

# **Fact Sheets: Priority Problems & Recommendations on NYS Brownfield & Superfund Draft Regulations**

This packet of five fact sheets provides a critical analysis and priority recommendations to improve the Department of Environmental Conservation's (DEC) draft regulations on the Brownfield and Superfund cleanup programs. **We hope you will testify at the March public hearings, or send written comments to DEC by March 27th** (see reverse for details). You can "cut and paste" from these fact sheets to create your testimony or written comments.

## **1) Unsafe Soil Cleanup Standards**

The proposed standards do not protect public health and the environment as required by law. They would not protect groundwater, fish and wildlife at many sites. The standards do not protect children, workers, sensitive populations and surface water; and ignore toxic indoor air and exposure to chemical mixtures at a site.

## **2) Weakened Cleanup Requirements**

The law's preference for safe, permanent site cleanups is seriously undermined. For instance, the "unrestricted" permanent cleanup category would result in sites that are not safe for farming; and there is no way to stop future residents from farming. A new cleanup category not authorized by the law would require unrealistic "garden police" to stop residents from growing vegetables in unsafe soil. Polluted background soil levels can be used to "legitimize" contamination and halt cleanups at some sites. And Superfund's cleanup goal is weakened, in violation of the law, by including land use considerations in selecting the cleanup remedy.

## **3) Weakened Off-Site Testing & Cleanup Requirements**

Even though the law requires comprehensive off-site investigations and cleanups to protect adjacent residents, the regulations are weak or unclear on the scope and content of investigations, and are totally silent on the state's critical role in facilitating off-site cleanups in a timely manner.

## **4) Will Site Engineering & Institutional Controls Be Reliable?**

The regulations do not specify how site owners will ensure the long term reliability and viability of any engineering controls (fences, pavement covers, etc.) or institutional controls (drinking water prohibitions, etc.) that are used, as required by law.

## **5) Diluted Citizen Participation Goals**

The regulations do not include the law's important goals on citizen involvement, and the DEC recently rescinded a valuable handbook providing detailed guidance on public participation. Site contact lists do not include adjacent property owners and environmental and community groups. The DEC will not make the lists of Brownfield and Superfund sites fully accessible to the public with written copies in DEC or county offices. To help stop toxic exposures, warning signs should be posted at contaminated sites, a DEC practice that has been largely phased out.

***See reverse for information on hearings and to submit comments.***

# Speak out and show your support for safe, protective cleanup standards!

## Testify at DEC Public Hearings on Brownfield Cleanup Regulations

The NY Department of Environmental Conservation (DEC) is requesting comments on draft regulations for cleaning up brownfields and Superfund toxic waste sites. **These regulations will set the standard for toxic waste cleanups in New York for years to come!** DEC's proposed regulations would allow too much toxic waste to stay on site, putting our health, drinking water, and environment at risk.

### **Attend DEC March Hearings**

*Please speak out for safe and protective soil cleanup standards by testifying.*

**March 6**, 1:00 PM, CUNY Graduate Center, Recital Hall, 365 5th Ave., **Manhattan**

**March 9**, 1:00 PM, Monroe Community College, Brighton Campus, R. Thomas Flynn Campus Center, Building 3, 1000 E. Henrietta Road, **Rochester**

**March 15**, 1:00 PM, DEC, 625 Broadway, Room 129A&B, **Albany**

### **Submit Written Comments**

If you can't testify at a hearing, **please send written comments by March 27th** to:

Robert Schick  
DEC, Division of Environmental Remediation  
625 Broadway  
Albany, NY 12233-7014  
or email to [derweb@gw.dec.state.ny.us](mailto:derweb@gw.dec.state.ny.us)

You can get the draft regulations at [www.dec.state.ny.us/website/der/superfund](http://www.dec.state.ny.us/website/der/superfund).

New York's brownfield cleanup program created by a 2003 state law provides substantial financial assistance to site owners and developers to conduct protective cleanups of known or suspected contaminated sites, known as brownfields. The level of cleanup is based on the future use of the site (e.g. residential, commercial or industrial).

*But the regulations disregard the clear directive of the law, which requires soil standards that protect people, especially children, as well as drinking water, rivers and streams, and fish and wildlife. Instead, DEC's proposed cleanup standards would allow unsafe levels of toxic chemicals to remain at sites.*

### **For more information, contact:**

Citizens' Environmental Coalition (CEC), Bobbi Chase Wilding, 518-462-5527  
Environmental Advocates of New York (EANY), Tim Sweeney, 518-462-5526  
NYC Environmental Justice Alliance (NYCEJA), ShaKing Alston, 212-239-8882  
NYPIRG, Laura Haight, 518-436-0876 x258; Joel Kelsey, 212-349-6460; Melinda Sobin, 315-423-4404  
Sierra Club Atlantic Chapter, John Stouffer, 518-426-9144  
Center for Health, Environment & Justice (CHEJ), Anne Rabe, 518-732-4538

# Fact Sheet #1: Proposed Brownfield Soil Cleanup Standards Don't Protect Children, Groundwater or Natural Resources

The Brownfields law requires the development of soil cleanup standards that protect our health and environment, specifically including: groundwater, drinking water, surface water and air (including indoor air); sensitive populations, including children; and ecological resources, including fish and wildlife. The law calls for the development of three standards for different future uses: unrestricted, restricted commercial, and restricted industrial. The cleanup standards differ based on who will be on the site, how they will use it and how frequently they will use it. The proposed soil cleanup standards fail to meet these requirements on a number of levels.

**We urge you to raise these problems and call for the solutions when you testify at the hearings.**

## **Standards Must Protect Health AND the Environment as Required by Law**

**Problem:** The law required DEC to establish three land-use based soil standards – unrestricted, commercial and industrial – which would protect both human health and the environment (water and ecological resources including fish and wildlife). The agency ignored this and instead set up six categories of soil standards - which either protect health OR water OR ecological resources. They are:

- Unrestricted human health and groundwater
- Ecological Resources (applied when the DEC determines ecological resources are on the site.)
- Restricted residential human health
- Restricted commercial human health
- Restricted industrial human health
- Restricted Groundwater (applied when DEC determines groundwater must be protected)

For instance, the draft regulations have 6 different soil cleanup standards for lead, known to harm brain development and function:

Chemical	Track 1 – Unrestricted		Track 2 – Restricted			
	Public Health	Ecological Resources	Restricted-Residential	Restricted-Commercial	Restricted-Industrial	Groundwater
Lead	400	63	400	1,000	<b>3,900</b>	450

*All numbers are in parts per million, or milligrams (mg) of lead per kilogram (kg) of soil*

The restricted residential, commercial and industrial categories are health-based soil standards that do NOT protect drinking water, fish and wildlife – and DEC says these standards will be used at most sites. DEC will only require cleanup standards that protect groundwater if it is currently being used for drinking.

Nowhere in the more than 1,000 pages of regulations and “technical support documents” does DEC acknowledge that the standards are required to protect all of the resources listed above, let alone explain how the proposed restricted categories would do so. Those standards only consider direct human exposure to contaminated soil, such as inhaling or ingesting dust. They are not protective of groundwater, ecological resources, surface water or exposures to contaminated indoor air.

**Solution:** DEC needs to completely redo the land use-based standards to ensure that all three of them are protective of groundwater, surface water, ecological resources and indoor air. Also, the regulations must directly state that all soil standards are required by law to protect such resources, and should include the criteria and cleanup goals outlined in the law.

## ***The “Unrestricted Use” Category Must Be Completely Unrestricted***

**Problem:** The law created an “unrestricted” use category so that its stated preference for permanent remedies – safe for any use without needing any future monitoring – could be put in place through tax incentives and encouragement from state agencies and the public when developers are selecting the type of cleanup they’ll do. The draft regulations threaten this preference for permanence by failing to create a truly permanent unrestricted category.

DEC would prohibit any brownfield site – even in the supposedly permanent, unrestricted category – from having a farm on it in the future. If people might eat meat, milk or eggs from animals raised on a former brownfield, the levels of toxic chemicals left behind would have to be lower (more protective) than those proposed. But since “unrestricted” sites won’t have warnings added to the property deed or be monitored by DEC, no one will know that such a site isn’t safe for raising livestock.

In addition, DEC developed two soil standards for unrestricted sites: one for protecting human health and groundwater, the other for protection of ecological resources. Further, analysis by researchers at Cornell University shows that DEC and DOH underestimate exposure to some toxic chemicals from food grown in gardens on unrestricted sites.

**Solution:** DEC should remove the farm exemption & develop soil cleanup standards for a truly unrestricted use category.

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## ***Standards Must Protect Children, Workers & Other Sensitive Populations***

**Problem:** The standards are required to consider sensitive populations, but they do not adequately protect them:

- **Children are more susceptible to cancer-causing agents.** The U.S. EPA has developed a guidance to address this risk and requires new assessments to use as much as a 10-fold protective factor in developing risk-based standards (divide the number by 10).<sup>1</sup> The draft standards don’t do this.
- **The DEC’s assessments of exposure for children are underestimates,** based on the indoor and outdoor exposure estimates. Nearly 50% of indoor dust is made up of outdoor soil. The exposure estimates are not conservative enough to protect the majority of children. Mt. Sinai School of Medicine researchers found that considerations of the acute toxicity from soil ingestion by children only took place for a miniscule proportion of the priority chemicals and using an inadequate exposure assessment.
- **DEC’s assessment of exposure for children and workers is too low.** Children play outside more than DEC estimates and workers are on a site for more hours than DEC assumes to develop their standards.
- **Laborers, like groundskeepers and construction crews, breathe more than more sedentary workers.** This means they can be exposed to almost twice as much contaminated dust as other workers. DEC ignores this as a factor for commercial and industrial use categories.
- **Pregnant women in the workplace are more at risk** as they can pass toxic exposures on to their babies.
- **Subsistence fishers are already more exposed to toxic chemicals.** DEC’s cleanup standards assume that 80% of people’s exposure comes from toxic chemicals other than the brownfield site. This works for many people, but the “sensitive” population of subsistence fishers in urban areas have already been more exposed – possibly at levels that can already harm their health.

**Solution:** DEC must redo the standards to account for sensitive pathways in each land use category.

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<sup>1</sup> [cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=116283](http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=116283)

## ***Standards Must Protect Indoor Air***

**Problem:** In developing the soil cleanup standards, DEC did not factor in the likelihood of residual contamination at a cleaned up site causing “vapor intrusion” – the movement of toxic chemicals in dirt and groundwater through soil into our homes, where they are inhaled and can make people sick. DEC is currently re-evaluating old cleanups to check for this problem. Analysis from researchers at Cornell University found that if vapor intrusion is included as a potential pathway of exposure, soil cleanup numbers for some chemicals might have to be as much as 10 to 100 times more protective<sup>2</sup>.

**Solution:** DEC must redo the soil cleanup standards so that they do not pose a threat of toxic vapor intrusion.

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## ***Standards Must Address Mixtures of Toxic Chemicals***

**Problem:** Most sites have more than one chemical present, but the standards don’t fully address the total exposure to these chemicals at the same time. If the Departments of Environmental Conservation and Health (DEC and DOH) looked at how chemicals often found together at Brownfield sites affect us (as required by law), they would need to set lower standards for some chemicals to make sure that the safety levels set in the law are met. For example, when more than one chemical that causes liver damage are on a site, the standard for each must be lower to make sure that the whole site does not pose an unsafe risk of liver damage.

**Solution:** DEC must revise the soil cleanup standards to protect us the combinations of chemicals found at sites that cause the same health problems and to insure that the total cancer risk from a site is less than one in one million, as specified by law.

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## ***Standards Must Protect ‘Ecological Resources’***

**Problem:** DEC’s draft standards don’t live up to the law’s requirement of all categories protecting fish and wildlife, as well as aquatic resources like lakes and streams and groundwater.

- **They don’t protect surface water or fish.** The law requires both the remedial program and the soil standards to protect surface water and fish. However, DEC and DOH’s calculations for soil cleanup standards don’t include protections for fish or lakes and streams directly affected. Instead, they treat streams and rivers as “off site.” This means that instead of making sure the cleanup standards protect fish and aquatic resources, DEC expects developers to keep any residual contamination after the “cleanup” away from water by using drains, landscaping, and other barriers. This directly contradicts the law.
- **They may not protect groundwater.** At commercial and industrial sites, which allow more chemicals to remain, paving could actually speed up groundwater contamination because more water will be forced quickly through soil from runoff at edges of or cracks in parking lots. It could reduce the time it takes for chemicals to reach groundwater, which means sites that don’t affect groundwater now could in the future. For example, Cornell University researchers estimate that under normal conditions it would take about 15 years for vinyl chloride (known to cause cancer at very low levels) to travel through fine soil to a deep groundwater aquifer (the most conservative estimate). Concentrated runoff could reduce travel time to as little as 7 or 8 months. For shallow, coarse soils, the chemical could reach groundwater in as little as a month and a half.
- **DEC has severely limited when “ecological resources” would be found at a site** by defining it narrowly around the contamination. Therefore, even if most of a site might be used by wildlife to graze, DEC could limit the “brownfield site” to a narrow section, allowing higher amounts of contamination.
- **The soil cleanup standards to protect “ecological resources” may still be too dirty for some**

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<sup>2</sup> Hay, Andrew, 2006. Analysis will be submitted to DEC and is available at [www.eectoxic.org/brownfields](http://www.eectoxic.org/brownfields).

**plants to survive**, or may lead to animals getting sick from eating plants at the site. For example, the standards may allow too much cadmium and chromium to remain on sites cleaned up – even under the ecological resources category.

**Solution:** DEC and DOH must go back to the drawing board and redo the cleanup standards so remaining contaminants don't harm fish, wildlife and both surface and ground water.

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## ***DEC Must Make Protective Assumptions About Exposure & Toxicity***

**Problem:** DEC and DOH make assumptions that do not lead to cleanup standards that are protective enough.

- Some chemical standards are based on the levels found in DOH's NYS study of "background" levels of toxic chemicals in rural areas, but are those levels accurate? Analysis by experts at Cornell University shows that some of the toxic chemical "background" levels are 5 to 10 times higher than other studies of rural sites in NYS. In addition, DOH may have tested rural contaminated areas. Environmental groups have been unable to obtain the test results and locations from the agency.
- The law directs DEC to look at past cleanups done under the existing voluntary cleanup or Superfund programs, and lower the standard – make it more protective – if a lower level was achieved at sites in the past and is therefore feasible. There is no evidence DEC did this, based on our comparison of agency internal memos summarizing past Superfund site cleanup levels and the proposed cleanup standards.
- DEC did not consider acute toxicity in adults.
- Despite direct requirements in the law, DEC does not address the possible health risks from contaminated dirt blowing into next door neighbors' homes or onto their yards. There are many examples of brownfields that are redeveloped for commercial or industrial uses and are located next to residential neighborhoods. DEC needs to assume that there will be off-site transfer of soil after the cleanup is conducted, and incorporate this into their standards.
- The standards may be based on outdated health information. A literature review conducted by Mt. Sinai School of Medicine researchers found many more recent health studies for some chemicals.

**Solution:** DEC must develop soil cleanup standards that meet all the requirements of the law.

## Fact Sheet #2: Improvements Needed to Uphold Brownfield Law's Preference for Complete & Permanent Site Cleanups

The Brownfield law clearly states that “*all* remedies must be protective of public health and the environment including but not limited to groundwater...; drinking water, surface water and air (including indoor air); sensitive populations, including children; and ecological resources, including fish and wildlife.”<sup>i</sup> The law sets up a hierarchy of cleanups, with a preference for permanent cleanups that do not rely on institutional or engineering controls to reduce toxic exposures. But the draft regulations distort the remedial goal, stating that cleanups shall protect public health “*and/or*” the environment.<sup>ii</sup>

The regulations fall short of the law in three key ways:

### ***Brownfield Cleanup Standards are Not Protective Enough***

The Department of Environmental Conservation (DEC) proposes a mixture of soil cleanup standards that would protect *either* public health *or* ecological resources *or* groundwater, instead of all three as the law requires. DEC staff say that in most cases, they will *not* apply the more stringent soil cleanup standards designed to protect water and ecological resources, *even if the site is right next to a river or stream*. Instead they will mostly use the “protection of human health” standards, which would leave far more contamination on-site than the standards to protect groundwater and ecological resources.

Moreover, the DEC ignored the law and developed soil standards that do not protect surface water or aquatic life, nor do they protect against “toxic vapor intrusion” – i.e. chemical vapors passing through soil into basements. Even the most protective “unrestricted use” cleanup category does not meet the remedial goals because the health-based soil standards are not protective enough. (*For more information, see Soil Standards fact sheet.*)

To match the law’s directive that soil cleanup objectives “shall be protective of public health and the environment,” cleanup standards for each land use category should protect health, water *and* ecological resources.<sup>iii</sup>

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### ***The Law’s Preference for Permanent Cleanups is Undermined***

The Brownfield law includes an explicit preference for “a remedial program that achieves a **complete and permanent cleanup** of the site.”<sup>iv</sup> The law sets up four clean-up “tracks” for contaminated brownfield sites, with “Track 1” being the most protective, resulting in a permanent cleanup allowing unrestricted use, and “Track 4” being the opposite end of the spectrum, leaving the most contamination on site and relying on engineering controls to limit exposure (for example, paving over polluted soil). (For Track Cleanup descriptions, see chart below.) The law provides financial incentives to encourage developers to select the most protective cleanups by providing the highest tax credits and other financial assistance for Track 1 “Unrestricted Use” cleanups, and the next highest for Track 2 “Restricted Use” cleanups. **But the draft regulations do not favor permanent cleanups!**

Important changes are needed in the regulations to meet the law’s remedial goals:

- **Remove the farm exemption for unrestricted cleanups.** Track 1 cleanups are no longer truly unrestricted, because the proposed cleanup standards would not make the sites clean enough to be safe for farming. The whole point of unrestricted cleanups is that these sites would be completely cleaned up, so they could be safe for *any* use. And, there is no way to guarantee that a site won’t be used for farming in the future.
- **Remove the “restricted residential” category.** The draft regulations create a new Track 2 restricted use category not anticipated in the law: “restricted residential.” This category allows more pollution to be left on site under the premise that vegetable gardening can somehow be prevented or controlled at apartment complexes or any other multiunit dwellings. It is unrealistic to expect that the DEC or local agencies would have the staff resources to enforce this provision. The “restricted use” category also includes day care centers, hospitals, nursing homes, schools and playgrounds. This category could expose our most sensitive and vulnerable populations, whom the law is supposed to protect, to unsafe levels of soil contamination.
- **Require Track 2 (restricted use) soil cleanups to protect human health, groundwater, and ecological resources, without relying on barriers to reduce exposure.** The Track 2 soil standards are in some cases dangerously high, particularly for industrial sites. This puts workers, adjacent residences, and

drinking water supplies at risk. Instead of protecting groundwater, as the law requires,<sup>v</sup> the DEC relies heavily on groundwater use restrictions and engineering controls, rather than requiring a soil cleanup level that would protect and restore groundwater quality. As a result, the proposed industrial “clean soil” standards are so high that they are likely to pose a long-term or permanent threat to groundwater and many approach the agency’s definition of “grossly contaminated soil.” Under the draft regulations, Track 2 cleanups are no better than Track 4 cleanups, except with 15 feet of “clean” soil rather than just the top 1-2 feet.

**Eliminate the use of polluted background soil levels for determining the extent of Track 4 cleanups.**

By law, Track 4 cleanups require only toxic source removal and a cleanup of the top 1-2 feet of soil. This is weakened even further in the draft regulations, which would only require exposed soils to be cleaned up if polluted soils *exceed the site’s “background levels” for contaminants*. Historically, “site background” is calculated based on the neighborhood surrounding a site. Therefore, surface soils in a neighborhood polluted by industrial facility emissions for instance, would not be cleaned up to protective levels. This disturbing change, which the statute explicitly prohibits, would legitimize leaving highly polluted exposed surface soils, posing greater health risks to people using the site and endangering adjacent properties who can be exposed through water run-off and wind-borne toxic dust.

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## **Draft Regulations Weaken Cleanup Goals for All Toxic Waste Sites**

The draft regulations also weaken the cleanup goals of the State Superfund toxic waste cleanup program and the 1996 Bond Act Environmental Restoration Program (ERP). In both cases, the regulations would allow land use to be considered as a factor in selecting the cleanup remedy. But the State Superfund law is clear: the goal is to restore sites “to pre-disposal conditions” whenever possible. The ERP law mirrors the Superfund law’s cleanup goal.

**The regulations should follow the law and remove land-use considerations from the Superfund and ERP sections.**

### **From Permanent Cleanups to “Pave and Wave” How the Brownfields Cleanup Tracks Work**

**Track 1** (unrestricted use) cleanups allow the site to be used for any purpose without a use restriction or the reliance

on long-term institutional or engineering controls.

**Track 2** (restricted use) cleanups may require use restrictions, such as commercial or industrial uses, but must meet

the contaminant-specific soil cleanup standards required for the site’s designated use without long-term reliance on the use of institutional or engineering control. Such controls can be used to restrict the movement or access to groundwater.

**Track 3** cleanups are similar to Track 2, only the cleanup standards are site specific.

**Track 4** (site-specific) cleanups require use restrictions and rely on the longterm use of institutional or engineering

controls. However, exposed surface soils under Track 4 are required to meet Track 2 or 3 levels (the top 1-2 feet, depending on the site’s future use).

The draft regulations contain “look-up” tables for contaminant-specific soil cleanup standards used for Track 1 and Track 2 cleanups; the other two tracks are site-specific. All cleanups require removal of sources of contamination (such as leaking tanks and barrels).

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<sup>i</sup> ECL 27-1415(1).

<sup>ii</sup> Draft 6 NYCRR Part 375-3.8 (a).

<sup>iii</sup> ECL 27-1415(6).

<sup>iv</sup> ECL 27-1415(3)(d).

<sup>v</sup> ECL 27-1415(1); ECL 15-3103(4).

## Fact Sheet #3: Off-Site Testing & Cleanup Improvements Needed to Protect People Living Near Sites

People living near Superfund or brownfield contaminated sites have the right to be fully protected from any toxic exposures, through comprehensive off-site investigations and timely off-site cleanups. The Department of Environmental Conservation (DEC), “volunteer” site developers and site “participants” (responsible parties or polluters) all have responsibilities to ensure off-site pollution is tested and/or cleaned up.

The following three improvements to the DEC regulations are needed to ensure that spreading off-site pollution does not harm nearby residents.

### ***Follow Law’s Stronger Off-Site Investigation Requirements***

**Problem:** The Brownfield law has two different requirements on investigating off-site pollution, depending on whether an innocent volunteer or a participant (responsible party) owns the site. Site owners may have financial incentives, such as containing their liability and cleanup costs, which can cause them to limit necessary testing or avoid tracking pollution off-site. The regulations are not clear on the scope of participant’s off-site investigations, and do not include the important legal definition of a volunteer’s off-site “exposure assessment.”

**Solution:** To clarify important off-site investigation responsibilities, the Draft Regulations should be amended with clarifying text from the law (noted in quotes) as follows. (The recommended additions are underlined.)

Participants must “fully characterize” the nature and extent of contamination that has migrated from the site, as per the law (Section 27-1411.)

Volunteers “must perform a qualitative exposure assessment regarding contamination emanating from such site.” An “exposure assessment shall qualitatively determine the route, intensity, frequency, and duration of actual or potential exposures of humans, fish and wildlife to contaminants. Such assessment must analyze the nature and size of the population” that could be impacted, “and it “consists of characterizing the exposure setting, identifying current and reasonably foreseeable exposure pathways, and evaluating contaminant fate and transport.” Whenever needed, an off-site investigation will be done “to identify and sample any potential areas of contamination” to support the exposure assessment.” (Section 27-1415)

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### ***Include Off-Site Cleanup Requirements by DEC or Polluter***

**Problem:** Volunteers are not required to clean up off-site pollution. Instead, the Department of Environmental Conservation (DEC) is responsible and must first try to have polluters fund the cleanup within 6 months of the decision that a volunteer’s brownfield site poses a “significant threat” (Superfund’s classification threshold). If DEC is unsuccessful, it must clean up the off-site contamination within 1 year of the completion of the enforcement or volunteer cleanup, whichever is later. The

Draft Regulations *do not provide any information on this critical process*, including the important timetables in the law which helps ensure timely action to stop toxic exposures and protect adjacent residents.

**Solution:** To ensure timely and protective cleanups of off-site pollution, the Draft Regulations should be amended to include the law’s directives. (The recommended additions are underlined).

Within 6 months of a decision that a volunteer’s brownfield site poses a significant threat, the DEC will bring an enforcement action against any known or suspected responsible parties to obtain a cleanup program. If the enforcement action is unsuccessful, DEC shall “use best efforts” to clean up off-site contamination with 1 year, after the volunteer’s on-site cleanup or the enforcement action, whichever is later. DEC will then use either Superfund or Oil Spill Fund monies, to clean up the off-site pollution. (Section 27-1411)

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## ***Strengthen Testing for Toxic Vapors & Drinking Water***

**Problem:** Toxic vapor from site pollution can pose serious health threats to people when it migrates into residential basements. Toxic leachate from site pollution can pose serious health threats to people when it pollutes private or municipal drinking water supply wells. The Draft Regulations define the “remedial investigation” of a site without specifically requiring an investigation of air quality, indoor air quality and nearby drinking water supplies, as outlined in the law. Toxic vapor intrusion is a serious health threat at a growing number of sites, yet DEC has not consistently required testing for these vapors whenever likely chemicals are at a site.

**Solution:** To ensure people are protected from toxic vapors or polluted wells, the Draft Regulations should be amended to strengthen the definition of remedial investigation with text from the law (noted in quotes) as follows. (The recommended additions are underlined).

The goals of a remedial investigation should also include an “assessment of the existing and potential impact of groundwater contamination on private or community water supply wells, surface water quality, air quality, and indoor air quality.” (Section 27-1415). In addition, vapor intrusion testing will be required at sites where chemicals likely to cause such vapors are present, such as highly volatile organic compounds (VOCs).

## Fact Sheet #4: Strengthen Site Engineering and Institutional Control Requirements To Protect Nearby Residents

Engineering or institutional controls are used to protect people using a site if it is not completely cleaned up. **Engineering Controls** are any physical barriers or methods to contain, stabilize or monitor contamination to restrict the movement of contamination or eliminate potential exposure pathways to people, fish or wildlife. This includes pavement, caps, covers, subsurface barriers, vapor barriers, slurry walls, building ventilation systems, fences, access controls, alternative water supplies via connection to public water supply, water treatment technologies and filtration devices on private water supplies.

**Institutional Controls** are methods to restrict the use of property to ensure it eliminates or limits exposures to remaining contaminants. It could include deed restrictions preventing the use of groundwater for drinking water, or prohibiting the use of a site for residential purposes if it is only cleaned up to industrial standards. It provides a warning notice to potential owners, operators and the public and prevents actions that would interfere with the long-term remedial operation or maintenance activities at a site. **Environmental Easements** are required for engineering or institutional controls, meaning a notice on any controls is recorded with the deed to the site.

If site controls fail, people can be exposed to harmful levels of chemicals. For instance, if filters stop working, people will drink polluted water. If a deed restriction notice is lost on an industrial use site, 20 years later a family could unknowingly build a home and garden on the site, exposing themselves to unsafe levels of toxic chemicals. Studies by the U.S. Congress General Accountability Office and the NYS Comptroller have identified failures in maintaining controls at a number of sites. So, it is extremely important that brownfield site controls are reliable and well-maintained, and that environmental easement notices are recorded and strictly followed.

**The following three improvements to DEC's regulations are needed to ensure controls are safely maintained.**

### ***Include Law's Requirement to Evaluate Site Control's Reliability & Viability***

**Problem:** The Brownfield law requires that any cleanup plan using controls should include a detailed description of the controls, evaluation of their reliability and viability, and sufficient analysis that they will be effectively implemented. (Section 27-1415). The Draft Regulations *do not explicitly include these critically important requirements.*

**Solution:** The regulations require that when controls are proposed for any cleanup plan, they should be evaluated in accordance with Section 27-1415.7 for their reliability, viability and effective implementation. The regulations, however, do not provide any information regarding what is required to demonstrate that the proposed engineering or institutional controls are reliable and viable.

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### ***Define Analysis of Site Control's Long-Term Reliability***

**Problem:** How will DEC and site applicants determine if a control is reliable and viable? The regulations need to include prescriptive requirements to adequately define how reliability and viability is demonstrated, to ensure controls remain protective of the environment and public health.

**Solution:** The regulations should include the following requirements to define how the agency will evaluate the reliability and viability of a control. "The site applicant shall conduct a Risk Failure Analysis of the engineering or institutional control to investigate its reliability and

viability, which includes the following.

- 1) Identifying all possible potential activities associated with the new use of the site and evaluating the impact of such activities on the controls.
- 2) Assessing the capacity of local government to enforce the control. Does the local government have enforcement authority? And, if so, does the local government have the technical ability to oversee engineering or institutional controls? There must be a system established for local governments to communicate with the DEC when a local permit is requested for site activities with controls, to make sure such activities are not in conflict with the site controls.
- 3) Conducting a financial analysis of the long term costs, and an assessment on whether the site owner is financially able to maintain the site control.
- 4) When the control is approved, the regulations should include guidance on establishing strictly enforced requirements to maintain the control, including frequency of monitoring, type of data, and a regular reporting process to DEC and/or local government on the status of the control.”

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## ***Strengthen Citizen Participation & Public Access to Control Database***

**Problem:** Since the long-term effectiveness of site controls is critically important in protecting the health of nearby residents, the regulations should strengthen citizen participation requirements. The Brownfield law includes a citizen participation goal of “*full, timely and accessible disclosure and sharing of information by the DEC.*” (Section 27-1417)

**Solution:** The regulations should include a public notice and public comment opportunity on the proposed site control, the results of the control’s Risk Failure Analysis, and the proposed control maintenance requirements.

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**Problem:** For public information purposes, the law requires DEC to set up a database listing of all brownfield sites, with site status activities and any site environmental easements (such as deed restrictions). The law notes it shall be available electronically. The regulations do not state how the public will access the Brownfield Sites Database List. Some people do not use the internet, and need paper copies of government reports, including important descriptions of brownfield sites in their town or county.

**Solution:** DEC should publish the annual Brownfield Sites Database List and make it available in county offices and DEC regional offices to provide full and accessible public information sharing.

## Fact Sheet #5: Public Participation Improvements Needed

People living near Superfund or brownfield contaminated sites have the right to participate in cleanup and land use decisions that affect their health and their community. The Department of Environmental Conservation (DEC) and site owners are required to inform and involve the public before making final decisions on the scope of a site investigation, standards and technology to clean up polluted soil and water at a site, and future land use and site redevelopment.

The following five improvements to the DEC regulations are needed for meaningful public participation.

### **Reinstate Citizen Participation Goals**

**Problem:** Public participation goals were explicitly included in the Brownfield Law and current Superfund Part 375 regulations to guide DEC and site owners on providing meaningful public involvement. In the Draft Regulations, DEC *removed* the goals from the Superfund section and *neglected* to include the goals from the Brownfield law.

**Solution:** Important public participation goals should be included in the Regulations for Superfund, Brownfield and Environmental Restoration sites: 1) Provide opportunities for citizen involvement and consultation as early as possible before DEC forms or adopts final positions; and 2) Ensure the public's views are heard and considered, including opportunities for two-way dialogue between DEC, site owners and the public.

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### **Set up Adequate and Inclusive Site Contact List**

**Problem:** Developing an inclusive list of site contacts is an important step in informing and involving the interested public. The Draft Regulations *do not include some key constituencies* in the Superfund and Brownfield Site Contact Lists.

**Solution:** Adjacent property owners, concerned environmental and community groups, and media representatives should be included in every Site Contact List for Superfund, Brownfield and Environmental Restoration sites.

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### **Reinstate & Expand Citizen Participation Handbook**

**Problem:** The law requires DEC to prepare a Citizen Participation Handbook to provide guidance in the design and implementation of meaningful Citizen Participation Plans by brownfield site owners. The regulations make no mention of this Handbook. In January 2006, DEC *rescinded* the Superfund Citizen Participation Handbook—a valuable document detailing how site owners and DEC can best involve people that was developed with input from community and environmental leaders in the 1990s. DEC claims it will replace it with “internal guidance.”

**Solution:** The Citizen Participation Handbook for Superfund sites is an important, publicly reviewed policy document which should be reinstated and expanded to include Brownfield and Environmental Restoration sites.

### **Provide Accessible Information on Superfund & Brownfield Sites**

**Problem:** The Superfund law requires DEC to provide the public with an annual statewide registry of Superfund sites in its regional offices, county offices or on its website. And, the DEC “*shall provide a written copy upon requests by any person.*” (Section 27-1305). The registry includes new description requirements, such as an assessment of any serious health problems in the immediate vicinity of the site.

The Brownfield law includes a citizen participation goal of “*full, timely and accessible disclosure and sharing of information by the DEC.*” (Section 27-1417) For public information purposes, the law requires DEC to set up a database listing of all brownfield sites, with site status activities and any site environmental easements (such as deed restrictions). The law notes it shall be available electronically. The regulations do not state how the public will access the Superfund Registry and Brownfield Sites Database List. DEC currently provides the Superfund Registry on its website, and has *rescinded* the publication of the 9 Volume Registry Reports.

Some people do not use the internet, and need paper copies of government reports, including important descriptions of Superfund and brownfield sites in their town or county.

**Solution:** DEC should publish the annual Superfund Registry and Brownfield Sites Database List and make it available in county offices and DEC regional offices to provide full and accessible public information sharing.

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## ***Post Signs at Contaminated Sites: Help Stop Toxic Exposures***

**Problem:** DEC used to place bright yellow “Hazardous Waste Site” signs with the DEC toll-free number at sites. It helped stop toxic exposures by warning children and teenagers to stay away from the polluted site. *Signs are still needed but they are no longer posted at many Superfund sites.* Hundreds of brownfield sites also need to be clearly posted with signs to advise the community of any known or suspected contamination at the site. The sign can also announce that the site is in the state Brownfield program, and let people know how to get on the Site Contact List.

**Solution:** DEC should require site owners to post prominent signs at all Superfund and brownfield sites advising the public of any known or suspected contamination, and providing contacts for people to get more information, including inclusion on the Site Contact List.