Needs and Feasibility Assessment for Site Re-Use

Route 9B Landfill
Wells, Maine

July 22, 2005

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July 22, 2005

Ms. Jane Duncan, Town Manager
Town of Wells
208 Sanford Road
P.O. Box 398
Wells, Maine 04090

Subject: Needs and Feasibility Assessment, Wells Landfill Re-Use

Dear Ms. Duncan:

At the request of the Town of Wells, Stratex, LLC, (Stratex) submits this Needs and Feasibility Assessment for the Wells Landfill located on Route 9B in Wells, Maine. This work is based on our communication with the Town of Wells, the Maine Department of Environmental Protection, Town committee members, and neighbors to the Route 9B site. For the preparation of this report, we also relied on published maps and reports, and our experience performing work of this nature.

Through this study, the Town explored the needs and feasibility of re-using 47 acres of land on Route 9B. This work was accomplished through a technical analysis of constraints and attributes and through a facilitated forum to collect information on town interests and needs for the land.

The Town has initiated re-use planning at an important juncture: prior to establishing a remediation program. Re-use planning that occurs concurrently with remediation planning will foster effective use of remediation resources and ensure that the remediation design will be consistent with the planned land use. This study represents a significant first step in re-use planning for the Route 9B site.

This study has resulted in the development of several recommendations for the Town of Wells as follows:

- Develop an interim management plan for the site to:
  - Remove buildings that are located directly on the landfill and secure other buildings that are selected to remain.
  - Take measures to limit site access such as install fencing and/or road barriers and post signs.

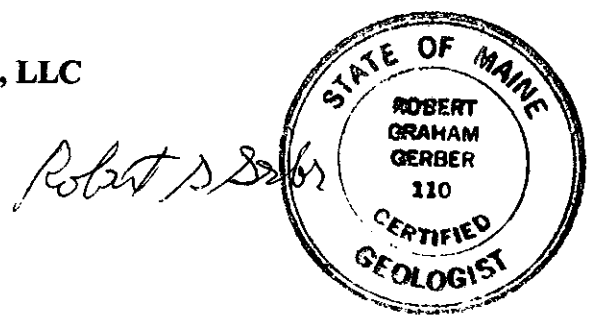
- Reduce issues related to exposed trash and buried waste:
  - Cover exposed trash.
  - Place additional cover material in areas where PAH levels are high.
  - Fill standing water that is in contact with trash.
  - Place deed notices in the registry on deeds where trash lies within the parcels

- Conduct an archaeological survey, wetland mapping, test pit survey, property boundary survey, topographic survey, and digital tax map adjustment as needed for future proposed land uses.

Stratex appreciates the opportunity to work with the Town on this study and is ready to provide additional assistance if needed.

Sincerely,

STRATEX, LLC



Robert G. Gerber, P.E., & C.G.

Attachment: Final report on end use planning for Route 9B landfill

Table of Contents

1.0 Introduction

The Town of Wells conducted this needs and feasibility assessment to explore the potential for re-use of town-owned land. The land is located on the north side of Route 9B adjacent to the east side of the Maine Turnpike corridor (Figures 1 and 2). This study is the first step in land use analysis for a site that has had a broad history of uses that included a sand and gravel borrow pit, a municipal landfill, and a residential subdivision.

In 2004, the Town of Wells purchased 47 acres of land comprised of 12 properties and 11 structures. A portion of the site is the former location of a town dump and landfill which was active until the early 1970's. The solid waste boundary of the landfill covers an area of about 7 to 10 acres (Figure 3). Environmental monitoring of ground water on and around the former landfill started in 2000 and is scheduled to continue through 2007.

Through this study, the Town explored land use feasibility and needs of the 47 acre site. This work was accomplished by a technical analysis of constraints and attributes, and through a facilitated forum to collect information on town interests and needs for the land.

It is important that the Town has initiated re-use planning especially during environmental monitoring, and prior to designing a site remediation program. Several remediation options exist for the site to minimize the potential for harm to public health, welfare, and the environment. Re-use planning that occurs concurrently with remediation planning will foster effective use of remediation resources and ensure that the remediation design will be consistent with the planned land use.

2.0 Objectives

The objectives of this study are threefold:

- To evaluate technical constraints and attributes for the 47 acre site.
- To collect information about Town needs and interests from key community members.
- To recommend the next steps in the re-use process.

The evaluation of constraints and attributes establishes both a physical and regulatory framework to help guide redevelopment options. For example, areas of shallow bedrock would probably exclude the development of a cemetery.

Equally important to this study is the collection of information about Town needs and interests. It is important to begin the discussion of potential redevelopment options in parallel with remediation planning so that the site remediation design can be compatible with future land use. For example, site grading and covering to provide a soil barrier may be compatible with the development of an athletic field.

3.0 Background

The site, sometimes referred to as the "Indian Trail Landfill," is located east of the Maine Turnpike along Littlefield Road (Route 9B) in Wells, Maine (Figure 2). Records suggest that the site was undeveloped until sand and gravel extraction activities some time in the early 1900's. Historic maps reveal the progression of land use at the site from the undeveloped state shown on a USGS 15-minute topographic quadrangle for Kennebunk, Maine, dated 1891 (Figure 4), to the development of a sand and gravel borrow pit shown on a USGS 15-minute topographic quadrangle for Kennebunk, Maine which was surveyed in 1941, culturally revised in 1956, and photo revised in 1979 (Figure 5). A Technical Bulletin prepared by Leavitt and Perkins in 1934 (Leavitt, 1934) shows the presence of a sand and gravel borrow pit in the vicinity of the Route 9B site. Based on these maps and published documents, it is possible that the borrow pit at the Route 9B site was established some time prior to 1934.

Anecdotal evidence suggests a dump began in the 1920's at this site. It is possible that waste was placed in the excavation created from sand and gravel extraction activities. The landfill remained active until the early 1970's when the dump was relocated elsewhere. At that time, the Indian Trail property changed hands, a thin layer of sandy fill was added, and the site was developed into a residential subdivision.

In the 1990's, rising concern among subdivision residents prompted an evaluation of the site. The Maine Department of Environmental Protection (DEP) retained Robert G. Gerber, Inc., to obtain a set of surface water and water well conductivity measurements. The Town retained Stratex in 2000 to do more comprehensive well water testing. The DEP conducted its own studies of soil, surface water, and soil gas qualities. Water on and around the landfill has been tested during more than nine sampling events. Early sampling events revealed that the closed landfill was adversely impacting residential well water quality for people living on or immediately next to the landfill. Water quality will continue to be monitored on a quarterly basis until at least 2007. In 2001, a public water main was extended along Route 9B to residential dwellings east of the former landfill site.

At the annual Town meeting on April 17, 2004, residents approved a $4 million bond issue to purchase about 47 acres of land and perform additional work at the former landfill site. Though not mandated by the State, the Town of Wells concluded that purchasing the buildings and lots was the most effective method for mitigating concerns of the subdivision residents. The Town of Wells is presently exploring remediation and site redevelopment options.

4.0 Project Team

Stratex assembled a team with the knowledge and expertise to evaluate the technical and social barriers to landfill re-use.

Robert Gerber, Civil Engineer, Hydrogeologist, and Site Evaluator, served as the project principal. Mr. Gerber oversaw the work scope, assisted with project analysis, reviewed work products, and interacted with the Town at vital stages of the project which included the facilitated forum on June 28, 2005. Mr. Gerber brings more than 30 years of environmental consulting to this project and in particular has 10 years of direct experience with the Wells Route 9B landfill.

Lissa Robinson, Civil Engineer, Hydrogeologist, and Planner, performed the analysis, prepared maps, organized and facilitated the Town forum on June 28, 2005, and compiled information for this project. Ms. Robinson has more than 18 years of experience in consulting in areas that include landfill investigation, site remediation, environmental analysis, group facilitation, and land planning.

5.0 Site Setting

The 47 acre site is bounded by Route 9B to the south, and the Maine Turnpike corridor to the west. The Webhannet River flows along the northern boundary of the site. A small residential subdivision is east of the site on Robinson Road and Pine Ledge Drive.

Topography at the site ranges from a high of about 150 feet Mean Sea Level (MSL) on the knoll near the center of the site, to a low of about 112 feet in the northeast corner of the site along the Webhannet River (Figure 6). The northwest quadrant of the site is interspersed with many small depressions or hummocks. Two bedrock knobs are located in the northeast quadrant. The southern half of the site is relatively flat with the exception of the knoll or rise near the center of the site. There is a surface and ground water divide on the site that separates the watersheds of the Webhannet River to the north and Stevens Brook to the south.

The bedrock in the area of the site, as mapped by Hussey (1985), is gray biotite granite (Figure 7, Bedrock Geology). The site lies near the eastern edge of a northeast-southwest elongate pre-Mesozoic calc-alkaline pluton, near the contact with the Kittery Formation, a feldspathic, calcareous, and micaceous quartzite (Gerber, 2003). A rose diagram of the bedrock fracture orientation, as inferred from photolinears to the west of the Turnpike, is included in Figure 7.

Most of the detailed geologic explorations performed recently focus on the area around the solid waste landfill. According to published sources and field work during landfill investigations in 2003, there is an arcuate bedrock ridge form trending southwest from the northeast corner of the landfill, then bending to trend south through the western part

of the old landfill (Gerber, 2003). Bedrock lows occur to the east and northwest portions of the landfill area. Although very little bedrock exploration has been performed outside the landfill area, Stratex observed exposed bedrock at locations in the northeast quadrant of the site during a site visit on 5/2/05 (Figure 13).

The sand and gravel borrow pit in which the waste was placed was located within a stratified moraine. Figure 8a shows the surficial geology of the site according to the Maine Geological Survey (MGS). Figure 8b contains the legend for the Surficial Geology Map prepared by MGS.

Site explorations have produced a more detailed interpretation of surficial geology. Figure 9 shows cross sections of the surficial geology. These cross sections show a complex vertical and horizontal sequence of stratified sands and gravelly sands lying under and around the landfill trash. There are probably lower permeability silty sand and clay-silt deposits lying around the extremities of this stratified moraine; however investigations for the Gerber 2003 report did not extend far enough away from the moraine to identify the nature of any laterally confining deposits. Soil mapping by the Natural Resources Conservation Service suggests several soil types are present at the site as shown on Figure 10.

Low wet areas exist in the northwest quadrant of the site and several other locations as shown on Figure 13. The National Wetlands Inventory (NWI) mapping does not show wetlands on the site (Southern Maine Regional Planning Commission, 2005). However, due to the extent of obvious wet areas on the site, redevelopment planning will require an onsite survey for wetlands by a qualified individual.

The Webhannet River flows along the northern boundary of the site. The Webhannet River flows into the Webhannet Estuary, which is listed as one of 17 priority coastal waters in the State of Maine Nonpoint Source (NPS) Priority Watersheds Program. This program (website, Nonpoint Source Priority Watersheds Program) is administered by the Maine Department of Environmental Protection. Although water quality standards for the estuary are in attainment, the Webhannet Estuary is threatened and may be eligible for funding to develop and implement watershed management programs. Under the NPS Priority Watersheds program the Webhannet River estuary is a "priority" water body due to elevated levels of bacteria, low dissolved oxygen, and areas closed to shellfish under certain conditions.

Several small streams cross the site from the southwest and flow northeast toward the Webhannet River. One stream originates from a culvert beneath the Maine Turnpike along the western boundary of the site. The site visit occurred at a time when groundwater levels are higher than the typical spring water levels. It is possible that these small streams dry up in late summer.

Ground water at the site flows in both surficial deposits and bedrock. Figure 11 shows a contour map of the phreatic water table in the surficial deposits. The inferred flow

direction, perpendicular to the contours, is generally east in the area of the landfill. However, in the process of easterly flow, the flow splits to the northeast and to the southeast. The water table is fairly flat within the landfill area and gradients are relatively gradual to the east and southeast. The gradients to the north, where the Webhannet River acts as a discharge point, are steeper, however, suggesting a much less transmissive soil in that direction beyond the end of the landfill (Gerber, 2003). Ground water contours in the surficial deposits were derived from water level measurements recorded on 10/20/03. These measurements were taken on the landfill site at soil borings that were developed as part of the ongoing environmental monitoring program by Stratex. The elevation of the surface water at the Webhannet River was also measured as a reference point for the surficial ground water contour map. Ground water data was collected from landfill investigations. Additional data points in the northern portion of the 47-acre site would provide more detail on surficial ground water elevations, adding refinement to the contour map shown in Figure 11.

Bedrock ground water contours are shown on Figure 12 from water levels measured in the bedrock on 10/20/03. The limited bedrock ground water level data suggest that ground water flows from the southeast corner of the site at an elevation of 126 feet MSL to an elevation of about 123 MSL feet at the knoll area, thence probably northward to the Webhannet River. Additional data points would help to refine the bedrock ground water contour map shown in Figure 12.

As part of the Wells Comprehensive Plan Update (Southern Maine Regional Planning Commission, 2005), the Town prepared maps of natural and man-made features across the town including floodplains, wildlife habitat, public water, and zoning. The following maps are available for review at the Town website or office:

Map # Map Name
Map 01 Base Map
Map 02 Existing Land Use as of April 1, 2004
Map 03 Existing Zoning
Map 04 Natural Areas Wildlife Habitat
Map 05 Topography & Drainage Divides
Map 06 Generalized Soil Types
Map 07 FEMA 100-Year Floodplain Zones
Map 08 Residential Growth Permit Locations 1992 2003
Map 09 Wetlands from National Wetlands Inventory
Map 10 Areas of High Potential for Wildlife Habitat - Gulf of Maine Project
Map 11 Lands in Conservation Ownership, or Current Use Taxation Programs
Map 12 Water & Sewer Utility Service Areas
Map 13 Branch Brook Aquifer Modeling of Travel Time for Contaminants to Reach Water Supply
Map 14 Fire Station Coverage Analysis
Map 15 Future Land Use Plan - Growth, Transitional, Rural, and Critical Rural Areas
Map 16 Targeted Residential Growth Areas

Information documented in those maps was not duplicated in this study. Several references are made in this report to the Wells Comprehensive Plan Update and associated mapping. Copies of Comprehensive Plan maps can be viewed at the Town office, or on the Town's website at the following address:

http://www.wellstown.org/Public_Documents/WellsME_Planner/ComprehensivePlan/index

This review of the physical site setting provides a foundation for an analysis of site constraints and attributes as described below.

6.0 Site Constraints and Attributes

The evaluation of constraints and attributes establishes both a physical and regulatory framework to guide redevelopment options. Stratex based the following information on constraints and attributes on explorations performed by Stratex during previous work at the site, published reports, and a site visit on 5/2/05.

6.1 Constraints

Natural and man-made constraints limit the development options available for a given site. Examples of natural constraints include steep slopes, wetlands, and exposed bedrock. Man made constraints can include, for example, buried waste, above ground and underground utilities lines, and buried storage tanks. Constraints limit development options due to regulatory controls and/or their potential to impede construction, which can result in higher design and development costs. Constraining features typically require additional permitting to address regulatory issues and/or additional engineering and construction cost to overcome limitations.

The presence of a constraining feature can exclude certain land use options due to the extreme cost required to overcome the constraint or because state and federal regulators simply do not allow a given land use activity in certain settings. An example of significant costs associated with overcoming a man made constraint would be the removal of all the buried waste at the site. Removal of waste at smaller landfills may be a feasible method for overcoming this type of constraint depending on the cost of remediation, the economic value of the land, and the desired re-use. An example of land use activity that is not allowed by the Maine Department of Environmental Protection due to natural constraints is the filling of a Tier I wetland or the discharge of pollutants into Maine's streams or lakes.

The Wells Route 9B site has a number of constraining features. Most of the constraints at the site are natural with the exception of the buried waste and exposed trash. The following table summarizes constraints at the site as identified for this study by Stratex. This table also lists limiting factors and possible mitigation measures. Figure 13 shows the locations of constraining features.

Table 1 – Site Constraints

Feature	Limitation	Mitigation	Likelihood of success with mitigation measures
Wet areas	Regulations restrict the extent of allowed wetland alteration (i.e., filling).	Apply for a wetland alteration permit.	It is possible that the state will allow the filling of wet areas where trash is exposed. However, there is a low probability of the state allowing other wet areas of the site that are greater than ½ acre in size to be filled.
Bedrock (exposed and shallow)	Rock represents a construction obstacle.	Blast rock and remove, or use alternative design measures such as filling over rock instead of excavating.	Blasting must be done very carefully to avoid spreading ground water contamination farther into the bedrock.
Webhannet River	Regulations prevent building within 75-feet of the river.	Apply for full NRPA permit.	Certain land uses may be allowed within the 75-foot setback (i.e., a pedestrian pathway and utility crossings) depending on the construction design and other mitigating factors such as erosion control.
Non-flat slopes (i.e., knoll)	Slopes represent a construction obstacle.	Excavate and relocate waste.	It is unlikely that excavation will be allowed within the solid waste boundary unless it is coupled with a remediation activity or involves installation of an essential utility.
Noise	Areas near Maine Turnpike are adversely affected by high noise levels.	Construct wall, soil berm, or plants and trees along turnpike to reduce traffic noise.	Mitigation measures such as wall construction or planting may reduce the noise impacts but are unlikely to reduce the noise generated by Turnpike traffic to rural decibel levels.
Exposed trash	Trash represents a threat to public health and the environment: - Falling hazard; - Fugitive dust; - Vermin; - Contamination of ground and surface water.	Remove exposed trash or cover with fill.	Exposed trash must be mitigated prior to considering future land use at the site. The Town will be required to apply for permits to fill wet areas where trash is exposed.
Solid waste	Waste represents a threat to public health and the environment: - Fugitive dust; - Vermin; - Soil Gas; - Material settlement; - Contamination of ground and surface water.	The State regulates activity within the solid waste boundary and a 100-foot buffer around the solid waste boundary.	The State has indicated a willingness to work with municipalities to encourage appropriate re-use of former landfill sites. However, there are limits that include no new structures or buildings, no excavation into the soil, and no agricultural activity within the solid waste boundary and 100-foot buffer without the consent of the state.

6.2 Attributes

The Route 9B site has several attributes that may enhance re-use of the property. Stratex identified the following attributes during this study:

- The Town owns the property outright without easements or restrictions.
- The site is centrally located within the town.
- The area near the site is served by infrastructure that includes electricity, telephone, public water, cell communications, and broad band.
- A significant transportation feature, the Maine Turnpike, abuts the property to the west.
- There is a forest of well-established pine and hemlock trees along the Webhannet River.
- Rock outcrops and the potential for shallow bedrock at the site represent a good foundation for large structures.
- There is a large garage at the site.
- There are about 10 acres of relatively flat land at the site.

Figure 13 shows the approximate location of site attributes.

With respect to natural features, the Webhannet River flows across the northern boundary of the site. The Webhannet River is the basis for several ecological attributes as highlighted by a program called "Beginning with Habitat." Beginning with Habitat is a collaborative effort of several state, federal, and private nonprofit agencies that provides information on wildlife and plant habitats across the state of Maine. The Wells Comprehensive Plan Update mapping (Southern Maine Regional Planning Commission, 2005) recognizes certain features of the Beginning with Habitat data for Wells. A full copy of features is available through the Maine Department of Inland Fisheries and Wildlife, Wildlife Resource Assessment Section in Augusta, Maine. The significance of the Beginning with Habitat data is discussed further below.

According to the Beginning with Habitat program, a rare animal was spotted on the Route 9B site. The type of animal and date of observation are not provided to protect the animal.

The riparian zone along the Webhannet River at the northern boundary of the site is designated by the United State Fish & Wildlife Service as "The top 25% rated habitat areas that are continuous areas of at least 5 acres" (Beginning with Habitat, 2005). This type of habitat is considered highly valuable for its contribution to the biological 'performance' of species based on the type and extent of environmental conditions present.

The site is part of a larger area identified as a "Large Habitat Block." The Beginning with Habitat program describes the importance of unfragmented blocks as follows:

Large Habitat Blocks provide habitat for certain plants and animals not already included in Riparian or High Value Habitats. These blocks are especially important to species with large home ranges, such as bobcat, and other species, such as the black-throated blue warbler, who may have small home ranges but will only be successful over the long term in larger habitat blocks. Large blocks also are likely to include a wider diversity of species than smaller blocks. Conservation of Large Habitat Blocks also presents opportunities to promote and preserve active farmland and woodlots, provide recreational opportunities, conserve aquifers, and maintain scenic vistas.

In addition to certain Beginning with Habitat features, the Wells Comprehensive Plan Update (Southern Maine Regional Planning Commission, 2005) also documents natural features of significance that are on, or near the Route 9B site. According to Map 11, Conservation and Current Use Taxation of the Comprehensive Plan, adjacent properties north of the Route 9B site are in the Tree Growth Taxation program. Comprehensive Plan mapping also indicates that the site is not in a FEMA mapped flood plain. As indicated previously, there are no wetlands from National Wetland Inventory mapping performed by the U.S. Fish and Wildlife Service. However, there appear to be smaller wetlands on the site that were not mapped by U.S. Fish and Wildlife wetland delineation methods.

6.3 Role of Maine Department of Environmental Protection

The DEP has regulatory authority over activities at closed landfills in the state of Maine. As such, the DEP has control over post closure land use activities. Stratex communicated with the DEP by telephone to discuss limitations to and opportunities for redevelopment. During our telephone communication, Robert Birk, of the DEP Division of Remediation, reiterated information expressed in three letters to the town dated 7/19/99, 9/16/04, and 11/29/04 (Appendix A). In particular, the DEP prohibits:

- The establishment of new structures or buildings on top of or within 100-feet of the solid waste boundary except roads and surface management systems.
- Excavation into the solid waste boundary.
- The use of the site for agricultural purposes except haying on a site-specific basis.

The DEP further states that the land use must be compatible with the cover system at a given site.

Mr. Birk offered examples of post closure activities at other landfills in Maine. He sent Stratex copies of correspondence from the DEP to municipalities in Maine regarding

maintenance, allowed activities, and certain regulatory limitations at closed landfills in 14 communities in Maine. Stratex prepared a summary of the DEP letters in Appendix B.

These letters of correspondence indicate that post closure land uses allowed by the DEP vary depending on the type of landfill and the closure design. For example, an athletic field was allowed by the DEP at a demolition landfill in Westbrook. However, the city was required to develop a conservative closure design and no permanent enclosed structures were allowed on the landfill. Furthermore, public water was required at the Westbrook site for drinking and watering and no water wells were allowed in the area of landfill.

Key points from these DEP letters of correspondence to municipalities include:

Site Drainage - Proper site drainage should be integrated into site construction and land use designs. In other words, land use activities should not interfere with site drainage at the closed landfill

New Development - Care should be taken to ensure that any new development near a landfill site is not impacted by contaminant migration. The DEP suggests this can be accomplished through easements, land purchase, or ordinances that would restrict land use on sites near a closed landfill.

Site Access – The DEP recommends that access to a closed landfill site should be managed to ensure that only appropriate uses occur at the site. Municipalities typically manage access with signs, fences, and gates.

Site Activities – Examples of land use at closed landfills provided by the DEP included passive activities such as equipment storage, and biking or walking along designated paths. In some cases, municipalities allow the use of All Terrain Vehicles or ATVs. However, ATV use has been a problem at some landfills, causing erosion and damage to landfill cover systems. The DEP recommends the following actions to limit harmful activities at closed landfills:

- Sign posting.
- Physical impediments and barriers.
- Ordinance enactment to prohibit harmful activities.
- Fines imposed and confiscation of equipment.
- Widely publicized arrest of violators.

Maintenance – The DEP correspondence contained many references about the importance of maintenance at closed landfills. This includes regular inspections, mowing the grass on the cover (to keep tree roots from damaging the cover system), and repairing gas vents or landfill covers as applicable.

Public Relations and Communication – The DEP encourages municipalities to keep landowners and citizens informed about monitoring and management activities at closed landfills. In certain cases of contaminant migration, public relations and communications includes informing owners downgradient of closed landfills about the risks of possible contamination in ground water.

Letters from the DEP to the various municipalities describe certain land use activities occurring at closed landfills in Maine. These activities depend on the physical setting of the landfill, the type of waste in the landfill, and the closure design. During phone conversations, Mr. Birk indicated there may be other re-use options for consideration at closed landfills in Maine. He is aware of activities in other parts of the United States and in Europe where successful landfill redevelopment has occurred. On several occasions, Mr. Birk has expressed a willingness to work with the Town to develop a conceptual land use plan that meets both the town's and the DEP's needs.

7.0 Town Needs and Interests

On June 28, 2005, Stratex, LLC conducted a facilitated forum on re-use for the Route 9B property. The purpose of this forum was to convene a group of leaders, visionaries, and neighbors in the Town to present feasibility findings and to discuss interests and needs as they relate to the 47 acres of land owned by the Town on Route 9B.

Notice for the meeting was posted in accordance with town protocol for public meetings. Individual invitations were mailed to forty-seven potential participants based on their municipal role, understanding of Town needs, and/or the proximity of their own land to the Route 9B site. The Town and the Selectmen identified this group of participants as key stakeholders who would help generate ideas for redevelopment options. Twenty people attended the forum, which lasted from 7:00pm until 9:00pm. One member of the press was present from the Biddeford Journal Tribune. No other members of the public attended.

The format of the forum was first, to present preliminary findings on site constraints and attributes, and, second, to engage stakeholders in creative thinking to develop a list of potential land uses at the Route 9B site. Information on site constraints and attributes presented at the meeting is described earlier in this report. This section of the study focuses on the creative thinking segment of the forum.

The group was distributed across three tables with 6 to 7 people per table. Participants from the same committee or household were placed at different tables to encourage the generation of new ideas without the potential for bias from established relationships. Each table chose a leader to facilitate the generation of land use ideas. Stratex oversaw the creative thinking process and answered technical questions.

Each table developed the following land use ideas:

Group 1
Construct a turnpike exit.
Do not construct a turnpike exit.
Save buildings until a complete plan is developed.
Leave the site alone (do not develop the site but secure it to prevent future illegal dumping)
Construct a monument describing what happened at the site.
Allow the site to be a wildlife commons.
Create a revenue producing use such as a commercial storage facility.
Allow the site to be used by a University for scientific study.
Clean the site (i.e., remove all the trash form the site).
Select a use that limits the town's liability.
Consider future eventualities such as public health.
Develop an Interim Management Plan to secure the site.

Group 2
Leave the site alone.
Block access (e.g., with a sand barrier).
Develop commercial use (distribution center, storage, hotel possibly directly linked to the Turnpike).
Develop communications towers.
Establish site as conservation land with trails, picnic tables, and access to the river.
Construct a connector road adjacent to the Turnpike.
Create a public facility.

Group 3
Cover the site and grow grass. The site has no value as business or industrial use.
Construct a fire station in the right front corner.
Develop bike and walking paths.
Protect the Webhannet River corridor.
Remove all buildings.
Cap the landfill.
Auction the buildings and add an incentive of a growth permit with each residential structure.
Move the large metal building (former Reed lot) and place on the Town Highway Department property on Route 9.
Cover and grow grass after all items are carried out.

Several points arose out of the discussions at the table and from the notes recorded. First, some participants were apprehensive about future land use at the site due to concerns

about public health. This resulted in a recommendation to "leave the site alone." When pressed for more information, participants generally concurred that the site must not be left alone in the current state. Participants discussed the need for improvements to minimize issues relating to improper use or access that could impact public health and/or the environment.

Second, some people felt there was a need for the site to generate revenue, perhaps to make up for the expense of purchasing the properties and performing environmental monitoring. Partnerships such as private/public relationships were presented at a preliminary level as possible mechanisms for redevelopment that might help generate revenue.

Stratex observed that some people feel it is too soon to consider redevelopment of the site. Anxieties about contamination and the significant cost to purchase the impacted properties are factors that are fresh in the minds of several neighbors and citizens. However, the majority of the participants at the forum were able to overlook this history and envision a larger goal of making the site safe and possibly useful.

Despite concerns, participants were productive in the generation of plausible future land uses that could bring value to a site that has been a recent liability for the Town. A review of land use ideas discussed at the forum reveals an intriguing feature. Several land uses are amenable to coexistence on the Route 9B site. For example, a cell tower, turnpike storage, and a connector road along the Maine Turnpike are uses that could coexist on the 47-acre site depending on site design and layout. Other land use ideas generated by participants, which may also be amenable to coexistence, include the construction of a hotel and the development of passive recreational areas such as pedestrian trails along the river corridor with areas for picnic tables.

The land uses generated at the forum typically fall into the following major categories:

Commercial
- Storage Facility (such as self storage units)
- Hotel (possibly with direct access to the Turnpike)
- Communications Towers
- Auction Buildings (provide "Growth Permits" as incentive to remove buildings)

Municipal
- Fire Station
- Storage site
- Garage
- Public Facility (such as playing fields)

Transportation
- Connector Road (between Route 9 and 9B)

Turnpike Exit

Recreation
- Bike and Pedestrian Paths
- Picnic Tables

Conservation
- Wildlife habitat
- River corridor protection

This section of the study focuses on the collection of preliminary interests for site re-use. It was the intention of this report to generate ideas without external influence from, for example, economic or market factors. It was also the intention of the Town Manager and Selectmen to limit meeting attendance to a discrete list of stakeholders, namely, committee members, town staff, and neighbors.

Stratex considers the facilitated forum successful for the generation of preliminary land use ideas. Stakeholders attended and participated to represent the voice of the community. People with different interests, professions, and backgrounds worked together to generate ideas that reflect some of the values of the citizens in the town. Through idea generation, the group revealed the potential for more than one land use to coexist at the site.

Stratex produced the following table based on the forum results and analysis of proposed land use options. Column 2 of this table shows the work tasks that would be required in order to develop the land into the option shown. In other words, the development of a Turnpike Exist would require that task **A) Remove buildings located on landfill,** be accomplished as well as the other lettered tasks shown. An indication of the land use option's compatibility with other land uses is shown in Column 3. Land use compatibility is dependent on the activity proposed for the site and the site design. For example, the establishment of a Wildlife Conservation Area could be compatible with the development of a recreational facility, depending on the proposed activity (i.e., walking and biking) and the site design.

Table 2 – Land Use Options Analysis

Land Use	Work Required (see notes below)	Compatibility with other Land Uses
1) No Development	***A, B***, **C**	Not applicable.
2) Turnpike Exit	***A, B***, **C**, F, G, H, I, J, K, L, N	4, 5, 6, 8, 9, 10
3) Wildlife Conservation Area	***A, B***, **C**, M	4, 7, 8
4) Scientific Study Area	***A, B***, **C, E**	2, 3
5) Commercial Development (linked to Turnpike Exit)	***A, B***, **C, D, E**, F, G, H, I, J, K, L, N	2, 8, 9, 10
6) Commercial Development (not linked to Turnpike Exit)	***A, B***, **C, D, E**, F, G, H, I, J, K, L	2, 8, 9, 10
7) Recreational Facility (for citizens)	***A, B***, **C, D, E**, F, G, H, I, J, K, L	3, 8, 10
8) Public Facility (for Town staff)	***A, B***, **C, D, E**, F, G, H, I, J, K, L	2, 3, 5, 6, 7, 9, 10
9) Connector Road	***A, B***, **C**, F, G, H, I, J, K, L	2, 5, 6, 8, 10
10) Communication Tower	***A, B***, **C**, E, F, G, H, I, J, K, L	2, 5, 6, 7, 8, 9

Notes:

A) Remove buildings located on landfill and secure others that are selected to remain.

B) Limit access to the site.

C) Cover exposed trash.

D) Place additional cover material in areas where PAH levels are high.

E) Fill standing water that is in contact with trash.

F) Perform test pit exploration to evaluate soil, bedrock, water table, and the extent of buried waste.

G) Apply for environmental permits.

H) Delineate wetlands.

I) Perform topographic survey.

J) Perform boundary survey.

K) Adjust tax map.

L) Perform archaeological survey.

M) Meet with local Conservation Groups to establish values to protect.

N) Negotiate with Maine Turnpike Authority.

One message from the forum was the need for an interim land use management plan for the site. Participants at the forum discussed a plan of this nature to minimize three potential risks: 1) To protect the property from additional dumping; 2) To reduce the potential for vandalism at existing vacant buildings; and, 3) To prevent harm to human health from improper use of the site.

A former landfill that is unattended is often the target of illegal dumping of waste. Stratex observed drums on the site that appeared to have been recently disposed of at the site during the site visit on 5/2/05. There are vacant houses on the site that are beginning to fall into disrepair. Not only does this reduce the potential value of these structures should they ever be considered for re-use, but it also has the potential to attract vermin and vandals. Also, the Wells Fire Chief indicated that a basement at one of the structures had water during a visit to the site. Furthermore, there may be soil gas entering the residences, which, if accumulated, could cause explosive conditions. There are other potential threats at the site such as exposed trash, contaminated surface water, and scrap metal that represent potential hazards.

Preliminary discussions by forum participants pointed to the need for measures to protect the site and public health in the interim prior to site remediation and re-use. Suggestions included the posting of signs and the installation of fencing. It would be prudent for the town to police the site and to install measures to make sure that no one accesses the site except town officials or their consultants.

Based on concerns of the forum participants and the potential hazards at the site, Stratex recommends the Town of Wells take immediate action to perform tasks A, and B of Table 2 as follows:

A) Remove buildings located on landfill and secure others that remain.
B) Limit access to the site.

Depending on land use activities envisioned for the site, tasks C, D, and E, should also be performed in a timely manner. These three tasks are dependent on remediation and land use design. Tasks C, D, and E could be delayed for a year or two while remediation and land use planning occurs, provided that tasks A and B are performed as soon as possible. Tasks C, D, and E include:

C) Cover exposed trash.
D) Place additional cover material in areas where PAH levels are high.
E) Fill standing water that is in contact with trash.

Tasks F through N would occur as needed, depending on the land uses proposed for the site as shown in Table 2 above.

The next steps in the planning process for the re-use of the Route 9B site depend on the interests of the Selectmen and possibly Town Meeting. Steps the Town may want to consider include:

1) Collect additional information on the values, needs, and interests from a broader group of citizens of the Town. Additional information on values, needs, and interests can be collected by surveying citizens. Alternatively, the Town could conduct a town-wide public workshop that could serve to educate and inform citizens about the issues, as well as collect information from them about their interests.
2) Explore land use concepts by engaging a Landscape Architect to develop conceptual designs based on town values and interests.
3) Estimate cost of remediation and land use options.
4) Perform marketing study for any commercial or public/private land use options.

Stratex envisions that these planning tasks would occur concurrently with ongoing monitoring and remediation planning.

8.0 Potential Funding Sources

Funding is available for certain projects to assist, for example, with site remediation, conservation, and/or re-development of land. Some projects funded by federal and state organizations include the remediation and redevelopment of "brownfield" sites, the protection of sensitive watersheds, and the control of non-point source pollution.

As part of this study, Stratex developed a preliminary list of potential funding sources. Appendix C contains a list of organizations that provide funding through grants and/or loans. This list also contains a contact telephone number and website address. A brief description of the funding organization is also provided. This is a preliminary list that will require additional analysis depending on the type of funds the town may wish to apply for. Stratex originally intended on compiling funding amounts and application schedules. However, due to the large number of possible funding sources and project types, Stratex suggests refining the potential project type (i.e., future land use) before exploring the more intricate details of the funding sources.

Appendix C also contains information on search engines for funding databases. These types of databases require the input of certain information regarding the project. For example, if the project involves sensitive watershed protection, that information would be entered into the search criteria and several alternative funding sources are then provided by the database.

Stratex can assist with the next step in evaluating potential funding sources should the Town wish to explore financial assistance for the redevelopment of the Route 9B site. Alternatively, the Town may want to work with a local or regional Economic Development director, or the Southern Maine Regional Planning Commission to explore project funding.

9.0 Technical Data Supplementation

Previous data collection at the Route 9B site focused on qualifying and quantifying contamination at the closed landfill. This work included, for example: geophysics, rock and soil borings, water quality testing, soil testing, and soil gas monitoring. Data collection was performed in areas where buried waste or contaminated ground water was suspected to be present. Explorations also occurred in limited peripheral areas of the site. However explorations did not encompass the entire site. Furthermore, the work performed at the site to date did not include the collection of data necessary to conduct land use planning.

During this needs and feasibility assessment for site re-use, Stratex identified areas where additional data are required to address redevelopment planning needs. The following list summarizes areas where technical data supplementation is warranted for redevelopment planning.

Archaeological survey - Stratex contacted the Maine Historic Preservation to inquire about the potential for historical or archaeological significance at the Route 9B site. The premise is that historical or archaeological significance site should be taken into consideration during redevelopment of the Route 9B site. Mr. Earle Shettleworth, Jr., indicated that areas within 200 meters of the Webhannet River have the potential of being prehistoric archaeological sites. Mr. Shettleworth indicated that a Phase I archaeological survey would determine whether prehistoric archaeological sites are present.

Wetland mapping - It is likely there are wetlands on the Route 9B site. However, wetlands are not mapped on the NWI wetland maps as shown on the Wells Comprehensive Plan Update, 2005. Due to the potential for wetlands to exist at the site, it would be prudent to have a wetland survey done by a qualified professional.

Test pit survey - Surficial geology at the Route 9B site is complex, especially in areas where the soils transition from sand and gravel to clay. There are also two large areas of exposed bedrock in the northeast quadrant of the site and bedrock may be shallow in other areas, as well. Furthermore, Stratex observed several low wet areas where the seasonal high water table appeared to be near or at ground surface. Finally, it does not appear that the limit of solid waste has been accurately determined. For these reasons, Stratex recommends test pit exploration to evaluate soil transitions, shallow bedrock, water table characteristics, and the extent of buried waste.

Property boundary survey – Stratex recommends the Town retain a registered surveyor to perform a boundary survey of the property owned by the Town of Wells.

Deed Notices--The Town should consult with its attorneys concerning the placement of notices in the Registry of Deeds with the deeds of lots that have underlying wastes that a former landfill exists on the property (06 096 C.M.R. 401(5)B(4)).

Topographic survey – As land use planning proceeds at the Route 9B site, the Town will need to have a topographic survey of the site at a contour interval of no more than 2-feet. This work could be done concurrently with the property boundary survey provided that the surveyor retained is qualified for both types of surveys.

Tax map adjustment – During mapping exercises for the project, Stratex observed that the digital tax map provided by the DEP appears misaligned relative to Route 9B and the Maine Turnpike. Upon completion of the property boundary survey, Stratex recommends that the Town coordinate realignment of the digital tax map and provide copies to organizations that have been using this map such as Wright-Pierce, the DEP, and the Southern Maine Regional Planning Commission.

10.0 Recommendations and Conclusions

As the first step in planning for future land use, the Town of Wells conducted this needs and feasibility assessment to explore uses for 47 acres of town-owned land located on Route 9B. This study evaluated the constraints and attributes of the site as a foundation for re-use planning. A facilitated meeting provided a forum for stakeholders to generate ideas for potential future use of the site.

The Town implemented this study at an important point: during environmental monitoring at the site, and prior to designing a site remediation program. Several remediation options exist for the site. A re-use planning program that is concurrent with remediation planning will foster the efficient and effective use of town resources. This study has resulted in the development of several recommendations as follows:

- Develop an interim management plan for the site to:
  - Remove buildings that are located directly on the landfill and secure other buildings that remain; and,
  - Take measures to limit site access such as install fencing and post signs.
- Perform measures to reduce issues related to exposed trash and buried waste:
  - Cover exposed trash.
  - Place additional cover material in areas where PAH levels are high.
  - Fill standing water that is in contact with trash.

- Conduct an archaeological survey, wetland mapping, test pit survey, property boundary survey, topographic survey, and digital tax map adjustment, as needed for future land use planning.

The Town will also need to apply for environmental permits, and meet with local conservation groups and/or state officials (i.e., Maine Turnpike Authority) depending on the nature of the proposed land uses at the site.

Stratex appreciates the opportunity to work with the Town on this study and looks forward to providing additional assistance as requested..

References

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Loiselle, M. 2002. Estimated Overburden Thickness in the Kittery 30x60-minute Quadrangle. Maine Geological Survey, Department of Conservation. Open File No. 02-3.

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Smith, G.W. 1999. Surficial Geology, North Berwick Quadrangle, Maine. Open-File No. 99-92.

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Website References

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Historic USGS Maps, UNH Dimond Library

http://www.state.me.us/dep/blwq/docwatershed/ip-wshds.htm
Maine Nonpoint Source Priority Watersheds Program, Maine Department of Environmental Protection

http://www.wellstown.org/Public_Documents/WellsME_Planner/ComprehensivePlan/index
Town of Wells Comprehensive Plan

Appendix A

DEP correspondence regarding post closure land uses

STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

July 19, 1999

ANGUS S. KING, JR.
GOVERNOR

MARTHA KIRKPATRICK
COMMISSIONER

Mr. Johnathan Carter, Town Manager
Town Office
Town of Wells, P.O. Box 398
Wells, Maine 04090

RE: Proposed use of closed Town landfill

Dear Mr. Carter:

The Town has requested a preliminary advisory opinion from the Department pertaining to a use concept for the closed landfill. The proposed use would be the development of a police firing practice range on top of the landfill.

The following comments are based only upon a phone description of the concept by Claire Betz of Woodard and Curran Co.:

1. Solid Waste Regulations Chapter 401.B(5) establish allowable final uses for landfill areas that have been properly closed. *Proposed Final use. The use must be compatible with the cover system. The following activities are prohibited at any closed landfill:*

   (a) Establishment of any structures or buildings, including transfer stations, on top of or within 100 feet of the solid waste boundary o, except that roads and surface management systems are allowed within 100 feet of the solid waste boundary; and

   (b) *The use of the site for agricultural purposes, except that the department may allow haying on a site-specific basis.*

2. It is not clear whether the proposed use would in fact be compatible with the cover system. There is a concern that projectiles might penetrate the cover system and over time degrade its function by allowing additional rainwater to penetrate. This would be contrary to the function of the cover system. What is the expected penetration of projectiles? Would penetration be only

AUGUSTA
17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY
PRESQUE ISLE, MAINE 04769
(207) 764-0477 FAX: (207) 764-1507

into the 6" of topsoil or actually into the clay cover system?

3. There is also a concern that over the long term the lead or other projectile metals might result in soil levels that exceed TCLP levels as Hazardous Waste. This means that the Town would need to monitor the situation and agree to a soils cleanup if this were ever necessary;

4. Note also that Regulations do not allow permanent structures on and/or penetrations of the cover system. What would be the access road and on-cap structural requirements for such a facility? All of this would need to be detailed on an existing site plan for the closed landfill. Overhead and cross-sectional configurations would be needed;

5. There was some discussion of the possible alteration of a portion of the cover system in order to limit or eliminate the concerns stated in #2 above. It was suggested that gravel and chopped tires might be placed over the downrange areas of the cap. It is not clear whether such alterations would be incompatible with the function of the cover system since normal vegetative growth supports evapo-transpiration and thus aids the removal of some significant portion of rainwater that falls on the cap.

As you can see from the above discussion, while Regulations do not outright preclude the possibility of approval for your proposal, there are a number of serious concerns that would have to be thoroughly and adequately addressed prior to Department approval. Please let me know if you wish to furnish us with additional, more specific information on the project and whether you will be responding to the concerns noted in this letter. Thank you.

Sincerely,

Robert Birk

Robert Birk
Division of Remediation
Bureau of Remediation and Waste Management

Pc: Claire Betz, Woodard and Curran Co.
David Burns, Mark Hyland, Ted Wolfe; DEP

WellsPCloUse.DOC

September 16, 2004

Jonathan Carter, Town Manager
Town of Wells
P. O. Box 398
Wells, Maine 04090

RE: Future uses, Route 9B landfill area

Dear Mr. Carter:

We understand that the Town consultants are currently completing a review of possible options for land use in the area of the Wells 9B landfill. Implementation of any re-use plan would be completed after the homes on and in the immediate vicinity of the landfill are moved or demolished. The Town requests DEP guidance on the possibility of use of the landfill and surrounding areas for athletic fields, parking and other associated facilities. Only a concept has been presented, and no specific plans have been produced.

There is guidance available to consider use and possible limitation to use of the area. The possible specific sources should be considered:

1. Regulations Chapter 401.4 (D)(5) (a+b), pg. 41 relate allowances and prohibitions for use on and within 100' of the landfill solid waste boundary (SWB). DEP interprets these Sections so as to require us to be conservative as to structures and activities that would be on top of the actual SWB area, but less restrictive for the area within 100' of the SWB. DEP has no authority to limit any uses in the area beyond 100' from the SWB.

2. A DEP Report on investigations at the dump is dated April 2003. Section 8.5 (pages 25-26) of that Report provided guidance to area residents on this same subject. Also, Report Addendum-A with attached Figure A.1. dated May 9, 2003 provided additional guidance on this same subject.

Additional to these sources, DEP believes it is very important to consider the strong public perception of risks posed to public health in the immediate vicinity of the landfill. Investigations have found Volatile Organic Compounds and other landfill gases at levels of possible concern in the soils located below ground level, directly above and immediately adjacent to landfill wastes. DEP has stated that it does not view it likely that this soils gas situation would translate into serious risks via air quality above ground in these same areas, unless vapors were to enter enclosed building structures. Gases attributable to the landfill have not been found within area homes. In actuality, any gases escaping to the surface and then to the atmosphere itself should be immediately diluted unless they were trapped within an enclosed structure, and again we have not found that to be the case here.

There may not be any health concern to place asphalt for a parking area above the landfill SWB, because in addition to gas dilution in the atmosphere, the paving would act as a gas barrier itself. Our concern with this concept, however, would be that there still may be an adverse perception of health risks from gases that might be sent laterally to the edges of the parking area. Such concerns may drive the need for sub-pavement gas venting systems and periodic monitoring at exit points, all of which would entail large, continuing expense. DEP does not want to encourage this type of use if there is going to be continuing concern for public health, and possibly be the call for additional studies either before or after that development.

We would, however, consider the use of areas beyond the SWB, even within 100' of it, for paved or gravel parking for possible athletic fields to be built further away. An access road and even electric utility poles and lines could also be run through this area outside of the SWB. The regulations appear to provide us with the ability to make thes types of allowances. It is suggested that any athletic field itself with accompanying seating, food stands and other supportive structures, be sited beyond 100' from the SWB of the landfill. Please refer to DEP Report Addendum Figure A.1. cited above for a depiction of the landfill SWB and the area known to be within 100' of it.

Please also recall from previous correspondence that there is still the need for us to address the final disposition of the landfill SWB area itself, including the need to cover PAH contaminated materials, to grade basement areas, to properly abandon some water wells, etc. Regardless of these partial limitations on use, the Town should still have available the bulk of the property for parking lots, athletic fields or other uses.

Note that no extensive environmental assessment of the outlying areas have been made, so that we cannot categorically state that these other locations are free from hazards that we have not identified. The Town might want to obtain a professional opinion from its own consultant as to any risks that might be posed through future use of these areas beyond the area regulated by DEP. While any major risks are unlikely to be found here, it may bring some peace of mind to residents to know that you have at least considered this possibility.

I can be reached at 287-8551 if you wish to further discuss the concept of future use of property areas located above or within 100' of the landfill solid waste boundary. Other uses of the properties are completely up to the Town's discretion.

Sincerely,

Robert Birk
Division of Remediation,
Bureau of Remediation and Waste Management

Pc: Lissa Robinson
Stratex, Inc.
Peter Eremita, Mark Hyland, John Wathen, Ted Wolfe; MDEP

Wells9BPCUses904.DOC

November 29, 2004

Jonathan Carter, Town Manager
Town of Wells
P. O. Box 398
Wells, Maine 04090

RE: Feasibility assessment-Route 9B landfill area

Dear Mr. Carter:

Thank you for the copy of the Stratex, Inc. September 22, 2004 *Scope of Work* for the Wells 9B landfill feasibility assessment and redevelopment project. We have the following comments concerning this submission:

1. DEP guidance concerning general reuse of the area was addressed in a previous letter to the Town dated September 16, 2004. This letter relates, from a DEP regulatory point of view, general feasibility of construction and activities in areas a) directly on the solid wastes, b) in the area less than 100' from the solid wastes, and c) in the remaining area beyond 100' from the solid waste boundary. We trust that the previous guidance will be helpful to you and the various committees considering such work. We will certainly be available to review concepts and detailed plans as they arise during the process to assure that they are in keeping with the guidance that has been provided. Please keep in mind that DEP cost sharing is not available for either the feasibility study or any redevelopment implementation efforts.

2. Please recall that the Town still needs to address several items of unfinished business that are part of the investigation work previously approved by DEP:

   a. PAH compounds on the Breton lot need to be addressed through soil cover or other approved means;

   b. Wastes at the surface behind the Breton business need to be addressed either through sufficient cover, excavation and proper disposal or some other approved means;

   c. Several previously identified residential water wells need to be properly abandoned.

   While DEP 90% cost sharing is available for completion of these particular items, the funds may not be immediately available in the form of reimbursement due to current budgetary constraints.

   Thank you for providing us with the opportunity to comment on the Scope of Work for the Feasibility Study.

Sincerely,

Robert Birk
Division of Remediation,
Bureau of Remediation and Waste Management

Pc: Stratex, Inc.
Peter Eremita, Mark Hyland, John Wathen, Ted Wolfe;
MDEP

Wells9BPCUses112904.DOC

Appendix B

Summary of DEP Landfill Post Closure Activities in Maine

Summary of DEP correspondence regarding
Landfill Post Closure Activities at closed landfills in Maine

The following information summarizes information relayed from the DEP to Municipalities regarding maintenance, allowed activities, and certain regulatory limitations at closed landfills in 14 communities in Maine.

Corinna

- No construction within 100-feet of solid waste boundary. Exceptions for roads and drainage structures in buffer.
- Recommendations for the purchase of development rights adjacent to property to restrict permanent construction and use of ground water near the landfill.
- Recommendations for easement or outright purchase of adjacent property for the Town to access ground water monitoring locations.

Union

- Recommendation to inform owners downgradient of landfill about risk of possible contamination in ground water.
- Monitoring and limit use of site by ATV's to minimize damage to landfill cover.
- Recommendation for the removal of tires inappropriately disposed of at landfill.

North Vassalboro

- DEP noted possible risks from landfill for future development on undeveloped parcels near landfill.

Freeport

- Recognition of Town repair to gas vents.
- Annual landfill maintenance required includes mowing grass on top of landfill and general inspection of site by Town personnel.
- Recommendation to review residential property and wells adjacent to and within 2000 feet of landfill for possible risk to drinking water.

Milbridge

- Recommendation to remove items stored on top of landfill cover (snow plows)
- DEP indicated flexibility with the placement of roads and permanent structures.
- Grass on landfill cover needs annual mowing.
- Gate needs repair.
- Site needs "No Dumping" signs.
- Town is required to place notification of the landfill in the property deed.

Machiasport

- Grass on landfill cover needs annual mowing.
- Site needs signs stating that ATV's must stay off landfill boundary.
- Residential properties near landfill need to be evaluated for possible risk to drinking water.
- Undeveloped land near landfill is potentially at risk of contamination to ground water.

Lubec

- Grass on landfill cover needs annual mowing.
- Undeveloped land near landfill is potentially at risk of contamination to ground water.

Fairfield

- DEP allowed placement of road in 100-foot solid waste buffer. Town had to relocated road to avoid placement on the solid waste.
- Heavy equipment needs to be kept off landfill (evidence of tracks).

South Portland

- Off-road vehicles caused serious damage to landfill cover.
- City requested placement of a bicycle trail near the landfill. DEP views the construction of a bike trail as needing to meet the same requirements as a road (outside solid waste boundary and not interrupting site drainage).
- Light bicycle and pedestrian traffic permissible in buffer.
- DEP warns about landfill gases near toe of landfill.

Westbrook

- Conservative closure design for demolition debris landfill required in order to allow post-closure landuse of athletic field.
- No permanent enclosed structures allowed on landfill.
- Public water required for drinking and watering (no water wells allowed in area of landfill).

Sorrento

- Grass on landfill cover needs annual mowing.
- New homes near landfill needs water quality monitoring.

Calais

- Severe damage to landfill cover inside solid waste boundary from off-road vehicles.
- Grass on landfill cover needs annual mowing.

Bangor

- Public nature trail (pedestrian, bicycles, snowmobiles) in 100-foot buffer of closed landfill is allowed provided that it reasonably accommodates site drainage. Motorized vehicle access prohibited (access restrictions considered).
- Haying of grass allowed on non-steep slopes.

Gorham

- Town made general request for DEP opinion regarding landfill post-closure use (no specific use identified).

Solution to landfill cover damage by off-road vehicles (general):

Sign posting.
Physical impediments and barriers.
Ordinance enactment to prohibit harmful activities.
Fines imposed and confiscation of equipment.
Widely publicized arrest of a violator.

Appendix C

Potential Funding Sources
For
Remediation and Redevelopment

POTENTIAL FUNDING SOURCES

EPA Brownfields Cleanup and Redevelopment
(202) 566-2777 http://www.epa.gov/brownfields/
EPA's Brownfields Program provides direct funding for brownfields assessment, cleanup, revolving loans, and environmental job training. To facilitate the leveraging of public resources, EPA's Brownfields Program collaborates with other EPA programs, other federal partners, and state agencies to identify and make available resources that can be used for brownfields activities.

EPA Clean Water State Revolving Fund (CWSRF or 319 grant funding)
(202) 564-0752 http://www.epa.gov/owmitnet/cwfinance/cwsrf/
(207) 287-3901 http://www.state.me.us/dep/blwq/docgrant/319.htm
Clean Water State Revolving Fund (CWSRF) programs provided an average of $3.8 billion over the past five years in low interest loans to fund water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management. The primary objective of Nonpoint Source Water Pollution Control projects is to prevent or reduce nonpoint source pollutant loadings entering water resources so that beneficial uses of the water resources are maintained or restored. Maine public organizations such as state agencies, soil and water conservation districts, regional planning agencies, watershed districts, municipalities, and nonprofit (501(c)(3)) organizations are eligible to receive NPS grants.

USDA Rural Development
(207) 990-9160 http://www.rurdev.usda.gov/me/index.htm
USDA Rural Development provides financing for many different programs that benefit the citizens of rural Maine. Assistance includes multi-family housing programs, water and sewer loan and grant programs, as well as fire, rescue, and medical service programs.

Rural Utility Service (RUS)
(202) 690-2670 http://www.usda.gov/rus/water/index.htm
Water and Environmental Program (WEP) provides loans, grants and loan guarantees for drinking water, sanitary sewer, solid waste and storm drainage facilities in rural areas and cities and towns of 10,000 or less. WEP also makes grants to nonprofit organizations to provide technical assistance and training to assist rural communities with their water, wastewater, and solid waste problems.

Rural Community Assistance Program (RCAP)
(202) 408-1273 http://www.rcap.org/programs/sdwap.html
Provides technical assistance grants to rural communities with population of 10,000 or less. Relevant projects include watershed surveys, delineation of wellhead protection areas, inventories of existing land uses and potential risks to water supplies and designation of land use controls to minimize the risks of resource degradation from future development.

U.S. Fish & Wildlife, North American Waterfowl Management Plan
(207) 781-8364 http://www.fws.gov/northeast/gulfofmaine/
The North American Waterfowl Management Plan, established to conserve the continent's remaining wetlands and increase migratory bird populations, is funded with appropriations from the North American Wetlands Conservation Act (NAWCA). This international effort provides large matching grants (up to $1,000,000 in federal funds) to manage, restore and/or acquire habitat, through purchase or easement. In addition, a small grants program (less than $50,000 in
federal funds) is available to encourage new partnerships.

Natural Resources Conservation Service (NRCS)
(202) 720-4527 http://www.nrcs.usda.gov/programs/
NRCS's natural resources conservation programs help people reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters. Public benefits include enhanced natural resources that help sustain agricultural productivity and environmental quality while supporting continued economic development, recreation, and scenic beauty.

Department of Housing and Urban Development
Community Development Block Grant Program
(207) 945-0467 www.hud.gov/cpd/communitydevelopment/programs/cdbg.html
The Department of Housing and Urban Development sponsors this program to assist developing viable communities by providing decent housing and a suitable living environment and by expanding economic opportunities primarily for persons of low and moderate income. Specific activities may include public services, acquisition of real property, relocation and demolition, rehabilitation of structures, and provision of public facilities and improvements, such as new or improved water and sewer facilities.

National Oceanic & Atmospheric Administration
(301) 713-0926 http://www.ago.noaa.gov/grants/
NOAA provides financial assistance awards for activities such as planning, market research, and needs development in support of the agency's mission.

Maine State Planning Office, Community Planning and Investment Program
(800) 662-4545 http://www.state.me.us/spo/landuse/finassist/grants.php
The Regional Challenge Grant Program provides non-competitive grants to support promising
regional initiatives designed to establish new mechanisms for managing governmental affairs
more efficiently while integrating transportation, economic development, natural resource protection, and land use management more effectively, consistent with smart growth principles.

Maine Bureau of Parks & Lands, Land & Water Conservation Fund
(207) 287-4962 http://www.state.me.us/doc/parks/programs/community/lwgrants.html
The Land and Water Conservation Fund Act of 1964 (LWCF) was established to assist federal, state and local governments in the acquisition and/or development of public outdoor recreation facilities. Administered at the federal level by the National Park Service and at the state level by the Bureau of Parks and Lands in the Maine Department of Conservation, LWCF grants can provide up to 50% of the allowable costs for approved acquisition or development projects.

Maine Department of Transportation, Environmental Projects and Grants
(207) 624-3100 http://www.state.me.us/mdot/projects-grant-applications/apply_for_environmental.php?tloc=5&loc=35
The Maine Department of Transportation has several programs for Maine communities: Maine DOT's Community Gateways program competition assists Maine communities in enhancing transportation corridors and community landscapes.

The Surface Water Quality Protection Program (SWQPP) is a cooperative endeavor that joins local, state and federal organizations in efforts to reduce the effect of polluted stormwater runoff from state highways and other MDOT transportation facilities.

The Transportation Enhancement (TE) Program is a federal/municipal match program offering a funding opportunity to help communities expand their transportation and livability choices.

Environmental Systems Research Institute (ESRI)
(800) 447-9778 www.esri.com
ESRI has developed a grant program called Community Development/Public Works Grants for Livable Communities, which are designed to foster and support the integration of GIS technology within community development agencies throughout the United States. The ESRI Community Development awards provide software solutions, data, and training to local governments and communities for projects for a host of applications that include environmental protection and public utilities.

The Libra Foundation
207-879-6280 http://www.librafoundation.org/
Libra Foundation is a private foundation established by Elizabeth B. Noyce that makes grants and contributions to charitable organizations for activities, operations, or purposes which take place in the State of Maine.

The New England Grassroots Environment Fund (NEGEF)
(802) 223-4622 http://www.grassrootsfund.org
The New England Grassroots Environment Fund (NEGEF) is a small grants program in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. It provides grants of up to $2,500 to fuel civic engagement, local activism, and social change.

SEARCHING FOR GRANTS

Grants.Gov
(800) 518-4726 http://www.grants.gov/
Grants.gov allows organizations to electronically find and apply for competitive grant opportunities from Federal grant-making agencies. Grants.gov is an effective access point for over 900 grant programs offered by the 26 Federal grant-making agencies.

EPA Catalog of Federal Funding Sources for Watershed Protection
(202) 566-1155 http://cfpub.epa.gov/fedfund/
The Catalog of Federal Funding Sources for Watershed Protection Web site is a searchable database of financial assistance sources (grants, loans, cost-sharing) available to fund a variety of watershed protection projects.

Directory of Watershed Resources, Environmental Finance Center, Boise State University
(208) 426-4990 http://efc.boisestate.edu/
The Environmental Finance Center in Boise has developed a searchable database of funding sources. This database is provided to assist local communities and watershed groups in finding creative funding solutions to support their own plans for environmental protection.

Maine Philanthropy Center
(207) 780-5029 http://www.megrants.org/mpc/home/mpchome.cfm
The Maine Philanthropy Center is a nonprofit organization to promote effective philanthropy in Maine by: convening & facilitating interaction among Maine funders, assisting nonprofits in becoming better grant seekers, serving as a bridge between funders & nonprofits, providing leadership to increase Maine's philanthropic resources.

Maine Community Foundation
(207) 667-9735 http://www.mainecf.org/
The Maine Community Foundation is a resource for donors seeking to provide long-term support to strengthen Maine communities. MCF is known for its innovative grant program, financial strength and prudent investment strategies.