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### A. Office, Equipment, and Staffing

The proposal must describe and list the field and office equipment to be used for the work tasks. It must also describe the office and field staffs' experience in the operation of the equipment.

Laboratories used to analyze water, air, and soil samples for the project must be certified by the Massachusetts Department of Environmental Protection. Therefore, the proposal must include a copy of the DEP certification of laboratories that the prospective consultant will use for sample analyses. The Town reserves the right to inspect said laboratories as part of the consultant selection process or at any time during the period that the consultant is working on this project. In the event that the inspection(s) reveal unsatisfactory conditions at the laboratories, the Town reserves the right to require that the consultant use the services of another certified laboratory.

### B. Project Organization

The proposal must provide a project organization chart which shows the relationship of project team members to each other under a manager and the relationship of the team to the Town. The chart must include the responsibilities of the project team members.

### C. Staffing and Schedule Chart

The proposal must provide a staffing and schedule chart indicating the team members to be used on the project and their job titles, job description, tasks, and time allotment of each one to carry out the tasks within the time frame of the contract.

Provide a staffing and schedule chart indicating present and future staffing commitments to the prospective consultant's other ongoing or upcoming projects and how this work will be staffed.

## Clarification of RFQ/P Content and Responses

Questions from prospective consultants on the RFQ/P documents will be answered by the IDENTIFY TOWN OFFICIAL at a meeting of prospective consultants and the Town. The meeting will be held at TIME, DATE & LOCATION This will be the only opportunity for prospective consultants to make inquiries about the RFQ/P documents. Questions on the RFQ/P will not be answered over the telephone.

If clarification of the contents of any RFQ/P Response is required, the Town will request clarification by either written or in-person request to the prospective consultant. Prospective consultants must be prepared at any reasonable time to visit the Town's offices to clarify their responses or review information. Unless otherwise stated, the Town contact is:

IDENTIFY with ADDRESS & PHONE #

## Submission of RFQ/P Response

The original and five copies of the prospective consultant's response to

the RFQ/P shall be submitted not later than the DATE AND TIME and shall be addressed to Town's contact person identified above.

Responses received later than the specified date and time will not be considered in selecting a consultant firm to perform the work.

#### Review of RFQ/P Response

Upon receipt of the RFQ/P Responses, the Town will evaluate Part I (Contractual Requirements) of all respondents. For those prospective consultants deemed to be qualified under Part I, the Town will review Parts II - IV.

#### Oral Presentations

Following evaluation of the proposals, at a date to be announced, each prospective consultant team found to be fully qualified and responsive may be invited to make an oral presentation of its RFQ/P Response to the Town. The presentation must be made by the proposed project manager and other top level team members expected to be assigned to this work. Such oral presentations shall, as a general rule, be limited to approximately 30 minutes for presentation plus 30 minutes for questions.

#### **4.0 COST EVALUATION**

The proposal will be evaluated on overall price and ranked from least costly to most costly based on the projected levels of effort and costs provided in this component. Proposals must present the cost for conducting each task required to complete the project as described both on the Department's manual and in the prospective consultants proposal. Proposals should include both direct and indirect costs.

#### **5.0 SELECTION OF A CONTRACTOR**

The results of the evaluation of each proposal will be compared by the Town and a final ranking shall be made considering management, technical merit, and capability of the consultant. The cost estimate contained in the proposal shall also be considered in the final selection of a consultant. In that regard, the Town will primarily consider the need to provide a comprehensive array of specialized services to accomplish the project including the need for detailed knowledge of the Town's solid waste program, policies and procedures. The overall goal of the evaluation process shall be to recommend award for the contract to the proposal which meets the requirements of the RFP/Q and is at the same time cost-effective.

If after completing this evaluation, the Town finds that two or more proposals are more or less equal, it reserves the right to re-evaluate said proposals placing greater emphasis on any and all of the following factors:

1. Price
2. Past performance record
3. Firm's special experience or abilities
4. Capacity of the firm to accomplish the work
5. Size and availability of firm personnel
6. Other criteria related to the firm's ability.

#### **6.0 ATTACHMENTS**

**ATTACHMENT A: Scope of Services Attachment A: Outline for Solid Waste Site Assessment**

The Scope of Services provides a detailed outline of activities which need to be conducted for the initial site assessment process to be completed under this RFP.

The Outline(s) for Solid Waste Site Assessment contained in this manual should be included as an attachment to the RFP/Q.

**ATTACHMENT B: Technical Evaluation Criteria**

The technical evaluation criteria is used to group consultants based on their ability to perform the required services. It provides criteria on which to rate proposals as unacceptable based on a minimum level of competence, and advantageous and highly advantageous based on experience in performing the tasks required for landfill assessment and closure. The following could be used as a guide in performing a standardised evaluation of proposals:

**CRITERIA**

! Completeness

**MINIMUMS**

! Complete response to RFP

**COMPARATIVE ADVANTAGEOUS** N/A

**HIGHLY ADVANTAGEOUS** N/A

**CRITERIA**

! Conformance to Technical and Scheduling Requirements

**MINIMUMS**

! Full Conformance

**COMPARATIVE ADVANTAGEOUS** N/A

**HIGHLY ADVANTAGEOUS** N/A

**CRITERIA**

! Proposed Service

! Ability to provide requested service

**MINIMUMS**

! Proposal shows that consultant has the capacity to provide the required services.

**COMPARATIVE ADVANTAGEOUS**

! Proposal shows that consultant has an established relationship with all sub-contractors of at least 2 years.

**HIGHLY ADVANTAGEOUS**

! Proposal shows consultant has the ability to provide established services without sub-contracting and/or has an established relationship of more than three years.

**CRITERIA**

! Proposed Service

! Experience in Assessment and Closure services

**MINIMUMS**

! Proposal shows consultant has satisfactorily conducted at least one landfill or waste site assessment and closure which included a groundwater and gas monitoring program.

**COMPARATIVE ADVANTAGEOUS**

! Proposal shows consultant has satisfactorily conducted at least one landfill or waste site assessment and closure under the DEP DSWM or BWSC guidance.

**HIGHLY ADVANTAGEOUS**

! Proposal shows consultant has satisfactorily completed more than three assessment and closures assessment using Department guidance.

**CRITERIA**

! Timing

**MINIMUMS**

! The consultant's proposal must fall within 3 months of the proposed schedule.

**COMPARATIVE ADVANTAGEOUS** N/A

**HIGHLY ADVANTAGEOUS** N/A

**CRITERIA**

! Staffing  
! Availability

**MINIMUMS**

! The consultant has the necessary staff to perform the required services.

**COMPARATIVE ADVANTAGEOUS**

! The consultant has the necessary staff dedicated to perform the required services.

**HIGHLY ADVANTAGEOUS**

! The consultant has the necessary staff dedicated & designated back-up staff to perform the required services.

**CRITERIA**

! Staffing  
! Experience

**MINIMUMS**

! The consultant's project manager has a minimum of 2 years of site assessment and closure experience.

**COMPARATIVE ADVANTAGEOUS**

! The Consultant's project manager has more than two year's site assessment and closure experience and 50% of support staff has one year's site assessment and closure experience.

**HIGHLY ADVANTAGEOUS**

! Project manager has a minimum of 4 years of site assessment and closure experience, and 50% of the support staff has more than 2 years assessment and closure experience.

**ATTACHMENT C:**

All proposals must include the completed certificate of non-collusion.

**CERTIFICATE OF NON-COLLUSION**

The undersigned certifies under penalties of perjury that this bid or proposal has been made and submitted in good faith and without collusion or fraud with any other person. As used in this certification, the word "person" shall mean any natural person, business, partnership, corporation, union, committee, club, or other organization, entity or group of individuals.

\_\_\_\_\_  
Name of person signing bid or proposal

\_\_\_\_\_  
Name of Business

## APPENDIX E. MUNICIPAL FEE PROGRAMS

Survey information has been collected from a variety of sources, including the Massachusetts Municipal Association surveys, recycling equipment grant applications to the Department of Environmental Protection, published newspaper accounts, a Kennedy School of Government survey and anecdotal evidence. This 1993 data was still being collected and verified when the last edition of this manual was being prepared. The information in this appendix has not been updated for this edition. However, Chapter 9 has been updated with information on .

**Almost half of all Massachusetts cities and towns currently charge some form of user fee for solid waste management.** Based on the information collected to date, 169 of the 351 municipalities have a user fee. Of these 169 cities and towns, 84 have a flat rate for drop-off at landfills or transfer stations, and 14 have a flat rate for curbside pick-up. At least 16 communities do not provide municipal rubbish service of any type, and their residents are served through private subscription service. Finally, 55 communities currently charge for rubbish service on a volume basis, either for curbside collection or drop-off. This last group, which represents 16% of the municipalities, has chosen to do the right thing by encouraging resource conservation and recycling through the establishment of unit based user fees.

Volume based user fee: Resident pays per bag, barrel, or other measurable unit. In this system a residents' disposal costs reflect the amount they throw away. The DEP supports this system because it encourages waste reduction, recycling, and awareness.

Flat rate user fee: Residents pay an annual fee for disposal of rubbish regardless of weight or volume. There is no variation in the fee to reflect annual usage. While this system may help a community pay its solid waste disposal costs, it does not encourage reduction or recycling.

Volume based User Fees  
(55 communities)

<u>Town</u>	<u>Curbside/Drop-off</u>	<u>Unit Price</u>
Amherst	Curbside	\$105 /yr 1 barrel
		\$140 /yr 2 barrel
Ashburnham	Curbside	\$1.00 /15 ga. bag
		\$1.50 /30 ga. bag
Ashfield	Drop-off	\$1 /30 ga. bag
Athol	Curbside	\$1 /bag
Belchertown	Drop-off	\$30 /yr + \$0.80 /bag
Boxford	Curbside	\$0.70 /30 ga. bag
Brimfield	Curbside	\$1 /bag
Charlemont	Drop-off	\$1 /30 ga. bag
Chesterfield	Drop-off	\$0.75 /15 ga. bag
		\$1.50 /30 ga. bag
Chilmark	Drop-off	\$2.65 /40 ga. bag/barrel
Clinton	Curbside	\$0.75 /bag
Colrain	Drop-off	\$1.00 /33 ga. bag
		\$0.50 /16 ga. bag
Concord	Curbside	\$0.90 /16 ga. bag
		\$1.75 /44 ga. bag
Danvers	Drop-off	\$10 /12 Transfer Station trips
Edgartown	Drop-off	\$2.25 /40 ga. bag/barrel
Freetown	Curbside	\$1.50 /bag
Gayhead	Drop-off	\$2.65 /40 ga. bag/barrel
Gill	Curbside	\$1 /bag
Gloucester	Curbside	\$1 /bag
Goshen	Drop-off	\$10 /yr + \$2 /30 ga. bag
Halifax	Curbside	\$1 /bag
Hardwick	Drop-off	\$1 /bag
Hatfield	Drop-off	\$25 /yr + \$2 /bag
Hawley	Drop-off	\$1 /30 ga. bag/barrel
Hudson	Drop-off	\$10 /yr + \$3 /carload
Huntington	Drop-off	\$0.60 /16 ga. bag
Manchester	Curbside	\$0.50 /32 ga. bag or barrel
Mendon	Curbside	\$1.25 /bag
Millis	Drop-off	\$50/yr + \$1 /bag
		\$1.00 /30 ga. bag
Milton	Curbside	One free can/wk; then
		\$1.50 /can
Montague	Curbside	\$1 /bag
North Adams	Drop-off	\$50 /yr + \$1.75 /30 ga.
		or \$0.90 for 15 gals.
Norfolk	Drop-off	\$1.35 /30 ga. bag
North Reading	Curbside	\$0.65 /bag
Northampton	Drop-off	\$1 /bag
Orange	Drop-off	\$10 /yr + \$1 /bag
Palmer	Drop-off	\$1.00 /30 ga. bag
Petersham	Drop-off	\$10 /yr + \$1 /bag
Plainfield	Drop-off	\$25 /punchcard (good for 50 bags
Russell	Drop-off	\$20 /yr + \$1 /30 ga.
		\$0.60 /15 ga.
Salisbury	Drop-off	\$0.80 /bag
Seekonk	Curbside	\$86/year base +
		\$0.31 /14-20 ga. bag or
		\$0.53 /31-33 ga. bag
Shelburne	Drop-off	\$1 /bag
Southbridge	Drop-off	\$2 /trip to Transfer Station
Tisbury	Drop-off	\$2.25 /40 ga. bag or barrel

Ware	Drop-off	\$40 /yr + \$1 /bag
Warwick	Drop-off	\$1 /bag
Webster	Drop-off	\$1 /bag if recycle \$2 /bag without
Wendell	Drop-off	\$0.50 /bag
Westhampton	Drop-off	\$25 /yr + \$1 /bag
West Tisbury	Drop-off	\$2.65 /40 ga. bag or barrel
Wilbraham	Drop-off	\$60 /yr + \$0.60 /bag
Williamstown	Drop-off	\$0.75 /15 ga. bag \$1.50 /30 ga. bag
Worcester	Curbside	\$0.50 /bag (to start 11/15/93)
Worthington	Drop-off	\$30 /yr + \$0.50 /bag

Flat Rate User Fees -- Curbside Service  
(14 communities)

<u>Town</u>	<u>Price</u>
Acushnet	\$ 65/yr
Attleboro	\$ 83/yr
Brockton	\$140/yr
Brookline	\$150/yr
Chelsea	\$152.50/yr
East Brookfield	\$104/yr
Franklin	\$160/yr
Hinsdale	\$ 30/yr
Holliston	\$ 75/yr
Marshfield	\$ 70/yr
Medway	\$150/yr
Nahant	\$ 75/yr + \$ 35/person/yr
Pembroke	\$120/yr
Reading	\$110/yr

Flat Rate User Fees -- Landfill/Transfer Station Drop-off  
(84 communities)

<u>Town</u>	<u>Price</u>
Acton	\$85/yr
Adams	\$12/yr
Alford	\$30/yr
Ashby	\$50/yr
Ashburnham	\$40/yr
Ashfield	\$35/yr
Barnstable	\$45/yr
Barre	\$ 3/yr
Becket	\$40/yr
Berlin	\$50/yr
Bernardston	\$25/yr
Bolton	\$75/yr
Bourne	\$ 7/yr
Boylston	\$ 5/yr
Braintree	\$10/yr
Brookfield	\$50/yr
Buckland	\$25/yr
Carlisle	\$10/yr
Chatham	\$35/yr
Charlton	\$10/yr
Cohasset	\$52/yr
Cummington	\$100/yr
Deerfield	\$35/yr
Dennis	\$50/yr
Douglas	\$10/yr
Dudley	\$ 2/yr
Duxbury	\$60/yr
Eastham	\$45/yr
Egremont	\$120/yr
Fairhaven	\$ 5/car/yr + charge based on vehicle tonnage
Foxborough	\$100/yr
Groton	\$30/yr
Hadley	\$30/yr
Hanson	\$100/yr
Harvard	\$50/yr
Heath	\$25/yr
Holland	\$25/yr
Hull	\$50/yr
Lakeville	\$50/yr (\$100/yr business)
Leverett	\$35/yr
Littleton	\$100/yr
Ludlow	\$30/yr (\$60/yr business)
Lunenburg	\$40/yr
Marlborough	\$5/yr
Mashpee	\$30/yr
Merrimac	\$30 /yr
Middleborough	\$ 5/yr
Middlefield	\$45 /1 year dump sticker
Middleton	\$10/yr
Millbury	\$15/yr
Mount Washington	\$50/yr
Nantucket	\$50/yr
Newbury	\$ 5/yr
North Brookfield	\$50/yr

Northfield	\$25/yr
Orleans	\$75/yr
Otis	\$20/yr
Palmer	\$35/yr (\$50/yr business)
Pepperell	\$50/yr
Plymouth	\$20/yr
Rockport	\$75/yr
Sandwich	\$35/yr
Scituate	\$10/yr
Sheffield	\$110/yr
South Hadley	\$ 5/yr
Southboro	\$100/yr
Southwick	\$40/yr
Sudbury	\$65/yr
Sutton	\$ 5/yr
Templeton	\$ 5/yr
Upton	\$25/yr
Wales	\$20/yr
Warren	\$ 2/yr
Wellfleet	\$45/yr or \$3/carload
West Bridgewater	\$10/yr
West Brookfield	\$25/yr
Westborough	\$10/yr
Weston	\$130/yr
Wilbraham	\$65/yr
Williamsburg	\$40/yr
Williamstown	\$17/yr
Winchendon	\$50/yr
Windsor	\$15/yr
Yarmouth	\$70/yr

No municipal service -- Private subscription  
Flat Rate User Fees  
Curbside Service  
(16 communities)

<u>Town</u>	<u>Price</u>
Auburn	\$13/month
Granby	\$15/month
Hadley	\$18-19/month
Holden	\$18-22/month
Hubbardston	\$20/month
Hull	\$18/month
Leicester	\$20/month
New Braintree	\$27/month
Northbridge	\$20/month
Oxford	\$16-18/month
Princeton	\$19/month
Rowley	\$12/month
Rutland	\$18/month
Sharon	\$11/month
Sturbridge	\$25/month
Uxbridge	\$19-24/month

**APPENDIX F. SAMPLE MUNICIPAL LANDFILL BUDGET**

**DIRECT COSTS**

**COLLECTION:**

Rubbish Collection	\$224,000	
Recyclables Collection	33,000	
Administrative Expenditures	<u>7,500</u>	\$264,500

**DISPOSAL:**

Landfill Wages & Overtime	72,866		
Landfill Operating Expenditures	17,822		
Landfill Compactor Lease	<u>31,700</u>	<u>122,388</u>	\$386,888

**INDIRECT AND OVERHEAD COSTS**

(See Indirect and Overhead Costs Detail)

(a) Administration - Highway Department	17,250	
(b) Engineering	3,000	
(c) Administration - Town	2,642	
(d) Treasurer	1,512	
(e) Collector	11,824	
(f) Data Processing	1,475	
(g) Pension	11,535	
(h) Health & Life Insurance	10,464	
(i) Workers' Compensation	13,510	
(j) General Insurance	2,000	
(k) Medicare	267	
(l) Payment in Lieu of Taxes	<u>15,938</u>	91,417

**LANDFILL CLOSURE AND POST  
CLOSURE RESERVE**

200,000

**TOTAL**

\$678,305

**INDIRECT AND OVERHEAD COST DETAIL**

(a) Administration - Highway Dept. Defined by Superintendent to be 15% of Highway Administration Division Budget:	15,000	17,250
(b) Engineering Quarterly Inspections & Reporting to DEQE	750/Qtr.	3,000
(c) Administration - Town Budget (Administration, Accounting, Audit) <u>Direct Cost Budget divided by</u> <u>386,888</u> Total Operating Budget 21,235,000 = 1.8%	145,000	2,642
(d) Treasurer Operating Budget	83,000	

Direct Cost Budget divided by          386,888  
Total Operating Budget    21,235,000    =    1.8%    1,512

(e) Collector					
Operating Budget	68,500				
<u># Trash/Commercial Bills</u>		<u>7,250</u>			
Total # Bills Sent, All Types	42,000	=	17.3%		11,824
(f) Data Processing					
Hardware Maintenance (5%)	17,500		875		
Software Maintenance (1/3)	1,500		500		
Supplies (5%)	2,000		<u>100</u>		1,475
(g) Pension:					
Pension Assessment	x		710,000		
Salaries divided by		<u>72,866</u>			
Total Salaries (Pensionable)	4,485,000		1.6%		11,535
(h) Health & Life Insurance					
2 Family Plan BC/BS	x	298/month	=	7,152	
2 Individual Plan BC/BS	x	138/month	=	3,312	10,464
(i) Workers' Compensation					
Labor Wages	65,000	x	20.74 rate	=	13,481
Clerical Wages	<u>7,866</u>	x	00.37 rate	=	<u>29</u>
	72,866				13,510
(j) General Insurance					
Liability/Fleet Policy (Est. by Insurance Carrier)					2,000
(k) Medicare (1.45%) Wages subject to:	1 laborer @ \$18,414				
	267				
(l) Payments in Lieu of Taxes					
Property Valuation	\$125,000	x	12.75 tax rate	=	15,938

REVENUE REQUIREMENT WORKSHEET

**REVENUE REQUIREMENT TO BE RECOVERED THROUGH RATES**

**LESS REVENUE REQUIREMENT FROM COMMERCIAL DUMPING**

Rate/Ton x number of tons  
of commercial dumping

**REVENUE REQUIREMENT TO BE RECOVERED FROM RESIDENTIAL USERS**

**Revenue to be Recovered from Residential Dumping**

Sticker Fee Rate x Number of Stickers

Dumping Fee Rate x Pounds/100 Dumped

**Revenue to be Recovered from Residential Curbside Pickup**

Remaining Revenue to be Recovered/# Residential Pickups

CURBSIDE PICKUP FEE CALCULATION

**REVENUE REQUIREMENT TO BE RECOVERED THROUGH RATES** 678,305

**LESS REVENUE REQUIREMENT FROM COMMERCIAL DUMPING**

Rate/Ton x number of tons \$65 x 950,000 61,750  
of commercial dumping

**REVENUE REQUIREMENT TO BE RECOVERED FROM  
RESIDENTIAL USERS** 616,555

**Revenue to be Recovered from Residential Dumping**

Sticker Fee Rate x Number of Stickers \$10 x 400 4,000

Dumping Fee Rate x Pounds/100 Dumped \$3.25 x 31,200/100 1,014

**Revenue to be Recovered from Residential Curbside Pickup** 611,541

# Residential Curbside Pickups 5,500

**Revenue to be Recovered per Residential Curbside Pickup** \$112



**REVENUE PROJECTION AT NEW RATES**

**I. COMMERCIAL DUMPING REVENUE**

Tipping Fee	\$65 per ton	
Highway Superintendent's Estimated Tonnage for FY'92	950	\$61,750

**II. RESIDENTIAL CURBSIDE PICKUP**

Annual Flat Fee	\$112/house	
Highway Superintendent & Health Agent's estimate of # of households participating	<u>5,500</u>	616,000

**III. RESIDENTIAL NON-CURBSIDE**

Landfill Sticker Fee	\$10	
Est. # Residential Stickers	<u>400</u>	4,000
Dumping Fee per 100 pounds		
Highway Superintendent's	\$3.25	
Estimate of # pounds dumped	<u>312</u>	<u>1,014</u>
		<u>\$682,764</u>

An additional \$611,541 to be recovered from 5,500 residential curbside pickups for an annual fee of \$112.00.

Once the rates are computed, a revenue projection at new rates analysis is needed to verify that the new rates will produce the desired revenue. As shown below, the aggregate of the commercial dumping revenue, curbside residential pickup and residential non-curbside fees produce \$682,764 slightly more than the \$678,305 to be recovered through rates.

## **APPENDIX G. PURCHASING GIS MAPS**

A party conducting a landfill assessment must submit a regional locus map of the area surrounding the landfill site. The Division of Solid Waste Management in cooperation with MassGIS has incorporated the State's permitted solid waste facilities into the MassGIS system and can produce low cost computer generated maps for use in completing a landfill assessment.

### **What Is GIS:**

A Geographical Information System (GIS) is a computer system capable of assembling, storing, manipulating and displaying geographically referenced information. The system allows for detailed mapping of site information in one or more data layers or "overlays". The system's database contains tabular information which can be linked to the geographically referenced (mapped) features. MassGIS is the Executive Office of Environmental Affairs (EOEA) state-wide GIS. Through MassGIS, the Commonwealth has created a coordinated, statewide database of spatial information for environmental planning and management. The source scale of MassGIS data ranges from 1:5,000 to 1:250,000. Data shown on the SW Assessment map set has been developed from data with a source scale of 1:25,000 to 1:100,000.

### **Why Use GIS Maps:**

The automated "Solid Waste Assessment" GIS map set consists of two maps at a 1:25,000 scale with your community at the center of the map. Some larger communities will plot at a smaller (more generalized) scale in order to fit both maps on one page. The Resource Map depicts Zone II's and Interim Wellhead Protection Areas, surface water supplies, non-forested wetlands, drainage basin delineations, aquifers, protected areas and permitted solid waste facilities. The Land-Use Map depicts 21 land use categories interpreted from 1985 aerial photography. The maps contain most, if not all, of the information necessary for the locus mapping required for assessment submittals. They can also be used by local officials to advocate for landfill closure and other resource protection activities.

### **How To Obtain These Maps:**

The GIS Solid Waste Assessment Map Set costs \$50 and can be ordered through MassGIS by choosing map theme "SW Assessment", Large Format Map "your town name" on the included orderform. Send completed form and check payable to Executive Office of Environmental Affairs, to: MassGIS, 20 Somerset St, 3rd floor, Boston, MA. 02108.



# Order Form for Maps or Licensing of Digital Data

*to be provided by the Massachusetts Executive Office of Environmental Affairs*

MassGIS serves the environmental agencies of the Commonwealth of Massachusetts as a coordinated, statewide database of spatial information for environmental planning and management. Please use this order form to request **either** digital data from the MassGIS database (see reverse) **or one printed map** to be generated using MassGIS data. The MassGIS *Datalayer Descriptions and Guide to User Services* describes the available map themes and datalayers in detail; to receive a copy please check this box:

### a. Client Information

<u>Organization or Individual</u>			<u>Date</u>
<u>Contact Name</u>			<u>Check or Purchase Order #</u>
<u>Address</u>			<u>Telephone</u>
<u>Town</u>	<u>State</u>	<u>Zip Code</u>	<u>FAX</u>

### b. To Order a Map

<b>1. Choose a Map Theme</b>	
<u>Land Use</u>	<u>Title 5</u>
<u>Open Space (OS)</u>	<u>DFA Groundwater</u>
<u>Water Resources</u>	<u>Wetlands Habitat</u>
<u>OS/Water Resources</u>	<u>DEP MCP (21E) NRS Site Map</u>
	<u>Natural Resources (DEP Regions only)</u>
	<u>Water Supply Protection</u>
	<u>Solid Waste Assessment</u>
<b>2. Choose a Format</b> <small>Provide the requested information</small>	
<p><b>Large Format Map</b> <small>(any listed theme)</small></p> <p>Map size and scale will vary depending on the area portrayed. Maximum size is 46" x 33". Maps of towns or USGS quadrangles are printed at 1:25,000 scale.</p> <p>List town, quad, or region name/number</p> <p>Map Title</p>	<p><b>Site Map</b> <small>(21e theme only)</small></p> <p>Map will be 8½" x 11" in size and printed at 1:15,000 scale. Radii of 500 feet and ½ mile around the specified coordinates will be shown.</p> <p>Site Name</p> <p>Site Address</p> <p>UTM or LL Coordinates (deg, min, sec)</p> <p style="text-align: right;">N <span style="margin-left: 100px;">E/W</span></p>
<b>3. Map Production Charges</b>	
<u>Basic fee</u>	<u>\$ 50.00</u>
<u>Additional copies of the same map</u>	<u>_____ copies @ \$ 15.00</u>
<u>Extra fee for printing on clear mylar</u>	<u>_____ copies @ \$ 15.00</u>
<b>TOTAL</b> Please attach a check or purchase order for this amount	

Please return this form with a purchase order or check payable to the **Executive Office of Environmental Affairs**

c.

**To License Digital Data** First provide the client information requested on the reverse side of this form, then use this side to specify which data, format, and media you wish to receive. The MassGIS *Datalayer Descriptions and Guide to User Services* describes available datalayers and panels. Most datalayers divided into panels by town or quadrangle, etc., each priced separately. Please refer to the other side of this form to request a copy of the *Guide*.

<u>1. List Datalayer Names</u>	<u>2. List Panels</u> <u>By number/name for each datalayer</u>	<u>3. Unit Price</u> <u>per panel</u>	<u>4. Data Format Fee</u> <u>see below*</u>	<u>5. Total Price</u>
Please attach additional forms if necessary				
<b>EXAMPLE</b> <u>Roads Datalayer</u>	<u>Quads 5, 11</u>	<u>100.00</u>	<u>50.00</u>	<u>250.00</u>
<u>1985 Land Use Datalayer</u>	<u>Town 341</u>	<u>100.00</u>	<u>25.00</u>	<u>125.00</u>
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<u>DXF (AutoCAD)*</u>	<u>MS-DOS 3.5" diskette</u>
<u>MapInfo (MIF and MID)</u>	<u>UNIX Exabyte 4mm/8mm tape</u>
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Date

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## APPENDIX I. DSWM POLICIES AND PUBLICATIONS

The following is a list of publications developed by the Division of Solid Waste Management (DSWM) of the Massachusetts Department of Environmental Protection (DEP). The documents listed can be ordered by phone on this page are available from the Department's InfoLine 617-338-2255 or 1-800-462-0444. For technical information, ask for the program contact listed in each category.

### Policies

Jim Roberts (617-292-5983)

Interim Oil Ash Disposal (Feb 1983 - 2 pp)

Coal Ash Landfill Cover & Disposal (May 1983 - 5 pp)

Urea Formaldehyde Foam Insulation (UUFIs) Disposal (Mar 1988 - 2 pp)

Tire Disposal and Stockpiling (June 1987 - 4 pp)

Ash Management and Disposal (Aug 1988 - 12 pp)

Ash Sampling & Analysis Guidance (July 1988 - 10 pp)

Tonnage Limits at Solid Waste Facilities (June 1989 - 4 pp)

Asbestos Guidelines (Mar 1988 - 3 pp)

Reuse & Disposal of Contaminated Soil at Landfills (Apr 1994 - 25 pp)

Policy on Approving Tonnage Increases to Facilitate Unlined Municipal Landfill Closures (Dec 1996 - 5 pp)

Leachate Tank Review at Solid Waste Facilities (Dec 1994 - 3 pp)

### Guidance Documents

Jim Roberts (617-292-5983)

Existing Solid Waste Management Facility Permitting Guidance (Apr 1991 - 15 pp)

Financial Assurance Requirements Guidance Document for Use with 310 CMR 19.051 (Apr 1991 - 9 pp)

Guidance on Compliance with 310 CMR 19.038(2)(d) Twenty-Five Percent Recycling Requirement (June 1991 - 27 pp)

Comprehensive Guidance to Solid Waste Disposal Facilities for Implementation of Disposal Restrictions Covering Glass, Metal and Plastic Containers, Paper, Leaves and Yard Waste, Lead-Acid Batteries, White Goods and Whole Tires (Jan 1995 - 13 pp)

Landfill Assessment & Cleanup Repermitting Guidance (Apr 1991 - 7 pp)

Landfill Technical Guidance Manual (May 1997)

Guide to the Asphalt, Brick, and Concrete (ABC) Exemption (Feb 1995 - 7 pp)

Solid Waste Facilities

Brian Holdridge (617) 292-5578

Active Ash Landfills (July 1995 - 6 pp)

Active MSW (municipal solid waste) Combustion Facilities (May 1995 - 6 pp)

Active MSW and Demolition Landfills (Dec 1995 - 19 pp)

Active Lined Solid Waste Landfills (MSW and other solid waste landfills) (August 1995 - 8 pp)

Active Stump & Demolition Landfills (May 1995 - 6 pp)

Active Transfer Stations (May 1995 - 25 pp)

General Information on Operating Solid Waste Combustion Facilities (Dec. 1993 - 27 pp)

Inactive or Closed Solid Waste Landfills (MSW and other solid waste landfills) (Dec. 1995 - 70 pp)

Tire Piles in Massachusetts

Solid Waste Management Reports

Stephen Lowe (617) 574-6873

1995 Solid Waste Master Plan Update (Dec. 1995 - 60 pp)

Presents the most up-to-date statistical and policy information on solid waste generation and disposal in the Commonwealth. Using 1994 figures, DEP calculated the amount of solid waste generated, its sources, and where it is going. The Update presents the state's policies on waste disposal capacity management with a special focus on initiatives designed to promote recycling as a means to reduce the waste stream requiring disposal and provide materials to the state's expanding recycling programs and industry. Contains charts, tables, and graphs.

1995 Solid Waste Master Plan Update - Appendices (Dec. 1995 - 55pp)

Contains technical data, methodological assumptions, and data tables, outlining analysis for both non-MSW and MSW components of the waste stream. Includes estimates of generation, diversion through recycling, and disposal.

Status Report on Cities and Town: MSW Generation and Disposal - Appendix I of Solid Waste Master Plan (Dec. 1995 - 9 pp)

Breakdown by all 351 municipalities' MSW generation rate, disposal information, and solid waste user fee programs - uses data from 1994.

Massachusetts Cities and Towns, Trash and Recycling Collection Methods, and Materials Recycled - Appendix J of Solid Waste Master Plan (Dec. 1995 - 10 pp)

Breakdown by city or town of all recyclable materials, method of trash and recycling collection and population.

## Recycling

John Crisley (617) 556-1021

Apartment Building Recycling: A Manual for Apartment Owners and Managers (July, 1991 - 11pp)

Explains how municipal officials, recycling coordinators, and property managers can incorporate recycling into existing curbside collection programs. Recycling can lower an apartment building's disposal costs. It examines key elements to be considered in designing and implementing an apartment or condominium collection program.

Apartment Building Recycling Manual (May, 1988 - 56 pp)

Written for municipal DPW or Board of Health officials, Recycling Coordinators to explain how to design and implement a recycling program for medium and large size, multi-unit apartment buildings and condominiums.

Massachusetts - Buy Recycled Resource Directory (July 1995 - 18 pp)

A directory designed primarily for businesses and

organizations interested in learning more about purchasing recycled products and how to set up a "buy recycled" program. Contains listings of programs that can provide technical assistance to business, sources of "how-to guides" providing information about purchasing recycled products, directories to help you locate available products made from recycled materials, and local, state, and national organizations and trade associations which can provide further information.

Commercial Recycling Basics (May 1992 - 2 pp)

Financing for Recycling Related Businesses: A Guide to MA Economic Development Agencies and Programs (May 1995 - 7 pp)

Guide covers 10 of the Commonwealth's economic development agencies and is intended as a starting point and reference for recycling related businesses seeking financial assistance. Provides agency summaries, contact names and addresses, a brief description of agency services, financing programs, types of financing available, amounts, and specific qualifications. Contains chart for each agency.

Municipal User Fees (Sept. 1993 - 8 pp)

Office Paper Recycling Guide - How your office can participate in the recycling process (1991 - 12 pp)

Step-by-step outline for starting, implementing, selecting a program coordinator, and managing an office recycling program. Provides tips on source reduction and "closing the loop" by buying recycled products. Produced by the National Office Paper Recycling Project - a consortium of private companies and public sector organizations.

Plastics Recycling Action Plan for Massachusetts (July 1988 - 108 pp)

Race-to-Recycle The MA Office Recycling Contest (1995 - 8 pp)

Contains a list of winners, and a description of recycling programs developed by owners and managers, of large to medium size office buildings. Produced jointly by DEP, WasteCap of MA, and the Building Owners

and Managers Association (BOMA). Call WasteCap to obtain a copy.

Recycled Products Guide (Dec. 1990 - 79 pp)

Recycling Questions & Answers (May, 1996 - 2 pp)

Recycling Rules-Questions & Answers (March, 1995 - 4 pp)

The "Recycling Rules" formerly known as "Waste Bans," are restrictions on the disposal of certain recyclable items at solid waste landfills and incinerators in Massachusetts. The rules are located in the state's solid waste facility management regulations, 310 CMR 19.017. This document lists the restricted materials and definitions.

Recycling Services Directory and Markets Guide for Massachusetts (May, 1996 - 30 pp)

The Directory lists vendors who accept, collect or purchase recyclable materials from Massachusetts communities and businesses. This resource supplements local yellow pages by describing markets for recyclables across the state.

Scrap Tire Management in Massachusetts: Questions and Answers for Municipal Waste Management Officials (August 1991 - 9 pp)

The Solid Waste Management Resource Guide for Massachusetts Schools - 1995 update

Developed for grades K-12. It helps students realize a solid waste and resource management problem exists, makes students aware that their attitudes and actions may contribute to this problem, and seeks to foster an appreciation among students that they can play a major role in solving our solid waste problems.

Transfer Stations: A Guide for MA Municipalities (1988 - 61 pp)

Value Added by Recycling Industries in Massachusetts (July 1992 - 13 pp)

Study undertaken by Massachusetts Department of

Environmental Protection and Department of Revenue to quantify the value of recycling products in the manufacturing sector. Report examines the value added ton-for-ton of different industries and concludes that the aggregate value of these totals \$588 million. Data tables included.

White Goods Management in Massachusetts (August 1991 - 9 pp)

1996 Statewide Municipal Recycling and Composting Guide (May 1996 - 124 pp)

Reference directory published by MassRecycle and sponsored by DEP. Intended for local, state, non-profit coordinators and administrators looking for names, phone numbers, hours of operation, accepted recyclables, at each of state's 351 municipal recycling locations. Includes MA Regional Recycling Districts and Associations, plus 22 national related organizations.

Turning Wastepaper Into Jobs - Increasing MA Primary Pulp and Paper Manufacturers' Competitiveness and use of Recovered Paper (February 1996 - 46 pp)

Joint study by DEP and the Industrial Services Program (ISP) to identify opportunities for increasing the competitiveness of primary pulp and paper manufacturers, and for sustaining or increasing the use of recovered paper by MA paper manufacturers. Makes recommendations and contains appendices and graphs profiling MA paper industry.

Variable Rate Pricing: A Practical Guide for Local Decisionmakers (Sept. 1995 - 120 pp)

Intended to assist municipal elected officials, administrators, solid waste managers and coordinators, recyclers, and others concerned about evaluating, planning, and implementing variable rate pricing of solid waste management services. Produced under a joint project sponsored by the Coalition of Northeastern Governors (CONEG) Source Reduction Task Force and the US Environmental Protection Agency's Office of Solid Waste.

Composting

Ann McGovern (617) 292-5834

Composting: Introductory Profiles Agricultural Sludge and Solid Waste Composting

Composting Programs in Massachusetts Cities and Towns

Composting Program Technical Assistance

Don't Trash Grass Brochure (1993 - 2 pp)

"How-to" brochure on lawn care which highlights benefits of replenishing soil nutrients by leaving clippings on the lawn. May be copied and distributed to residents.

Guidelines for Centralized Grass Composting - on the municipal scale (1993 - 7 pp)

Home Composting Bin Ordering Information for Municipalities

Home Composting Bin Design Sheets (1991 - 15 pp)

Home Composting Brochure (1993 - 1 pp)

"How-to" on home composting that can be copied and distributed to residents. Master available with blank area for insertion of distributing organization's name/address.

Home Composting Handbook: How to Promote Home Composting in your Community (1991 - 15 pp)

A guide to giving a home composting workshop, common composting questions and answers, instructions for compost testing, and bibliography.

How to Start a Christmas Tree Chipping Program (1990 - 7 pp)

Leaf and Yard Waste Composting Guidance Document (1991 - 29 pp)

Official DEP guidance for operators of municipal leaf and yard waste composting facilities. Provides detailed information and instruction on how to sit, design, equip and operate a leaf and yard waste operation. Includes appendices on environmental impact

control measures and a glossary of technical terms.

Municipal Leaf Composting: Planning for a Municipal Leaf Composting Program (1991 - 6 pp)

Notes for a Short Course on Municipal Scale Leaf and Yard Waste Composting (1991 - 41 pp)

Outlines DEP's training workshops for municipal leaf and yard waste composting operators. Provides planning and technical information on the composting process in a simple outline format. Contains tables, diagrams, & presentation outlines.

Rodent Proof Compost Bins

Table of Collection Option for Leaves

Thermometers vendor list (1995 - 1 pp)

Vermicomposting (worm composting) Information and Bin Design Sheets

Instructions for how to make and maintain an indoor earthworm composting bin. Contains updated list of local worm and worm bin suppliers.

Publications Available at the State Bookstores

Boston 617-727-2834

Springfield 413-784-1374

*Note: The following publications can only be purchased through the State Bookstores, and not through the DEP.*

Solid Waste Management Regulations 310CMR16.00 (\$6.15) & 19.00 (\$6.15)

The Solid Waste Management Resource Guide for Massachusetts, 17.00

Toward a System of Integrated Solid Waste Management, \$6.15 (Solid Waste Masterplan, June 1995)(1994 Draft Master Plan available through InfoLine number listed above)

APPENDIX J.  
APPENDIX J. GUIDANCE MANUAL CREDITS

Ethan Bodin

Mark Dakers

James Doucett

Paul Emond

Eric Fahle

Sean Griffin

Joel Hartley

David Murphy

Michael Rostkowski

Patricia Rodden

Roy Willey

Julie Bender

William DiLibero

Alison Donovan

Luke Fabbri

Richard Gioiosa

Daniel Hall

Ann McGovern

James Roberts

Katherine Rodden

Abdul Turay

#### PART IV. GLOSSARY

This Section is intended to assist municipal officials, solid waste committee members, and landfill owners and operators who may not necessarily have technical backgrounds to understand technical terms used throughout the manual. A few words have been added to this section during this revision.

## GLOSSARY

mark d: add PPA & lf gas well -aqt

Applicant: the person named in the application as the owner of a property.

Adverse Impact: an injurious impact which is significant in relation to the public health, safety, or environmental interest being protected.

Aquifer: a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of groundwater to wells or springs.

Area of Critical Environmental Concern (ACEC): an area designated by the Secretary of the Executive Office of Environmental Affairs pursuant to 301 CMR 12.00, Areas of Critical Environmental Concern.

Aerobic Decomposition: the first phase of decomposition in a landfill that takes place in the presence of oxygen with carbon dioxide and heat produced as by products.

Anaerobic Decomposition: a decomposition process in a landfill that takes place in the absence of oxygen which results in the formation of methane and carbon dioxide.

Closure: the act or process of deactivating a facility in compliance with the approved facility final closure plan and applicable closure requirements.

Composting: a process of accelerated biodegradation and stabilization of organic material under controlled conditions yielding a product which can safely be used.

Composite Liner: a liner composed of two low permeability layers where the upper layer consists of a low permeability synthetic material direct contact with the lower layer consisting o a low permeability soil.

Construction and Demolition Waste: the waste building materials and rubble resulting from the construction, remodeling, repair or demolition of buildings, pavements, roads or other structures. Construction and demolition waste includes, but is not limited to, concrete, bricks, lumber, masonry, road paving materials, rubber and plaster.

Cover Material: soil or other materials that can be placed in one or more layers over solid waste for control of vectors, fires, odors, percolation of water into a landfill, grading, support of vegetation and related environmental or engineering purposes.

Floodplain: an area which floods from a rise in a bordering waterway or waterbody and is the maximum lateral extent of flood water which will result from the statistical 100 year frequency storm. This boundary shall be determined using the data available through the National Flood Insurance Program (NFIP) as administered by the Federal Emergency Management Agency (FEMA), except where the Department determines that more accurate information is available.

Groundwater: water below the land surface in a saturated zone.

Hazardous Waste: any waste that is defined and regulated under 310 CMR 30.00, [Hazardous Waste Regulation], as may be amended.

Interim Wellhead Protection Area (IWPA): an area extending to a one-half mile radius from a public water supply wellhead which is intended to protect the wellhead pending the delineation of its Zone II.

Landfill Gas Monitoring Well: a permanent well designed to facilitate the down-hole measurement and/or collection of landfill gas.

Landfill Gas Probe: a temporary device designed to facilitate the down-hole measurement (depth 2-5 ft) of gas and/or collection of landfill gas. Often used as a screening tool to facilitate the placement of landfill gas monitoring wells.

Landfill Gas: a mixture of gases produced by decomposition, volatilization, and by chemical reactions within solid waste. The following gases are produced; methane, carbon dioxide with trace amounts of nitrogen, oxygen, hydrogen sulfide, hydrogen, and other organic compounds. Landfill gas is typically heavier than air, explosive, corrosive and toxic.

Landfill Gas Vent: a passive landfill gas control device which relies on natural atmospheric pressure and convection to release landfill gas from the interior of the landfill to the atmosphere.

Leachate: a liquid that has passed through or emerged from solid waste and which may contain soluble or suspended material from such waste.

Liner: an engineered layer or layers of recompacted soils and/or synthetic materials designed to restrict the movement of leachate into groundwater and to facilitate the collection of leachate. "Liner" may refer to one or more low permeability layers in a groundwater protection system.

Lower Explosive Limit (LEL): the lowest percent by volume of a gas in a mixture of explosive gases that will propagate a flame at 25 degrees celsius and atmospheric pressure.

Methane: a colorless, odorless gas that is less dense than air and relatively insoluble in water. Methane is explosive at concentrations from 5 percent to 15 percent (by volume) in air and is a major constituent of landfill gas.

Monitoring Well: a well designed to facilitate the down-hole measurement of groundwater and/or gas levels and the collection of groundwater and/or gas samples.

Municipal Solid Waste: any residential or commercial solid waste.

Operator: any person who has care, charge or control of a facility subject to these regulations, including without limitation, an agent, lessee of the owner or an independent contractor.

Owner: any person who alone or in conjunction with others has legal ownership, a leasehold interest, or effective control over such property interests, the real property upon which a facility is located, or the airspace above said real property; "owner" does not mean persons holding bare legal title for the purpose of providing security for financing.

Post-Closure: a finite period of time commencing after the closure of a facility has been completed and approved by the Department, during which the Department may require site monitoring, care and maintenance.

Primary Leachate Collection System: the uppermost leachate collection system.

Recycle: to recover materials or by-products which are:

- (a) reused; or
- (b) used as an ingredient or a feedstock in an industrial or manufacturing process to make a marketable product; or
- (c) used in a particular function or application as an effective substitute for a commercial product or commodity.

"Recycle" does not mean to recover energy from the combustion of a material.

Recycling Center (or Drop-off Center): a site where recovered manufactured materials and yard wastes are collected and sold for reprocessing.

Regional Disposal Facility: a solid waste facility that is a member of a regional disposal district established in accordance with M.G.L. c. 40, s. 44K, or a solid waste facility that receives substantial quantities of solid waste on a regular basis from two or more municipalities.

Secondary Leachate Collection System: the leachate collection system lying between the uppermost or primary liner and the secondary liner and is designed to collect leachate which has leaked through the primary liner.

Site Assignment: a determination by a board of health or by the Department as specified in M.G.L. c. 111 s. 150A that:

- (a) designates an area of land for one or more solid waste uses subject to conditions with respect to the extent, character and nature of the facility that may be imposed by the assigning agency after public hearing; or
- (b) establishes that an area of land was utilized as a site for the disposal onto land of solid waste or as a site for a refuse disposal incinerator prior to July 25, 1955 as provided in St. 1955, c. 310, s. 2. The area of land determined to be site assigned under this subsection shall be limited to the lateral limits of the waste deposition area (footprint) or the area occupied by the incinerator on July 25, 1955, except as approved by the Department in approved plans. Said assignment shall apply only to uninterrupted solid waste disposal activities within the footprint or plan approved area and shall have no legal force or effect at any time after the commencement of non-disposal activities.

Sludge: the accumulated solids and/or semisolids deposited or removed by the processing and/or treatment of gasses, water or other fluids.

Sole Source Aquifer: an aquifer so designated by the U.S. Environmental Protection Agency, or by the Department under the authority of a state program as may be established, that supplies 50% or more of the drinking water for the aquifer service area, and the volume of water which could be supplied by alternative sources is insufficient to replace the petitioned aquifer should it become contaminated.

Solid Waste or Waste: useless, unwanted or discarded solid, liquid or contained gaseous material resulting from industrial, commercial, mining,

agricultural, municipal or household activities that is abandoned by being disposed or incinerated or is sorted, treated or transferred pending such disposal, incineration or other treatment, but does not include:

- (a) hazardous wastes as defined and regulated pursuant to 310 CMR 30.000;
- (b) sludge or septage which is land applied in compliance with 310 CMR 32.00;
- (c) waste water treatment facility residuals and sludge ash from either publicly or privately owned waste water treatment facilities that treat only sewage, which is treated an/or disposed at a site regulated pursuant to M.G.L. c. 83, ss. 6 & 7 and/or M.G.L. c. 21 ss. 26-53 and the regulations promulgated thereunder, unless the waste water treatment residuals and/or sludge ash are co-disposed with solid waste;
- (d) septage and sewage as defined and regulated pursuant 314 CMR 5.00, as may be amended, and regulated pursuant to either M.G.L. c. 21 ss. 26-53 or 310 CMR 15.00, as may be amended, provided that these regulations do apply to solid waste management facilities which co-dispose septage and sewage with solid waste;
- (e) ash produced from the combustion of coal when reused as prescribed pursuant to M.G.L. c. 111, s. 150A;
- (f) solid or dissolved materials in irrigation return flows;
- (g) source, special nuclear or by-product material as defined by the Atomic Energy Act of 1954, as amended;
- (h) those materials and by-products generated from and reused within an original manufacturing process; and
- (i) compostable or recyclable materials which composted or recycled in an operation not required to be assigned pursuant to 310 CMR 16.05(2)-(4).

Solid Waste Management: the collecting, handling, and disposal of all solid waste.

Surface Water: all bodies of water natural or artificial, inland or coastal, fresh or salt, public or private within the territorial limits of the Commonwealth of Massachusetts.

Transfer Station: a handling facility where solid wastes are brought, stored and transferred to vehicles for transport to the location of further processing, treatment or ultimate disposal.

Upper Explosive Limit (UEL): the maximum concentration of a gas or vapor above which it will not burn when exposed to an ignition source at 25 degrees celsius and atmospheric pressure.

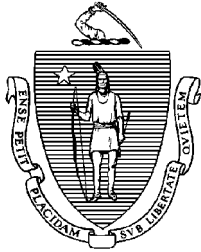
Vector: an organism that is capable of transmitting a pathogen from one organism to another including, but not limited to, flies and other insects, rodents, birds, and vermin.

Wetlands: any land or water area subject M.G.L. c. 131. s. 40 or resource areas regulated pursuant to 310 CMR 10.00.

White Goods: an appliance employing electricity, oil, natural gas or liquified petroleum gas to supply heat or motive power to preserve or cook food, to wash or dry clothing, cooking or kitchen utensils or related items or to cool or heat air or water.

Zone II: that area of an aquifer which contributes water to a well under the most severe recharge and pumping conditions that can be realistically

anticipated (i.e. pumping at the safe yield of the well for 180 days without any natural recharge occurring); it is bounded by the groundwater divides which result from pumping the well and by contact of the edge of the aquifer with less permeable materials such as till and bedrock. At some locations, streams and lakes may form recharge boundaries. For the purposes of these regulations, a Zone II area is one which has been defined and delineated in accordance with the Department's Division of Water Supply "Guidelines for Public Water Systems", September, 1984 Supplement to the 1979 edition or the most recent version thereof.



WILLIAM F. WELD  
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Commissioner

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## **LANDFILL TECHNICAL GUIDANCE MANUAL**

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**REVISED**

**MAY, 1997**

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**EXECUTIVE OFFICE OF ENVIRONMENTAL AFFAIRS**  
**Department of Environmental Protection**  
**Division of Solid Waste Management**

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