any other form of ELG.

Unlike EPA’s numeric limit approach, Option 2 with “action levels” is the approach used by the several states that have adopted advanced treatment systems as part of their stormwater strategy for construction. We support this alternative. An “action level” does not require the site to achieve any specific numeric limit. Exceeding the “action level” requires the facility to take further action, which could include implementation of additional best management practices (BMPs) to minimize sediment runoff. This action level approach is the approach already used by EPA today for stormwater discharges from industrial sources in the Multi-Sector General Permit (MSGP). EPA requested comments on the action level variation of Option 2.⁹ Like Enhanced Option 1, this approach will also produce very similar sediment removals at a fraction of the Option 2 cost. Using this modification, EPA could maintain its preferred Option 2 approach, promoting new passive measure technologies, as well as the advanced treatment system, while saving considerable resources.

B. The 13 NTU Standard in Option 2 is Not Supported in the Record

The record does not support EPA’s proposed determination that properly operated advanced treatment systems specified in Option 2 can consistently achieve 13 NTU. EPA derived the 13 NTU standard using the methodology for deriving a maximum daily average standard, not the maximum instantaneous standard proposed by EPA. But more importantly, the agency failed to comply with its own procedures for establishing numeric limits applied in previous ELGs. First, EPA failed to determine that the plants were representative of nationwide plants. All of the data are from three states: California, Oregon and Washington. The two vendors chose data from their sites without guidance on representativeness. The vendors may have selected sites with good operating records and low turbidity. Second, EPA did not make any site visits nor

⁶ “Urban Stormwater Management in the United States,” National Research Council, Washington DC: National Academies Press 2009, EPA-HQ-OW-2008-0465-0662.

⁷ Id. at 301.

⁸ EPA-HQ-OW-2008-0465-0662 at 406.

⁹ 73 Fed. Reg. 72562, 72582-83 (November 28, 2008).

perform any of its own sampling. Third, at most of the sites, the agency does not know what equipment was used to treat the stormwater. For example, in most instances, the agency does not know whether a facility used polishing filters to supplement the sand filters to achieve these low turbidity levels.

It is fundamental to the promulgation of an ELG that the agency determine that these plants were properly maintained and operating facilities using the specified equipment, and that these plants were representative of plants nationwide. EPA cannot make the legal finding that the Option 2 numeric limit is achievable by EPA's specified technology without these underlying determinations. This is a very important omission for a rule costing two billion dollars annually, according to the agency's own estimate.

In addition, some of the early comments state that background turbidity in streams during normal flows, not storm events, range between 20 and 100 NTU,¹⁰ well above 13 NTU. Greene County, Missouri finds that storm event discharges from detention basins from undisturbed fully developed land showed a median of 67 NTU,¹¹ also well in excess of 13 NTU. One professional engineer observed that a glass of water at 30 NTU was indistinguishable from a glass of drinking water.¹² These comments collectively question the merits, practicality and feasibility of reducing turbidity to 13 NTU under Option 2.

C. Turbidity is Not the Regulated Pollutant in this Rulemaking; Option 2 Fails the BCT Cost Test and Cannot be Promulgated

Conventional pollutants are subject to BCT ("best conventional technology") controls, while toxic and nonconventional pollutants are subject to BAT ("best available technology") controls. In this proposal, EPA targets turbidity in Option 2 as a "pollutant" of concern in its effort to control sediment discharges from construction sites. However, in this case, it appears that the agency is only regulating turbidity, a nonconventional pollutant, and not TSS, a conventional pollutant, in order to make a BAT finding. This is problematic because: (1) this determination permits EPA to ignore the agency's initial finding that the advanced treatment technology fails the BCT cost test that would otherwise apply to TSS;¹³ and (2) this determination allows for a BAT cost test, providing an inappropriate cost basis to support the ATS numerical limits.

If not for the separate BAT determination, EPA could not legally require permittees to install this expensive equipment under Option 2. The agency is not controlling toxics or nonconventional pollutants here, only sediment, and TSS, a conventional pollutant, is the appropriate parameter for EPA to use. The agency cites the case of *Rybachek v. EPA*, 904 F.2d 1276, 1291-92 (9th Cir. 1990) in support of its position that turbidity is the regulated pollutant in this rulemaking, but Advocacy believes that this case is inapplicable here.¹⁴

¹⁰ See, for example, the City of Bartlett comments, EPA-HQ-OW-2008-0465-0954.

¹¹ EPA-HQ-OW-2008-0465-0970 at 2 (February 19, 2009).

¹² EPA-HQ-OW-2008-0465-0972 at 3 (February 19, 2009).

¹³ 73 Fed. Reg. 72562, 72583 (November 28, 2008).

¹⁴ 73 Fed. Reg. 72562, 72572 (November 28, 2008).

Once the agency reexamines the applicability of the BAT to this rulemaking, EPA will no longer have a legal basis for promulgating the numeric limits in Option 2. In that event, we urge EPA to consider reformulating Option 2 to accommodate an action level reporting system, as deployed by several states today. Alternatively, EPA could adopt an enhanced level of the Option 1 technology, as discussed below.

D. EPA Should Exclude Permits that Include LID Requirements from the ELG

While EPA cannot regulate post-construction activity under the ELG authority, it should not act in any way to discourage states and localities from adopting low impact development (LID) requirements. As the NRC stated in its report, LID requirements are an important tool for minimizing construction sediment discharges. Imposing Option 2 would have the effect of discouraging such investments in LID because governments would be unwilling to ask businesses to bear the costs of both LID post-construction and noncomplementary ELG construction-related requirements.

To address this problem, as mentioned above, we recommend that EPA exclude jurisdictions with effective LID programs from this ELG. In this manner, jurisdictions who have executed the land use planning process and are best able to implement LID measures are able to efficiently deploy LID and other complementary BMP measures to best address construction stormwater issues. The objectives of environmental groups who have promoted LID measures for years will be best accomplished by not allowing the new ELG program to interfere with those goals.

E. EPA Benefits of Option 2 are Vastly Overestimated

EPA has overestimated the baseline sediment discharges due to construction by a factor of about 50. The EPA estimates were developed from a theoretical model using the Revised Universal Soil Loss Equation (RUSLE) equation.¹⁵ This modeling approach required EPA to develop numerous assumptions about construction activities that were not validated against actual processes. In addition, the results of the modeling approach were not evaluated against data from actual construction runoff. While actual baseline sediment discharge data suggests that a value of about 700 mg/L is an appropriate average sediment concentration for the baseline, EPA's modeling approach estimates an average value of more than 32,600 mg/L.¹⁶

The agency itself estimates that construction only constitutes 3.48% of total sediment discharge.¹⁷ Therefore, the overall contribution of construction sites is only 0.08% of

¹⁵ The RUSLE model for estimating soil erosion is described in the EPA Technical Development Document for this rulemaking.

¹⁶ E.H. Pechan & Associates, Inc., "Comparative Analysis of Construction Sediment Loading/Influent and Effluent Discharge Estimates," January 2009.

¹⁷ U.S. Environmental Protection Agency, "Environmental Impact and Benefits Assessment for Proposed Effluent Guidelines and Standards for the Construction and Development Category," November 2008.

total sediment, after this revision. Furthermore, with EPA's inflated sediment discharge values, EPA estimates that Option 2 reduces median TSS by less than 2 percent. This reduction would be even less if EPA properly estimated sediment contributions from construction sites.

F. Thousands of Small Firms Face Significant Economic Impacts Under Option 2

1. EPA Has Understated Construction Firm Impacts

EPA's Economic Analysis for the proposed C&D industry ELG estimates that only 0.5% of construction firms (774 in total) will incur Option 2 compliance costs of at least 1 percent of revenues, and that 33 (<0.0%) of such firms will incur cost-to-revenue impacts of 3% or more.¹⁸ An analysis of the new single-family housing construction sector of the C&D industry performed for Advocacy suggests that the number of firms incurring these impacts is higher by at least a factor of 10.¹⁹ Without addressing the question of whether EPA properly certified the rule under the Regulatory Flexibility Act, it appears clear that EPA underestimated both the costs and economic impact on small firms of this proposed rule. The following sections discuss three of the major analytical flaws that contributed to the large EPA understatement of the cost-to-revenue impacts. This is followed by a summary of the results of Advocacy's cost-to-revenue analysis.

2. EPA Costs of Option 2 are Vastly Underestimated

EPA understates the cost of Option 2 in a number of important ways. First, EPA simply applies a \$0.02/gallon of stormwater treated to estimate the cost for an Advanced Treatment System (ATS). It is not clear whether this cost includes all of the costs associated with an ATS. Advocacy's review of actual vendor bids for ATS treatment determined that the bids documented a number of additional required elements for which costs were excluded (e.g., fuel for operating generators/pumps, freeze protection for equipment, a forklift to transport chitosan). Using an ATS cost modeling approach that was included in EPA's Cost Model as a starting point, URS Corporation developed estimated costs for an itemized list of all required Option 2 cost elements.²⁰ URS generally relied on EPA's itemized cost estimates when they were provided in EPA's Cost Model.

¹⁸ U.S. Environmental Protection Agency, "Economic Analysis of Proposed Effluent Limitation Guidelines and Standards for the Construction and Development Industry," Office of Water, November 14, 2008.

¹⁹ E.H. Pechan & Associates, "Cost-to-Revenue Impacts of Proposed Effluent Limitation Guidelines for the Construction and Development Industry," prepared for the U.S. Small Business Administration, Office of Advocacy, February 2009.

²⁰ It is unclear why EPA abandoned this approach in favor of the \$0.02/treated gallon approach. An engineering firm, URS Corporation, developed alternative costs for comments by the National Association of Home Builders (see footnote 22).

In building its bottom-up Option 2 cost estimates, URS first developed a list of required cost elements that did not appear in EPA's Cost Model. These included, but are not limited to, the following:

- An additional sediment basin volume of 1,000 ft³ to comply with EPA's sediment storage requirements under proposed 40 CFR 450.21(b)(8)(ii);²¹
- At least one skimmer and baffle added to the required sediment basin;²²
- Labor costs associated with supervisory and management labor and for sand filter backwashing;
- Freeze protection for ATS equipment;
- Stabilized pad for the ATS equipment; and
- Forklift rental.

²¹ URS did not include this volume for states with CGP stormwater basin requirements that would cover this additional basin volume.

²² URS included one skimmer and baffle for all medium (10+ acre) construction sites, and one skimmer and baffle for one-half of large (30+ acre) construction sites and two skimmers and baffles for all other large construction sites based on the assumption that 2 ponds would be required for one-half of these sites.

More importantly, while EPA's cost analysis assumed that large residential construction sites would treat stormwater over the course of a 9-month construction project, URS assumed treatment over 18 months. The 18-month estimate reflects the median time between start and end date for residential construction sites of 30+ acres as determined from the permits in EPA's Notice of Intent database.²³ This more representative project duration results in a significant portion of the total increased cost reflected in URS' estimates. The URS cost models are provided in files submitted to EPA as part of National Association of Home Builders' comments on the proposed rule.²⁴

3. EPA Adopts Unrealistic Assumption that Only Firms with Substantial Revenues Are Affected by Option 2

EPA's analysis assumes that all firms with annual revenues below a certain threshold would not be affected by Option 2. This approach is flawed in two very different ways: (1) EPA's calculation of annual firm revenues does not account for construction project durations that significantly exceed one year (as noted above, it is estimated that the median 30+ acre residential construction site is associated with an 18-month duration); and (2) it is quite common for 30+ acre sites to involve multiple construction firms. The residential construction analysis developed for Advocacy adopts a more representative approach that is based on the assumption that total construction site compliance costs are allocated to all firms building on that site (costs are assumed to be allocated to firms in proportion to the acreage of the lots on which they build).

4. EPA's Analytical Approach Masks Impacts

EPA's analysis relies on aggregate data that do not account for the reality that firms build in different markets. That is, residential construction firms may specialize in building high price homes on large lots, while others may build more affordable homes on small lots. EPA's use of average data in its analysis masks the likely impacts of the proposed ELG. Advocacy's analysis utilizes available data on the distribution of new single-family housing units sold by price and lot size category. This information allows for insight into the likely distribution of impacts on firms that work in divergent housing markets. The following section summarizes the Advocacy analysis, which is detailed further in a separate document.²⁵

5. Summary of Advocacy Cost-to-Revenue Analysis

Using Census Bureau home construction/sales data, Advocacy contractor, E.H. Pechan & Associates, Inc. (Pechan) analyzed the cost-to-revenue impacts on new single-family residential construction firms building in six different size classes, reflecting different

²³ EPA-HQ-OW-2008-0465-0290.12 (June 2007).

²⁴ URS Corporation, URS Cost Model, 2009. Modifications of the URS cost methodology are explained in the Pechan analysis cited in footnote 23.

²⁵ E.H. Pechan & Associates, Inc., "Cost-to-Revenue Impacts of Proposed Effluent Limitation Guidelines for the Construction and Development Industry," prepared for the U.S. Small Business Administration, Office of Advocacy, February 2009.

numbers of annual housing starts (e.g., firms with 1 to 4 housing starts). The analysis separately evaluated impacts for detached single-family and attached single-family dwellings. Within each firm size/housing type category, Pechan developed Option 2 cost-to-revenue estimates for 45 combinations of lot size and housing price. Cost-to-revenue estimates were calculated for firms building homes with lot sizes below 7,000 square feet and sales prices less than \$125,000 at the one extreme, to homes with lot sizes above 22,000 square feet and sales prices greater than \$750,000 at the other extreme. Pechan used Census data on the number of homes sold in each of the 45 lot size/housing price combinations to reflect the actual distribution of new single-family residential construction activity.

The results of the analysis indicate that thousands of establishments will incur costs under Option 2 that are greater than 3% percent of revenues. More specifically, approximately 7,800 establishments are projected to incur costs that are at least 1% of revenues from Option 2. Furthermore, approximately 1,800 establishments are estimated to incur costs of at least 3% of revenues under this option. Because the Advocacy analysis was limited to new single-family residential construction due to data constraints, it is likely that many more establishments in other construction sectors – including multifamily housing construction within the residential construction sector – would incur similar impacts from EPA’s proposed regulation. Pechan estimates that 97% of these strongly affected firms are small businesses. The Pechan analysis contrasts with EPA’s estimates that only 0.5% of all C&D industry firms (774 in total) will incur Option 2 compliance costs of at least 1 percent of revenues, and that less than 0.0% (33) of such firms will incur cost-to-revenue impacts of 3% or more.²⁶

G. Option 2 is Not BAT Because Toxicity Concerns Are Not Yet Resolved

Option 2 should not be chosen because of continuing concern about the capability of contractors to protect fish and aquatic organisms from toxicity associated with the addition of treatment chemicals to water. Some fish species (e.g. trout) are very sensitive to adverse effects from these polymers.

EPA quotes the 2008 draft California fact sheet for construction permits:

“We are concerned about the potential acute and chronic impacts that the polymers and other chemical additives may have on fish and aquatic organisms if released in sufficient quantities or concentrations. In addition to anecdotal evidence of polymer releases causing aquatic toxicity in California, the literature supports this concern.”²⁷

The state of Washington required vendors of ATS technologies to obtain state approval to ensure that the aquatic organisms could be safe. However, even the best laid plans can go astray. Untrained personnel or system upsets could result in toxic spills, for example.

²⁶ U.S. Environmental Protection Agency, “Economic Analysis of Proposed Effluent Limitation Guidelines and Standards for the Construction and Development Industry,” Office of Water, November 14, 2008.

²⁷ 73 Fed. Reg. 72562, 72573 (November 28, 2008).

EPA should not put in place a technology that will cause more adverse environmental effects than the problem it is addressing, and Option 2 raises that possibility. There is difficulty determining how much treatment chemical needs to be added, and this needs to be carefully calibrated by on site personnel. If the personnel is not on the site at the relevant time or untrained personnel make errors, adverse effects can occur.

Given the very small number of projects with advanced treatment to date, it is not surprising that this has not yet been reported to EPA. However, EPA doesn't need to look far for such reports. In one of the first public comments filed in this docket, Brash Industries of Marina del Rey, California, quotes a letter from the Central Valley Regional Quality Control Board, as far back as 2004, finding that such chemical additives "have created significant environmental harm and resulted in enforcement actions by the California Department of Fish and Game and the Central Valley Regional Water Quality Control Board."²⁸ It is only a matter of time before more such problems arise and multiply if Option 2 is promulgated by EPA. It is not at all clear that this technology has been demonstrated to be safe, and therefore, we question the basis of EPA's determination that the advanced treatment system is "best available technology" on the basis of toxicity concerns. We would tend to agree with Tippecanoe County, Indiana that the risk to water quality for failure to apply the polymer properly at a large number of construction sites in the state of Indiana likely exceeds the possible water quality benefits.²⁹

H. States Have Uniformly Rejected Numeric Effluent Limits for Construction Stormwater

Several states have expended considerable resources to develop advanced stormwater programs and have examined advanced treatment systems and the use of numeric standards for turbidity. These knowledgeable states have all rejected numeric turbidity standards in favor of the action level or benchmark approach. This approach emphasizes the role of properly designed and implemented BMPs. In the majority of the programs, an exceedance of pre-set turbidity limits triggers the review and inspection of current BMPs and/or the installation of additional BMPs to reduce turbidity. Only after a second exceedance is it necessary to notify State agencies for further action. These states include Washington, Georgia, Oregon and Vermont. In light of the contrary judgment reached by the four states that have examined this issue, EPA's course of action does not seem to be supported.

I. Passive Measures Cannot Achieve A Relatively Low Effluent Limit; Option 2 with Action Limits Can Be Achieved

In addition to the ATS-based regulatory option proposed by EPA, EPA requested comment on setting a turbidity limit in the range of 50 to 150 NTUs (or some other

²⁸ EPA-HQ-OW-2008-0465-0973 at page 4 (February 20, 2008).

²⁹ EPA-HQ-OW-2008-0465-0979 at page 6.

number) based on passive treatment, instead of ATS. As EPA states in the preamble of the proposal:

EPA has identified information that indicates that a limit in the range of 50–150 NTUs might be met by relying on passive, rather than active, treatment systems. Passive treatment systems consist of a number of techniques that do not rely on pumping of stormwater or mechanical filtration and that are not as complex, do not cost as much and do not utilize as much energy as ATS. Data in the literature indicate that passive systems may be able to provide a high level of turbidity reduction at a significantly lower cost than active treatment systems (73 FR 72562, November 28, 2008, at page 72580).

EPA then goes on to cite a few studies to support the above assertions including studies by R.A. McLaughlin (EPA-HQ-OW-2008-0465-0393) and the Auckland Regional Council (EPA-HQ-OW-2008-0465-0612). A review of these studies indicates that neither one supports use of passive treatment measures to achieve a particular turbidity standard, and in each case, the limited circumstances in which each achieved relatively low turbidity values indicates that passive measures cannot be relied upon to achieve standards in the multitude of rainfall, soil type, and other site-specific conditions under which construction takes place.

The McLaughlin study consisted of simulated experiments that did not vary many of the parameters that greatly affect stormwater treatment system effectiveness (e.g., soil type, rain event characteristics). Therefore, the McLaughlin study, which did not address the issue of achieving turbidity limits under real world conditions, does not provide sufficient evidence that passive treatment measures can consistently achieve a reasonably low turbidity level such as the 50 to 150 NTU levels identified in EPA's proposal.

The purpose of the Auckland Regional Council (ARC) study was to evaluate whether passive flocculation is a stormwater treatment practice that the ARC should adopt as a best management practice. Although the study did not address the possibility of achieving a turbidity limit via passive treatment systems, study results provide more evidence that such an approach is unworkable with respect to the low limits cited in EPA's proposal. While concluding that passive treatment systems using liquid polymers can result in significant reductions in suspended sediment concentrations, the ARC study reported post-treatment effluent suspended solids concentrations ranging from 3 to 966 mg/L. Such widely varying effluent levels indicate the difficulty in achieving a turbidity standard given the wide variability of stormwater/site conditions that affect influent concentrations/treatment system effectiveness. Although not cited in EPA's preamble for the proposal, a related ARC study ("Performance of a Sediment Retention Pond Receiving Chemical Treatment"), which was developed as a follow-up to the initial study, provides further evidence that a turbidity limit based on passive treatment is unworkable. This study found that passive treatment with flocculants resulted in suspended solids measurements that varied by more than a factor of 10 over the seven rain events that were monitored (from <10 mg/L to >11,000 mg/L).

J. EPA Should Adopt Either Enhanced Option 1 or Option 2 with Action Levels for the Final ELG

1. Enhanced Option 1 Can Effectively Address Stormwater Discharges

EPA has already designed an effective Option 1 based on the current Construction General Permit, and added several additional features, such as an outlet device to skim off the water, specific dimensional requirements for sediment ponds, and a requirement to stabilize the sites more quickly. As others such as NAHB have recommended, this option can be further enhanced by adding a specific requirement for limiting slope lengths, requiring a qualified erosion and sediment control person to certify the stormwater management plan, and a certified ESC person to inspect the site periodically.

We know from the previous examination of the C&D issue in 2004 that the most important impediment to good pollution control facing construction sites is the implementation and maintenance of appropriate BMP measures. The addition of the qualified personnel requirements should add substantially to the benefits of this Enhanced Option 1. We urge EPA to strongly consider these Option 1 improvements as part of a new Option 1. As discussed elsewhere, even the current Option 1 achieves virtually the same benefits as EPA's Option 2 for much less resources. Adding additional "enhancements" to Option 1 makes Enhanced Option 1 a sound choice for a final rule.³⁰

2. Option 2 with Action Levels Can Effectively Address Stormwater Discharges

Option 2 with action levels provides a similar level of benefits to the Enhanced Option 1. This has the advantage of promoting new passive measure technologies and the advanced treatment system, and provides considerable more flexibility than the current Option 2. Most importantly, this version of Option 2 is economically and technically achievable. Furthermore, the numeric limit of 13 NTU or any alternative limit of between 50 and 150 NTU is not supported in the record, as discussed in detail below.

3. Costs Outweigh the Benefits Costs of Option 2: EPA Should Either Adopt Option 2 with Action Levels or Enhanced Option 1

The cost of Option 2, according to EPA, is \$1.9 billion annually. The URS estimate, using what we believe to be more realistic assumptions, is \$6.9 billion annually, a factor of 3.6 more. This rule is by far, in our experience, the most expensive ELG ever unveiled in the history of EPA rulemaking. Yet, despite these enormous costs, to be imposed at this time of great economic turmoil, the expected benefits, even by EPA's own estimate is \$333 million, well under EPA's estimated costs and even further below our estimated costs.

³⁰ We don't expect these enhancements to add significantly to the overall Option 1 costs.

Under Executive Order 12866, EPA is directed to choose among the cost-effective legal alternatives. Here EPA has two viable alternatives: the Enhanced Option 1 or Option 2 with action levels.³¹

K. Option 3 Should be Rejected Summarily

We have explained above why Option 2 should be rejected by the agency. Option 3 is worse: it doubles the considerable costs of Option 2 by applying Option 2 technology across the entire country, with little additional benefit. Despite its other flaws, at least Option 2 is specifically restricted to areas of the country where it is more likely to provide some benefit: areas of the country with high clay soil content and adequate rainfall.

EPA's preamble points out the disadvantages of Option 3.³² Permittees would run the risk of not installing the equipment but then may discharge water in excess of the limits when surprised by unexpected rainfall. Alternatively, contractors would spend the money on equipment that receives "little or no use."³³ Furthermore, there is considerable uncertainty and concern about the availability of advanced treatment systems and trained personnel under Option 2. ATS systems are very rarely deployed in the United States today – and EPA proposes to cover more than 8 thousand 30 acre+ projects annually in Option 2. Option 3 doubles that needed capacity. "Option 3 means that substantial numbers of active treatment systems would need to be manufactured and mobilized, along with sizeable levels of vendor support, in a relatively short period of time as NPDES permits incorporating the ELGs and NSPS are issued."³⁴ EPA itself makes a strong case for how Option 3 is very inferior to Option 2. At a minimum, to the extent EPA considers the advanced treatment system a worthwhile technology, Option 2 is as far as EPA should go.

L. Conclusion

Advocacy estimates that the EPA proposal is likely to cost between 2 and 7 billion dollars annually, with water quality benefits that are certainly not commensurate with the huge expenditure. States that have examined this issue have uniformly rejected numeric limits. Given the current economic crisis, this is not a good a time to institute new, costly technology requirements on small firms that yield uncertain water quality benefits, and are potentially harmful to the environment.

³¹ As explained herein, since there is no evidence to support any numeric standard, the current Option 2 has no legal basis.

³² 73 Fed. Reg. 72562, 72577 (November 28, 2008).

³³ Id.

³⁴ Id.

We present two solid regulatory alternatives for the agency's consideration, and look forward to working with EPA on the formulation of the final rule. Thank you for the opportunity to comment on this proposed rule. Please feel free to contact me or Kevin Bromberg at (202) 205-6964 (or Kevin.Bromberg@sba.gov) if you have any questions or require any additional information.

Sincerely,

/s/

Shawne C. McGibbon
Acting Chief Counsel for Advocacy

/s/

Kevin Bromberg
Assistant Chief Counsel for Advocacy

cc: Kevin Neyland, Acting Administrator
Office of Information and Regulatory Affairs
Office of Management and Budget

Attachments: E.H. Pechan & Associates, Inc., "Cost-to-Revenue Impacts of Proposed Effluent Limitation Guidelines for the Construction and Development Industry," prepared for the U.S. Small Business Administration, Office of Advocacy, February 2009

E.H. Pechan & Associates, Inc., "Comparative Analysis of Construction Sediment Loading/Influent and Effluent Discharge Estimates," January 2009