Benefits of Going Green with Remediation

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Green Remediation: does that term sound redundant to you? After all, isn't brownfield remediation all about cleaning up an environmentally contaminated site? Yes, but an increasing number of developers and municipalities are recognizing that there is even more that can be done during the design, implementation and monitoring of a cleanup project to reduce the environmental impacts of the project itself.

For instance, instead of using gasoline in trucks or onsite pump systems, use alternative fuels such as biodiesel. Rather than hauling away waste materials that are generated, recycle them for reuse in the parking lot, retaining walls or other structures. The U.S. Environmental Protection Agency (EPA) identifies the following as the core elements of Green Remediation:

- **Energy efficiency**
  Actions recommended include using little or no external utility power, using energy efficient equipment and alternative energy sources such as wind and solar.
- **Air emissions**
  Suggestions here include minimizing the use of heavy equipment requiring high volumes of fuel, using cleaner fuels, retrofitting diesel engines and reducing the release of pollutants, contaminants and particulates into the air.
- **Water resources**
  Steps here include minimizing fresh water consumption and maximizing water recycling during daily operations and treatment processes, reclaiming treated water for irrigation use and planting native vegetation that requires little or no irrigation.
- **Land and ecosystems**
  Green Remediation techniques here include the use of minimally invasive technologies, minimizing soil and habitat disturbance, and reducing noise and lighting disturbances.

- **Material consumption and waste generation**
  The EPA suggests developers re-use materials whenever possible, recycle materials generated at or removed from the site, minimize natural resource extraction and disposal, and use passive sampling devices wherever feasible.

As you can see from this list of Green Remediation actions, not all conventional remediation activities are environmentally friendly when you consider the amount of energy consumption, waste, additional pollution that is generated.

Benefits of Green Remediation
As a brownfield developer, there are benefits to using Green Remediation techniques on your projects:

1. **Reduce energy costs**
   The costs for implementing Green Remediation strategies can range considerably depending on the scope of the project, but developers often find that they end up costing less than conventional cleanup practices. Incorporating Green Remediation and building techniques can also pay out in the future, as owners, operators and tenants reap the benefits of energy savings from weatherization, alternative energy sources and energy efficient-buildings.

2. **Access to more types of funding**
   Thanks to the American Recovery and Reinvestment Act of 2009, the opportunities for brownfield development is expanding. Over $100 million was earmarked in this stimulus legislation specifically for brownfield activities, and some of the other funds targeted for clean water and transportation could potentially be pulled into brownfield development. Deploying Green Remediation strategies can be an attractive advantage when pursuing stimulus or other government funded projects.

3. **Demonstrate good corporate citizenship**
   Brownfield developers that adopt Green Remediation practices benefit from a more positive social and community image. When developers reduce the impacts of remediation to surrounding businesses and neighbors through the generation of less pollution and reduced noise, their reputation as a "green citizen" is enhanced. A recent study by A.T. Kearney* showed that a company's commitment to sustainability helps it outperform its peers. In 16 of the 18 industries studied, the sustainable businesses outperformed industry averages by 15 percent in the period from May to November 2008.[1]

4. **Decrease carbon footprint**
   Regulations to address the effects of carbon generation on climate change is on the minds of federal and state governments. Reducing carbon emissions on development sites could be mandated someday, so taking the appropriate steps now to minimize your carbon footprint on cleanup practices puts your business ahead of the game.

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*_Brownfield Renewal, "_Brownfield Economics Go Green," June 2009

Clearly, there are advantages to Green Remediation over conventional remediation techniques that make it a powerful business strategy with clear-cut and long-term economic and social benefits.