

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

I N T E R N A L   M E M O

TO: Bruce H. Wolfe  
Executive Officer

FROM: Gary J. Riley, P.E.  
WRCE

DATE: October 6, 2004

SIGNATURE: \_\_\_\_\_

SUBJECT: Brownfield Site Cleanup and Redevelopment – Status Report

CONCUR: \_\_\_\_\_  
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Brownfields are underutilized properties where reuse is complicated by the presence or perception of pollution. They are a significant challenge with estimates of over 100,000 sites statewide. This Water Board has a strong track record of promoting site cleanup for protection of human health and the environment while, at the same time, fostering revitalization of idle properties. This memorandum provides background on the issue and a summary of brownfield activities in our Region. Its content includes details on the diverse range of tools we use to achieve results to enhance water quality, protect human health and the environment, and improve local economies. A summary of recent State and Federal legislation includes several initiatives that will change aspects of brownfield cleanup in the future. A recent initiative spearheaded by Cal/EPA Secretary Terry Tamminen has directed the water boards and the Department of Toxics Substances Control (DTSC) to prioritize revitalization of brownfields and change the way the agencies interact on these sites. New legislative and agency efforts are focusing energy on brownfields, and this memorandum details the major next steps we are taking in this area. The Water Board has played a leadership role in site cleanup and reuse for well over ten years and is in the position to continue this into the future.

## I. INTRODUCTION

The last few decades in California have seen an enormous growth in development of former agricultural lands and open spaces. This growth has occurred, in part, because properties in the urban core are often thought to be so contaminated that it is prohibitively expensive to clean them up to be reused for industrial, commercial, or residential purposes. These properties, known as “brownfields”, can be created when major industries downsize, such as what happened with the aerospace industry, or when land use decisions make it more economical for industries and developers to move to the fringes of cities. This Water Board, because of its location in a highly urbanized area, plays a key role in helping to redevelop these properties by our leadership in working with redevelopment agencies and the development community to oversee effective environmental cleanups that foster reuse. We see this as having the benefit of getting sites cleaned up that would not get cleaned up any other way, and helping to revitalize the communities we live and work in.

Brownfields have moved off the back burner at Cal/EPA and are now enjoying the support necessary to achieve “big” things. Governor Schwarzenegger’s 2003 Environmental Action Plan highlights the Brownfields Program as one of its highest priority programs in order to help clean up and preserve California’s environment. The Plan’s goal is to put brownfield sites back into productive use and revitalize the State economy by promoting job creation and increasing tax revenues.

### *What are Brownfields?*

The U.S. Environmental Protection Agency (US EPA) currently defines brownfields, with certain legal exclusions and additions, as “real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.” This definition is purposefully loose and flexible. The factors that cause these properties to remain vacant or under-used can change, often rapidly. For example, a significant rise in the interest rate will tend to increase the number of brownfield sites as increased costs of capital change the economics of redevelopment.

Property development surged during the mid-1990s with an upturn in the California economy. Demand for real estate increased and communities looked toward economic revitalization through redevelopment. Many of the areas most in need of redevelopment were former industrial sites located in the core of our older cities. Brownfields quickly became a common word within the development community and environmental regulatory agencies, including this Water Board. Our Toxic Cleanup and Groundwater Protection Divisions have been very proactive and have overseen the necessary investigation and remediation of more than 100 brownfield sites. These cleanups have resulted in billions of dollars of investment in development, created thousands of new jobs, and significantly increased the tax base.

Not all underused or blighted properties are brownfields. Social and economic factors play a hand in why some properties are not redeveloped. However, when a property suffers from the stigma of real or perceived environmental contamination, that may well be the “nail in the coffin” of development. This certainly does not have to be the case. We in the regulatory

community are in the unique position of being able to facilitate cleanup at these sites; thereby, protecting and enhancing human health and the environment while fostering economic and social benefits for communities.

### *Why are Brownfields Important?*

Land, like most natural resources, is a limited commodity. With urban sprawl occurring at an increasing pace in California, farmland and other undeveloped areas known as “greenfields” are being consumed at alarming rates. Many of these developments fill or otherwise impact waters of the State and require the Water Board to issue water quality certifications. On the flip side, brownfield development is essentially land recycling, and is part of a “smart growth strategy” to discourage suburban sprawl in favor of new development and redevelopment in urban areas. Due to the generally denser nature of redevelopment within urban areas (“infill” development), it is estimated that every acre of infill development saves more than four acres of greenfields. According to the California Center for Land Recycling, the California population is expected to grow to 50 million in the next 25 years. This being the case, land recycling/brownfield development will become even more important to California’s future and a critical part of the State’s environmental protection and resource conservation program. The California Performance Review estimates that there are 67,000 to 119,000 properties statewide which remain idle or underutilized because of real or perceived environmental contamination. Clearly, there is a tremendous opportunity to reuse these properties and slow new development consumption of greenfields.

The socioeconomic benefits of brownfield development are also significant. Commercial redevelopment on underutilized properties can increase sales and property tax revenues for local communities and job opportunities for residents. Infrastructure such as roads and public transit is already present within cities, such that redevelopment there reduces the need to build these facilities to serve greenfields. Locating development in inner city areas can serve as a catalyst for revitalization of entire neighborhoods. Oftentimes brownfield redevelopment projects may be the “pioneers” in a blighted area of a city. Once the hurdles to successful revitalization of the first property are overcome, there can be a cascading effect where additional redevelopment explodes. In addition to these benefits, brownfield programs have become an important tool in discovering, investigating and remediating pollutant-impacted properties. If not for brownfield development, the funding necessary to investigate and remediate many impacted properties is almost impossible to obtain. This is especially important for the smaller sites or those without “deep-pocketed” responsible parties where cleanup of these sites is desirable to protect local residents from pollution.

## **II. BROWNFIELD ACTIVITIES AND TOOLS IN OUR REGION**

The Water Board is one of several agencies with roles in the brownfield cleanup and redevelopment process. We and our sister agency, DTSC, oversee investigation and cleanup at brownfield sites. Elsewhere in the state, the Los Angeles Water Board is also active in brownfield cleanup oversight within its jurisdiction. Water boards in other regions and the State Board are becoming more interested in brownfield programs. Other stakeholders in the process

include: local redevelopment agencies (who designate redevelopment areas and often acquire and redevelop brownfield sites), local governments (who must approve redevelopment proposals), developers and non-profits (who make redevelopment proposals), lenders, and community members.

We have been engaged in brownfield activities for over ten years, recognizing early on that redevelopment often provides a unique opportunity to make cleanup at contaminated sites happen. Most of our brownfield oversight activities are currently funded by site-specific cost reimbursement agreements with responsible parties or developers. Below we discuss oversight tools, regulatory tools, and some results and accomplishments.

### *Oversight Tools*

We take a proactive approach in addressing the cleanup of brownfield sites. Using a variety of regulatory tools, the Water Board has on many occasions facilitated the transformation of blighted urban areas into environmentally safe and economically productive redevelopment projects. Typical regulatory tools include:

- Enforcement orders and other directives: We issue directives under two sections of the Water Code: Section 13304 for cleanup and abatement orders (also known as site cleanup requirements) and Section 13267 for technical report requests. While these are binding on the recipients, we normally work closely with responsible parties prior to their issuance to assure that these directives are consistent with redevelopment plans. In some cases, a redeveloper will seek to recover cleanup costs from the parties responsible for a site's contamination, and a Water Board directive can help in this regard.
- The Spills, Leaks, Investigations, and Cleanups (SLIC) cost recovery program: We require responsible parties or redevelopment proponents to reimburse the Water Board for our oversight costs. This is a fee-for-service process that allows brownfield owners to receive a fast response to investigations and cleanup plans and avoid potentially costly delays in redevelopment projects.
- Oversight via the Polanco process: The Polanco Redevelopment Act of 1990 (AB 3193) allows a redevelopment agency to curtail liability for future landowners if the remediation follows prescribed steps. Specifically, the Water Board (or other oversight agency) must approve a proposed cleanup plan and later certify that the plan was fully implemented before allowing the redevelopment agency to obtain liability relief.
- Prospective purchaser agreements (PPA): We occasionally enter into agreements with buyers of contaminated property to facilitate cleanup and redevelopment; these are also known as covenants not to sue. In a typical PPA, the oversight agency promises not to enforce against the buyer (or subsequent owners) with the provision that assurances are in place to complete cleanup and any long-term requirements. The

buyer promises to provide reasonable access for the parties responsible for doing the cleanup and not to contribute to pollution at the site.

- “Comfort” letters: We issue comfort letters to buyers of polluted property or owners of off-site properties affected by migrating groundwater pollution to mollify buyers or lenders about the potential liability they face. Letters to off-site owners typically promise not to enforce against them as long as they provide reasonable access. Letters to on-site buyers typically promise not to enforce against them as long as they provide reasonable access and the current responsible parties continue to perform necessary cleanup work.

### *Technical Tools*

We use several technical tools to promote brownfield cleanup and redevelopment, including risk-based corrective action, risk management, environmental screening levels, and US EPA grants. We use the first three at all of our cleanup sites; only the US EPA grants are unique to brownfield sites. Below we have summarized each.

#### *Risk-based Corrective Action*

During the first ten years of our site cleanup program, we learned that it is usually infeasible to clean up sites to pristine or background conditions. Even cleaning up groundwater to meet drinking water standards is often difficult and time consuming. Risk-based corrective action refers to a systematic process of identifying all of the different ways that site contamination could affect human health or the environment (current and future exposure pathways and receptors) and requiring cleanup actions that protect those receptors. This approach is comprehensive, in that it looks at the full range of receptors and exposure pathways. The approach also tailors the cleanup to the severity of the contamination; less cleanup may be needed if certain pathways and receptors are not present (and will not be in future). At brownfield sites, landowners and developers often have limited funds for site cleanup. Risk-based corrective action focuses those limited funds where they can do the most good. We endorse this approach and encourage all our sites to use it.

#### *Risk Management*

As noted earlier, site cleanup is rarely quick and simple. Groundwater cleanup can take decades, and some soil contamination cannot feasibly be cleaned up due to technical difficulties, buildings that are in the way, and other factors. Risk management refers to various measures that can be taken at a site, to cope with either (1) residual soil contamination that is being left in place or (2) groundwater contamination that is still being cleaned up or that is naturally attenuating. Examples include: engineered caps over residual soil contamination, location of occupied structures away from residual contamination, and various institutional controls (e.g., deed restrictions and regular notices to tenants and neighbors). At any given site, there are usually different combinations of cleanup and risk management that, taken together, will protect all the receptors. At brownfield sites, landowners and developers can select combinations that are effective and affordable, thereby increasing the number of brownfield sites that get redeveloped.

We encourage the use of risk management at contamination sites as an integral part of the cleanup toolkit.

### *Screening Levels*

Initially, to implement risk-based corrective action, we required dischargers to prepare detailed risk assessments. This assured that all exposure pathways and receptors were considered, and that the net risk was acceptable following cleanup. This approach was intended for State and Federal Superfund sites, which typically have substantial contamination. We learned that this approach does not work as well for smaller, lower-risk sites. The cost of a detailed risk assessment can be prohibitive at these sites and the level of detail is usually not warranted. Therefore, several years ago we developed Environmental Screening Levels (ESLs). These are lookup tables for about 100 commonly encountered contaminants. The screening levels are conservative values and are intended to be protective in a range of conditions. With a minimum of site information, a landowner or developer can view the tables and determine what soil and groundwater screening levels apply to his or her contaminated site. The landowner or developer can either use these screening levels as cleanup standards or, if they prefer, they can prepare a more detailed risk assessment. At brownfield sites, screening levels are invaluable, allowing a landowner or developer to quickly determine whether site contamination will need further study or cleanup. The Water Board's ESLs are updated regularly and are posted on our website at <http://www.swrcb.ca.gov/rwqcb2/esl.htm>.

The Legislature and the Governor recognized the value of screening levels for brownfields when SB 32 (Escutia) was enacted in 2002. This legislation was intended to encourage brownfield redevelopment. A centerpiece of the legislation was its requirement that Cal/EPA develop statewide screening levels. We have worked closely with our Cal/EPA counterparts to implement this portion of the legislation. We expect Cal/EPA to release draft screening levels for public comment later this fall. The draft only covers a subset of the exposure pathways and receptors at this point. As a result, we are spearheading an effort to derive statewide soil screening levels to protect groundwater (see September EO Report, page 3).

### *Grants*

The US EPA provides two types of brownfield grants: to states (for the purpose of promoting brownfield redevelopment), and to local agencies and non-profits (to jump-start specific brownfield redevelopment projects). Water Board staff have worked closely with several cities in our Region to encourage brownfield site cleanup and redevelopment, including writing letters of support for project-specific US EPA grants. Since 1996, US EPA has awarded brownfield grants totaling \$9 million within our Region. The City of Oakland alone has received over \$2 million in grants. Other recipient jurisdictions include: Emeryville, East Palo Alto, Richmond, San Francisco, Livermore, Alameda County, Contra Costa County, San Pablo, Petaluma, San Jose, and Union City.

Statewide, the water boards recently started receiving a portion of a state grant from US EPA for the purpose of brownfield liaison with other Cal/EPA agencies, local agencies, and brownfield redevelopers. Starting last year, Cal/EPA directed about 40% of its \$1.5 million/year US EPA

grant to a newly formed, targeted site investigation program. Under the program, local agencies and non-profits can apply to have a Cal/EPA contractor conduct basic site investigation on qualifying brownfield sites. This work helps landowners and developers determine the scope of site contamination, reducing uncertainties that often block brownfield redevelopment. Water board staff helped draft the application process and criteria, and participate in the selection process each year. Last year, the MacArthur BART transit village in Oakland in our Region was one of the initial eight sites in this program. This year, four Bay Area sites are applying for targeted site investigations.

### *Results*

Water Board staff has worked on brownfield sites throughout the entire Region. Approximately 400 sites are currently enrolled in the Board's cost recovery program. While not every one of these sites is a brownfield where redevelopment is complicated by contamination, many are. Over the past ten years, we have overseen cleanup at approximately twenty sites where redevelopment agencies used Polanco Act liability relief. At another twelve sites, the Board entered into prospective purchaser agreements to clarify liability for innocent parties intending to acquire property for cleanup and redevelopment. Over 200 "comfort letters" have been issued to provide off-site landowners with a degree of assurance that they (or successive owners) will not be subject to enforcement action if they do not interfere with a responsible party who is addressing the plume.

The City of Emeryville is a prime example of a brownfield success. Both the Water Board and DTSC have been very active over the past ten years assisting both the City and private firms (e.g., Pixar, Chiron, and Pulte Homes) to investigate, remediate and redevelop dozens of brownfield properties. These efforts have resulted in an estimated \$1.5 billion of investment and 5,000 jobs created. The 300-plus acre San Francisco Mission Bay development, overseen by the Water Board, is one of the largest brownfields projects in the U.S. with an estimated total value of \$4.5 billion. This project will include 6,000 residential units, approximately 5 million square feet of office and commercial space, a 500-unit hotel, and a 43-acre UCSF campus with 9,100 employees. The Board has also been involved in East Palo Alto over the past ten years, helping transform several brownfield sites into hundreds of housing units and providing office, retail and industrial space. Large projects can focus attention based on their sheer size, but we have also worked on many smaller projects that have very high impact in their communities. The Habitat for Humanity and the East Bay Asian Local Development Corporation housing developments in Oakland are two examples of small residential projects completed on brownfield sites. A partial list of brownfield sites we have overseen is included in the attached Appendix.

### **III. RECENT LEGISLATION**

There are several key Federal and State environmental laws that have fostered brownfield development.

#### *Federal*

The “Small Business Liability Relief and Brownfields Revitalization Act” signed into law in January 2002 contains three sections (Titles) dealing with funding and liability for assessing and cleaning up contaminated properties. Title I codified and expanded US EPA’s current brownfield program by authorizing funding for assessment and cleanup of brownfield properties. Title II exempted contiguous property owners and prospective purchasers from Superfund liability, and clarified the extent of appropriate environmental inquiry for innocent landowners. “Innocent landowners” are those who hold property with contamination on it, but did not contribute to the pollution. Title III authorized funding for State response programs and limited US EPA’s Superfund enforcement authority at sites cleaned up under a State response program.

This law is important because it provides liability relief for innocent landowners and purchasers as long as they meet certain requirements. Many redevelopment deals have stalled previously because there was no clear-cut mechanism for providing liability relief to innocent purchasers who were willing to perform the cleanup, but unwilling to take on the long-term liability associated with the site.

#### *California*

The State has passed several important laws to encourage brownfield redevelopment as well. The Polanco Redevelopment Act (Polanco), assists redevelopment agencies in responding to brownfield properties in their areas. It prescribes processes for redevelopment agencies to follow when cleaning up a hazardous substance release in a redevelopment project area. It also provides immunity from liability for redevelopment agencies and subsequent property purchasers for sites cleaned up under a plan approved by a water board or DTSC. The Polanco process has become a widely used tool by redevelopment agencies to guide and pursue redevelopment of brownfields. Redevelopment agencies requesting approval of their cleanup plans under the provisions of Polanco are required to reimburse oversight costs to the agencies.

The California Land Environmental Restoration and Reuse Act (SB 32) by Senator Escutia establishes a local agency hazardous material cleanup program designed to help return brownfields to productive uses. SB 32 requires Cal/EPA to provide a variety of data related to brownfield cleanups, and to develop a set of screening values for hazardous substances commonly found at brownfield sites. These screening tables are a direct result of the Environmental Screening Levels (ESLs) developed by Roger Brewer of our office.

The Frommer bill (AB 2436) requires that deed restrictions be mandated for sites that are not cleaned up to “unrestricted use”. These restrictions are recorded and run with the land to prohibit sensitive uses such as homes, schools, or day care facilities. Underground storage tank (UST) sites are exempted from this requirement because of the sheer numbers and the small size of

most of these sites. Site conditions are tracked in Geotracker, a statewide database developed by the State Board for all UST sites (and now SLIC sites). Additionally AB 2436 requires that these deed restrictions be posted on a publicly accessible website.

AB 389 was signed into law on September 23, 2004. This new law is intended to bring California into conformity with the Federal statutes concerning liability relief for innocent landowners, perspective purchasers, and off-site affected parties. It allows for risk-based cleanups at brownfield sites and it, importantly, allows DTSC to streamline their oversight process. This law prevents the water boards from requiring an innocent party to perform a complete cleanup at a site. We can only require such parties to clean up contamination that endangers human health, typically soil contamination. However, we still retain the ability to require the party responsible for the contamination to perform a complete cleanup (soil and groundwater). We believe that this bill will significantly open the door to brownfield development in California, but it has yet to be fully tested.

#### **IV. CAL/EPA BROWNFIELDS INITIATIVE**

In a July 20, 2004, memo to department heads, Cal/EPA Secretary Terry Tamminen announced a new brownfield initiative aimed at improving the way Cal/EPA agencies coordinate their regulatory activities at brownfield sites. The memo includes an ambitious implementation plan to: foster partnerships with brownfield stakeholders, develop an inventory of brownfield sites in California, provide liability relief to brownfield owners and buyers, and pursue necessary funding and resources for brownfield cleanup. Many of these same elements can also be found in the California Performance Review (see pages 41-50 at [www.report.cpr.ca.gov/cprprt/issrec/res/pdf/chapter5b.pdf](http://www.report.cpr.ca.gov/cprprt/issrec/res/pdf/chapter5b.pdf)). The memo also directed the State and regional water boards and DTSC to complete a “memorandum of agreement” (MOA). The MOA would reduce agency overlap and provide more certainty about how the agencies oversee brownfield sites. Secretary Tamminen directed that the MOA:

- Limit oversight to a single lead agency at any given site
- Establish procedures for identifying the appropriate lead agency
- Establish a uniform site assessment procedure to be used by both agencies
- Require that cleanups address the issues and concerns of both agencies
- Allow the lead agency to gain the advice and expertise of the other agency as appropriate
- Ensure ample opportunities for public input and involvement
- Establish target timeframes for completing investigation and cleanup
- Establish regular coordinating meetings

The MOA is intended to address the perceived problem that DTSC and the water boards use different oversight processes that can yield different cleanup results. Cal/EPA wants more consistency and less overlap between the agencies’ oversight efforts. Cal/EPA also wants applicant preferences to play a much smaller role in determining the appropriate oversight agency (sometimes referred to as “forum shopping”). Some of the differences between agencies are due to the enabling statutes; DTSC is obliged to follow a more formal “Superfund” process for most sites, including brownfields, while the water boards are given more flexibility under the

Water Code. The recent brownfield legislation cited above gives DTSC more flexibility in how it oversees brownfield sites and should narrow the differences.

Secretary Tamminen met with agency heads, including water board chairs, on August 23 to discuss the brownfield initiative. Stephen Morse represented us at that meeting. A key issue was staff resources: how will DTSC and the water boards support a significantly expanded staff effort to implement the various aspects of the Cal/EPA initiative, given that there probably will not be any new resources available. We are hopeful that this issue will be addressed favorably in the months to come and in next year's budget.

Meanwhile, the agencies are making good progress on the MOA. Water Board staff drafted two sections of the MOA and have been involved in numerous teleconferences with Cal/EPA, DTSC, and other water board staff to discuss draft MOA wording. At the most recent session, on September 30, the group reached a basic consensus on the MOA language. Cal/EPA staff will circulate the draft MOA to interested persons outside the agencies before bringing it back for final review and signature by DTSC and the water boards, expected in late November.

We are satisfied that the draft MOA will address Cal/EPA's concerns while preserving the fundamental virtues of this Region's brownfield oversight program. Barring significant changes during public review, we recommend that you sign the MOA when it is presented for ratification later this fall. This falls clearly within the scope of actions delegated to the Executive Officer. However, this status report provides an opportunity for the Board itself to indicate if it wishes to be more involved in the MOA review and approval process.

## **V. NEXT STEPS**

Using brownfield tools to accelerate revitalization of potentially contaminated properties has quickly become a mainstream approach. As summarized earlier in this report, innovative tools have been developed along the way, often as they are needed to make a particular project a success. With an ever-increasing inventory of redeveloped sites, many practices have become institutionalized and led to new policies, procedures, and regulations. Application of brownfield tools has rapidly moved to a wider variety of sites in more and more areas. A number of future steps for brownfields in our Region and statewide are beginning to become evident.

### *Development of Statewide Screening Levels*

As described earlier in this memorandum, Water Board staff have led the State in establishing screening levels for commonly encountered contaminants. These screening levels provide brownfield project sponsors with an easily used tool to more rapidly assess site conditions and the risks posed to human health and the environment. As noted above, SB 32 directs Cal/EPA to develop statewide screening levels, and we expect them released in draft form later this year. The current screening levels under development by Cal/EPA address only a subset of exposure pathways and receptors that may be relevant for a given site. Staff of our region is leading an effort to expand the statewide screening levels to include protecting water quality from leaching of pollutants from soil to groundwater. We expect that making the statewide screening levels more comprehensive will be a significant focus for our Region in the future.

### *Exporting Our Success to Other Regions*

The water boards in the heavily urbanized areas of the state, specifically our Region and Los Angeles, have well-developed brownfield programs with significant accomplishments over the past 10 years. Interest in brownfields is expanding from these traditional urban cores to small cities and other regions of the state. A study by Urban Land Institute recently noted the decline of so-called “inner ring suburbs” and discussed the need to apply “big city” redevelopment to these communities. These were the first suburbs in America and, when they were established in the 1940s and 50s, had vibrant commercial and industrial districts complementing areas of suburban housing. Changing economics and the desire to relocate to office and industrial parks developed on greenfields left blighted areas in these first-tier suburbs. These smaller cities, usually immediately adjacent to the primary urban centers of their regions, are today successfully applying brownfield incentives to encourage infill development. As the interest in brownfields in smaller cities – and small towns – increases, we expect other regions in the State Board system to look to our Region for examples of successful regulatory involvement in contaminated site revitalization.

### *Involvement by the State Board*

The State Board has become much more involved in brownfields over recent years. A half-time staff position at the State Board, funded by a portion of the US EPA brownfield grant, has been allocated to coordinate brownfield activities around the State. Staff in our Region participate in monthly roundtables to communicate important brownfield issues to and from the rest of the State. The State Board brownfield coordinator, along with staff from our Region, also participate in a monthly meeting with Cal/EPA and DTSC to ensure the best possible coordination for agency-wide work on brownfields. We anticipate the staff resources and regular communication with the State Board will help our Region – and the other regions – to continue to improve the service we provide to brownfield project proponents.

### *Staff Brownfields Coordinator*

A portion of funds from a US.EPA grant are being used for brownfield coordination among DTSC and the State and regional water boards. In our Region, Gary Riley has recently been designated to serve as Brownfields Coordinator. This role provides a single point of contact for brownfield project proponents at our Region. The Coordinator can assist those groups seeking to apply for grant funding from the State or US EPA, and guide these projects into the appropriate Water Board oversight program once investigation and cleanup begins. Mr. Riley also provides coordination with other regions and the State Board and reports on our brownfield activities to Cal/EPA and US EPA. The Brownfields Coordinator also serves as a member of the Interstate Technology Regulatory Council’s Brownfields Team. As a result of this collaboration with environmental regulators from around the country, many of our Region’s successes in site revitalization have been disseminated to a nationwide audience. Best practices that have been successfully applied in other states’ brownfields programs are also researched by this team, and we expect additional benefit to the Water Board’s programs as this partnership matures.

### *Base Realignment and Closure Act Facilities*

Closed military bases share many similarities with brownfields and have the potential to become very large idle properties themselves. California has experienced 29 major base closures since the early 1990s, with the loss of an estimated 200,000 jobs and an economic loss of \$7 billion. The perception of environmental contamination at these facilities complicates their reuse and can slow the progress of cleanup and redevelopment. Water Board staff is actively providing oversight to cleanups at these facilities to help ensure successful cleanup, transfer and reuse of these facilities and prevent the creation of large, underutilized properties.

In our Region, these facilities include Mare Island Naval Shipyard, Alameda Naval Air Station, Point Molate, Hamilton Army Airfield, Hunters Point Naval Shipyard and a number of others. Thousands of military and civilian jobs disappeared at these facilities upon closure, and communities became desperate for reuse of these bases. Under the Base Realignment and Closure Act, the Department of Defense (DOD) has been conducting environmental investigation and cleanup at each of these facilities with oversight from the Water Board and other agencies. Progress has been slow in many cases due to annual competition for limited DOD cleanup funds, the complexities of the sites themselves, and uncertainty about specifics of the planned reuse. Cities have recently been pursuing “early transfers” that allow them to receive the military property prior to completion of cleanup. Local governments have contracted with developers and environmental firms to perform an integrated cleanup and redevelopment.

Applying brownfield tools to military base cleanups results in accelerated cleanup and allows reuse to be coordinated with environmental remediation. At the former Mare Island Naval Shipyard in Vallejo, the Navy transferred 850 acres of property and approximately \$80 million to the City of Vallejo to allow for cleanup and redevelopment. Since the transfer occurred in 2002, interim reuse of industrial facilities already employs 1,600 people working on the Island daily. Thousands of residential units will be built over the next two years. One successful practice learned from our brownfield program and applied to the Mare Island cleanup is prioritizing cleanup and then matching remediation to end use. With definitive knowledge of redevelopment plans, polluted areas can be managed or remediated in a manner that is protective of human health and the environment, while allowing economic reuse of the site. Other brownfield tools (described above) are being applied to closed bases in our Region with similar success. Congress is expected to recommend another round of base closures in 2005 that could impact our Region beginning in 2007, so the use of brownfield tools on base closures will be optimizing cleanup and redevelopment for years to come.

### *National “Portfields” Initiative*

The US EPA, NOAA, and a number of other federal agencies announced the “Portfields” initiative in 2003. This effort is a renewed focus on revitalizing the nation’s port communities to protect the coastal environment and restore or maintain economic vitality. Many waterfront areas have suffered as waterfront manufacturing industries changed their interests or went abroad. Abandoned properties with perceived contamination can prevent redevelopment, and local communities lose jobs and other economic benefit. Businesses that are today seeking viable waterfront lands for manufacturing, shipping, and tourism can benefit from Portfields

revitalization projects. There are significant waterfront industrial areas in our region that have undergone redevelopment, such as the Port of Oakland and Mission Bay, and we expect more will follow suit as Federal agencies direct funding to brownfield project proponents in port areas.

## **VI. CONCLUSION**

We view our brownfield site oversight program as a major means to gain environmental benefits at sites where there was, previously, little hope of getting any cleanup to occur. By using efficient regulatory oversight processes, innovative cleanup technologies and implementing effective risk-management plans, our oversight can help bring these sites back into productive use, protect human health, and provide long-term benefits to the environment and communities. The Water Board has played a leadership role in brownfield cleanup and redevelopment, and is positioned to continue this role in the coming years.

### **Acknowledgements**

This report includes significant contributions from the following Water Board staff:

Chuck Headlee  
Stephen Hill  
Mark Johnson

Attachment

**Attachment**  
**Partial List of Brownfield Sites in San Francisco Bay Region**

Former Bayshore Rail Yard Site, Brisbane	Former Southern Pacific rail yard that has remained vacant since 1960. The developer is contemplating a mixed commercial and office development on this 180-acre site.
Eastshore State Park, Emeryville to Richmond Shoreline	Various parcels located along the shoreline from Emeryville to Richmond, converted into park and open space.
Chiron Life Science Campus, Emeryville	Several industrial properties assembled to build the corporate headquarters of Chiron. When completed the complex will include: 14 buildings, containing over 2 million square feet of research and office space and 4,200 jobs.
Pixar Animation Studios, Emeryville	Former Del Monte Cannery and Pepsi Bottling Plant converted into Pixar' s headquarters on 21 acres.
University Square, East Palo Alto	Former pesticide impacted nurseries converted into 217 single family homes and 129 apartment units (65 of the apartments were below market rate) on approximately 36 acres.
Shorebreeze IV Residential Subdivision, East Palo Alto	Former nursery property w/pesticide impacts converted into 20 high quality single-family homes on 2.5 acres.
Cooley Land Open Space, East Palo Alto	Former use of property includes a county disposal area, followed by a boat yard. Property will be converted into open-space park.
East Palo Alto Corporation Yard	Former Rogge's Auto Dismantling facility converted into City Corporation Yard on 2 acres.
Victoria by the Bay/Hercules LLC, Hercules	Former Pacific Refinery converted into approximately 800 homes on about 200 acres.
Great Mall of the Bay Area, Milpitas	Conversion of former Ford auto assembly plant into super-sized shopping mall (200 plus stores), residential units, office and hotel on 150 acres.
Napa Flood Control Project, Napa	Former bulk oil terminals converted into expanded flood plain and wildlife habitat.
Fed-Ex, USPS and US Customs, Oakland	Former Enterprise Engine manufacturing plant converted into major facilities for Fed-Ex, USPS International Branch and U.S. Customs facility on 60 acres, w/approximately 700 jobs created.
Central Station, West Oakland	Conversion of West Oakland railyard and station into museum and approximately 1,000 condominiums and 500 rental apartments on 25 acres. Project is in early phases of development.
The Estuary by Signature and Friends of California Men's Crew, Oakland	Redevelopment of a former bulk fuel terminal (about 4 acres in size) for 100 townhome units and expansion of the University of California Men's Crew use.
Habitat for Humanity	Former gas station converted into 4-5 low-income housing units.
Fruitvale BART Station Expansion, Oakland	Former industrial properties converted into office, parking, restaurants and plaza complex around BART station.

Nursery Development, Novato	Former dry cleaning facility converted into nursery.
Basin Street Properties/Petaluma River Waterfront, Petaluma	Former coal gasification plant and several UST sites assembled together and converted into office buildings, theatre, parking and other commercial uses.
Giants Stadium, San Francisco	Former Port of San Francisco Maintenance Facility converted to baseball stadium.
Deres Lofts, 16th St., San Francisco	Former paint manufacturing plant converted into 500 plus, up-scale residential lofts.
Brannan Street Properties, San Francisco	Former industrial painting facility converted into 35 to 40-story office building.
1 Arkansas, San Francisco	Former battery manufacturing facility converted into hi-tech incubator space.
Bridge Housing, Bay Street Project, San Francisco	Redevelopment of pre-war low-income housing development into modern low-income housing complex consisting of several hundred units near Fisherman' s Wharf.
Shell Station/Mini Mart, South San Francisco	Conversion of former scrap metal yard into gas station, truck scale, mini mart and car wash on a 2-acre site.
San Francisco General Hospital Parking Garage	Former Muni bus repair facility converted into 5-story parking structure.
North Park Apartments, San Jose	Former Moitozo Farm, pesticide impacted agricultural property, converted into 2800 apartment units on 60 acres.
Story King Redevelopment, San Jose	Former dry cleaners, strip mall & gas station, cleaned up and redeveloped into a 220,000 square-foot new shopping center on 11 acres.
Former Brandenburg-Butters Site, San Jose	Former industrial site converted into mixed-use development, including 1100 housing units on 9 acres. Part of a large-scale redevelopment project by San Jose Redevelopment Agency. Includes use of Polanco Act.
IBM, 5600 Cottle Road, San Jose	Hitachi and IBM formed a joint venture and now plan to sell off about 175 of the 335 acres for commercial & residential use. The site was formerly used for high-tech manufacturing.
Office Building Development, San Rafael	Former Fairchild Semiconductor manufacturing plant converted into office buildings.
Low Cost Housing, Sonoma	Former PG&E Corporation Yard converted into low cost housing
Shearwater, South San Francisco	Former U.S. Steel steel and pipe fabrication and assembly yard, now developed into a commercial and (biotech) office building complex with more than a dozen buildings on 47 acres.
Fry's Electronics store, Sunnyvale	Former semiconductor facility converted into retail store.