

MassGIS Data: Protected and Recreational OpenSpace

April 2022

The protected and recreational open space datalayer contains the boundaries of conservation lands and outdoor recreational facilities in Massachusetts.

TABLE OF CONTENTS

[Downloads](#) (#downloads-)

[Overview](#) (#overview-)

[Original Source Manuscripts and Original Production](#) (#original-source-manuscripts-and-original-production-)

[Current Source Manuscripts and Production Methodology](#)

(#current-source-manuscripts-and-production-methodology-)

[Definitions of "Level of Protection"](#) (#definitions-of-)

[Future Data Enhancements](#) (#future-data-enhancements-)

[Attributes](#) (#attributes-)

[Maintenance](#) (#maintenance-)

[Related](#) (#related-)

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Downloads

Download shapefiles (69 MB)

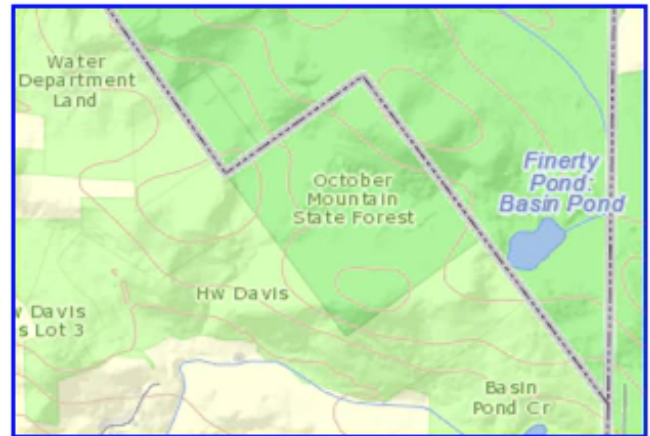
(<https://s3.us-east-1.amazonaws.com/download.massgis.digital.mass.gov/shapefiles/state/openspace.zip>)

Download a file geodatabase (105 MB)

Overview

Conservation and outdoor recreational facilities owned by federal, state, county, municipal, and nonprofit enterprises are included in this datalayer. The associated database contains relevant information about each parcel, including ownership, level of protection, public accessibility, assessor's map and lot numbers, and related legal interests held on the land, including conservation restrictions. Not all lands in this layer are protected in perpetuity, though nearly all have at least some level of protection.

Although the initial data collection effort for this data layer has been completed, open space changes continually and this data layer is therefore considered to be under development. Additionally, due to the collaborative nature of this data collection effort, the accuracy and completeness of open space data varies across the state's municipalities. Attributes, while comprehensive in scope, may be incomplete for many parcels.



[Click to open full size image](#)

(</files/images/massgis/datalayers/openspace-green.png>)

NOTE ON APPROPRIATE USE OF DATA:

These data are very useful for most statewide and regional planning purposes. However, they are not a legal record of ownership, and the user should understand that parcel representations are generally not based on property surveys.

The OpenSpace layer includes two feature classes:

OPENSOURCE_POLY - polygons of recreational and conservation lands as described above

- **conservation land** - habitat protection with minimal recreation, such as walking trails
- **recreation land** - outdoor facilities such as town parks, commons, playing fields, school fields, golf courses, bike paths, scout camps, and fish and game clubs. These may be privately or publicly owned facilities.
- **town forests**
- **parkways** - green buffers along roads, if they are a recognized conservation resource
- **agricultural land** - land protected under an Agricultural Preservation Restriction (APR) and administered by the state Department of Agricultural Resources (DAR, formerly the Department of Food and Agriculture(DFA))
- **aquifer protection land** - not zoning overlay districts

- **watershed protection land** - not zoning overlay districts
- **cemeteries** - if a recognized conservation or recreation resource
- **forest land** - if designated as a Forest Legacy Area

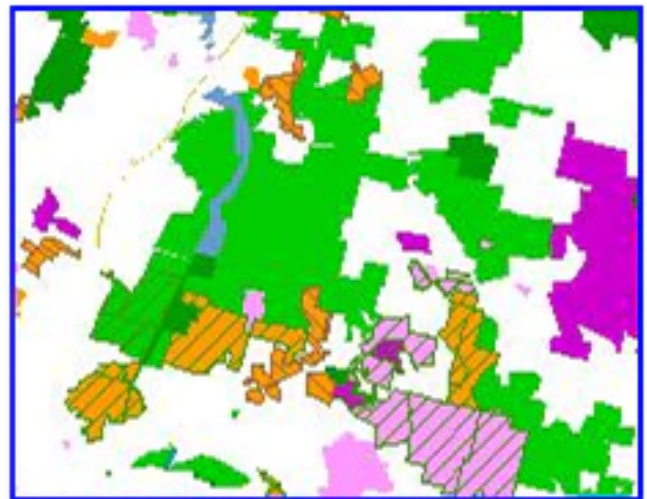
OPENSOURCE_ARC - lines that represent boundaries of the polygons. These arcs are coded as being coincident with other map features (town boundary, stream, etc.).

These feature classes are stored in an ArcSDE feature dataset named **OPENSOURCE** that includes ArcGIS geodatabase topology Details about the OpenSpace feature dataset, including all table schemas and field code values, are provided in the small poster [MassGIS Protected & Recreation OpenSpace Schema](/files/documents/2016/07/ne/os-schema.pdf) (</files/documents/2016/07/ne/os-schema.pdf>).

Original Source Manuscripts and Original Production

State and federal lands were originally compiled in 1988 from 1:25,000 scale maps by the Department of Regional Planning and Landscape Architecture at the University of Massachusetts at Amherst. The data were verified and are maintained by each agency of the Executive Office of Energy and Environmental Affairs (EOEEA).

Each agency maintains its own maps according to its own standard operating procedures and the accuracy of these maps varies. Some parcels were drafted onto USGS quadrangles from detailed surveys, while in other cases the exact property boundary is not known. The compilation process that produced a unified manuscript faithfully reproduced the property boundaries as represented on the agencies' maps. The Department of Fisheries, Wildlife, and Environmental Law Enforcement (DFWELE, now the Dept. of Fish and Game (DFG)) cartographer then compiled onto this manuscript the land holdings of the National Park Service (NPS), US Fish & Wildlife Service (USFWS), and The Trustees of Reservations (TTOR, incomplete). Updating of this layer began in the fall of 1989 and is ongoing.



[Click to open full size image](#)

</files/images/massgis/datalayers/openspace-own.png>

Also included in the original open space datalayer were some community and local lands within Berkshire and Essex Counties and the Nashua River Basin. The production methodology varied subtly by region. Compilation of open space holdings in Essex County had already been done by the Essex County Greenbelt Association (ECGA), and these 1:25,000 scale maps were used as the manuscript for Essex County. Manuscripts for Berkshire County were compiled by the Berkshire County Cooperative Extension Service in cooperation with

town assessors, conservation commissions, and local land trusts. Manuscripts for the Nashua River Basin were prepared jointly by DFWELE and DFA from town assessors maps.

In 1993, MassGIS began an attempt to include all protected openspace and outdoor recreation sites in the datalayer. Volunteers in each municipality in the state were asked to draw the openspace in their town on basemaps and provide attribute information on blank data sheets that were provided to each volunteer. MassGIS requested that lands in the Chapter 61 program be included, but these were not required from the volunteers. MassGIS staff digitized the polygons drawn on the returned maps. This initial effort to collect information on municipal and land trust data was completed in 1998. Since then, while updates for land in which EOEEA has a legal interest or provided acquisition funds has continued, updates for municipal, land trust, and privately-owned lands has not been consistent across the state.

Because this was a volunteer-based effort, the resulting data were variable in their accuracy and completeness. Additionally, all data data development during this period was done without the benefit of an ortho basemap or digital parcel data; openspace polygons were positioned on the basemaps and then digitized relative to a MassHighway Department roads dataset (created from USGS 1:100,000 roads digital line graph data) and a USGS 1:25,000 hydrologic dataset.

In January 2005 the MassGIS Protected and Recreational OpenSpace Datalayer underwent major revisions. The underlying data schema was changed and many polygons were added/revised/deleted. A detailed discussion of these revisions that includes a full explanation of all fields is available in the document [The MassGIS Protected and Recreational OpenSpace GeoDatabase Data Model](#) (</files/documents/2016/07/wq/osp-datamodeldescription.pdf>). The highlights of these changes are:

- Improved schema
 - Spatial edit dates-of-revision reside in the arc feature class
 - Data source types tracked for polygons and arcs separately
 - Name fields no longer abbreviated
 - New owner types (e.g. Land Trust) and Primary Purpose values (e.g. Habitat)
 - Defunct fields removed (e.g. redefined coverage fields)
 - Rules-based topology enforced
 - View the [Schema Diagram](#) (</files/documents/2016/07/ne/os-schema.pdf>)
 - Cleaned data
 - Integration of new Survey Town Boundary data in progress
 - Fee_Owner field cleaned (e.g. abbreviations resolved)
 - Updated data (polygons in over 80 towns updated)
 - Data distributed in shapefile and ESRI personal geodatabase formats
 - Downloadable self-extracting .exe files contain:
 - OPENSOURCE_POLY (polygon feature class)
 - OPENSOURCE_ARC (arc feature class)

- ArcGIS 9.1/9.2 LYRs (layer files)

Current Source Manuscripts and Production Methodology

Existing information (both geographic and attribute) continues to be updated and new lands are added to the datalayer with the assistance of volunteers at the local level, staff at regional planning commissions, land trusts and municipal conservation commissions, and through the submission of source materials required in grant submissions to EOEEA. Geographic data sources include town tax assessor's maps and existing open space plans, and all input is done using the orthophotos as a basemap. We maintain a record of all source maps used. Data may be digitized from a map supplied to EOEEA if this map meets minimum digitizing requirements. Increasingly, data are also pulled into the open space coverage from preexisting digital data layers provided by a municipality, regional planning agency, or state agency. All polygons bordering a road, stream, pond, town boundary, or coastline are snapped to that feature and the coincident arcs are coded according to the coincident feature (CODE in the arc attribute table). The source material and production methodology used as source material for the geographic component of the site are also provided in the arc attribute table (SRCTYPE_PRIM, SRCTYPE_SEC). Input dates for both the geography and attributes are included in the attribute tables: the arc attribute table (ARC_DATE) and the polygon attribute (ATT_DATE), respectively.

Definitions of "Level of Protection"

In Perpetuity (P)- Legally protected in perpetuity and recorded as such in a deed or other official document. Land is considered protected in perpetuity if it is owned by the town's conservation commission or, sometimes, by the water department; if a town has a conservation restriction on the property in perpetuity; if it is owned by one of the state's conservation agencies (thereby covered by article 97); if it is owned by a non-profit land trust; or if the town received federal or state assistance for the purchase or improvement of the property.

Private land is considered protected if it has a deed restriction in perpetuity, if an Agriculture Preservation Restriction has been placed on it, or a Conservation Restriction has been placed on it.

Temporary (T) - Legally protected for less than perpetuity (e.g. short term conservation restriction), or temporarily protected through an existing functional use. For example, some water district lands are only temporarily protected while water resource protection is their primary use.

These lands could be developed for other uses at the end of their temporary protection or when their functional use is no longer necessary. These lands will revert to unprotected status at a given date unless protection status is extended.

Limited (L) - Protected by legal mechanisms other than those above, or protected through functional or traditional use.

These lands might be protected by a requirement of a majority municipal vote for any change in status. This designation also includes lands that are likely to remain open space for other reasons (e.g. cemeteries and municipal golf courses).

None (N) - Totally unprotected by any legal or functional means. This land is usually privately owned and could be sold without restriction at any time for another use (e.g. scout camps, private golf course, and private woodland).

Where the level of protection is unknown, a polygon will be coded as X for this field.

Future Data Enhancements

Land that is protected by EOEEA agencies, through either fee ownership or a deed restriction, are regularly updated. All sites purchased with funds administered by the Division of Conservation Resources (DCS), EEA, are being added to the data layer, including sites in the Self Help and Urban Self Help programs. All Conservation Restrictions approved by the Secretary of EOEEA will be added to the data layer. Lastly, as staffing level allows, EEA is using OpenSpace data provided by municipalities and conservation organizations to add new sites, improve the existing data, and adjust property parcels to coincide with the local parcel mapping..

Attributes

Fields in the **OPENSOURCE_POLY** attribute table (lists of code descriptions appear below):

Field Name	Width	Type	Description
TOWN_ID	3	I	Official municipality ID designated by Secretary of State (1-351)
POLY_ID	4	I	Unique ID within each municipality; combined with TOWN_ID to compose the OS_ID field
SITE_NAME	120	C	Main site name
FEE_OWNER	100	C	Owner or grantor of the land represented by the polygon
OWNER_ABRV	20	C	The link to the OSNAMES table. A simple and unique abbreviation for some of the lengthier names in the field. <i>Formerly</i> ABRV_FEE_OWNER . (see codes)
OWNER_TYPE	1	C	Category for the fee owner's status. <i>Formerly</i> TYPE_FEE_OWNER . (see codes)
MANAGER	100	C	Entity with day-to-day care of the site (only if different from FEE_OWNER)
MANAGR_ABRV	20	C	Abbreviation of entity with day to day management responsibilities for the site. <i>Formerly</i> ABRV_MANAGER . (see codes)

Field Name	Width	Type	Description
MANAGR_TYPE	1	C	Category of entity with day to day management responsibilities for the site. <i>Formerly TYPE_MANAGER.</i> (see codes)
PRIM_PURP	1	C	Primary purpose - Code for why the land was protected/improved. <i>Formerly PRIMARY_PURP.</i> (see codes)
PUB_ACCESS	1	C	Public access - Legal (not physical) level of public access to the land (see codes)
LEV_PROT	1	C	Level of protection (see definitions)
OLI_1_ORG *	100	C	Enterprise(s) holding a legal interest in this land. <i>Formerly OTHER_1.</i>
OLI_1_ABRV	20	C	Abbreviation for OLI_1_ORG (see codes). <i>Formerly ABRV_OTHER_1.</i>
OLI_1_TYPE	20	C	Category for the interest holder's status (see codes). <i>Formerly TYPE_1.</i>
OLI_1_INT	1	C	The type of interest held by OLI_1_ORG (see codes). <i>Formerly INT_1.</i>
OLI_2_ORG	100	C	Enterprise(s) holding a second legal interest in this land. <i>Formerly OTHER_2.</i>
OLI_2_ABRV	20	C	Abbreviation for OLI_2_ORG (see codes). <i>Formerly ABRV_OTHER_2.</i>
OLI_2_TYPE	20	C	Category for the second interest holder's status (see codes). <i>Formerly TYPE_2.</i>
OLI_2_INT	1	C	The type of interest held by OLI_2_ORG (see codes). <i>Formerly INT_2.</i>
OLI_3_ORG	100	C	Enterprise(s) holding a third legal interest in this land. <i>Formerly OTHER_3.</i>
OLI_3_ABRV	20	C	Abbreviation for OLI_3_ORG (see codes). <i>Formerly ABRV_OTHER_3.</i>
OLI_3_TYPE	20	C	Category for the third interest holder's status (see codes). <i>Formerly TYPE_3.</i>
OLI_3_INT	1	C	The type of interest held by OLI_3_ORG (see codes). <i>Formerly INT_3.</i>
GRANTPROG1	20	C	Grant program (1) used to acquire/improve land (see codes)
GRANTTYPE1	1	C	Category for the grant 1 status

Field Name	Width	Type	Description
GRANTPROG2	20	C	Grant program (2) used to acquire/improve land (see codes)
GRANTTYPE2	1	C	Category for the grant 2 status
PROJ_ID1	10	C	Project (1) identifier for the parcel; may include many parcels under a single project (EOEEA legal interests only)
PROJ_ID2	10	C	Project (2) identifier for the parcel; may include many parcels under a single project (EOEEA legal interests only)
PROJ_ID3	10	C	Project (3) identifier for the parcel; may include many parcels under a single project (EOEEA legal interests only)
EOEAINVOLVE	1	I	Indicates the category of funding the parcel received from EOEEA sources (see codes)
ARTICLE97	1	I	Yes/No. Is the parcel protected under article 97 of the Massachusetts Constitution? (see codes)
FY_FUNDING	4	I	Fiscal year project was completed (EOEEA use only)
GIS_ACRES	9	N	GIS-calculated acreage of parcel
DEED_ACRES	9	N	Acreage according to the recorded deed
OS_DEED_BOOK	6	I	The number of the book the deed for this parcel and/or interest was recorded in at the local registry of deeds
OS_DEED_PAGE	4	I	The starting page of the above recorded deed
ASSESS_ACRE	9	N	Acreage according to the local assessor maps or database. <i>Formerly ASSESS_ACRES.</i>
ASSESS_MAP	5	C	Tax map identifier text as determined by the Assessor
ASSESS_BLK	5	C	Tax map block identifier as determined by the Assessor. <i>Formerly ASSESS_BLOCK.</i>
ASSESS_LOT	5	C	Tax map lot identifier as determined by the Assessor
ASSESS_SUB	5	C	Tax map subplot identifier as determined by the Assessor. <i>Formerly ASSESS_SUBLOT.</i>
ALT_SITE_NAME	120	C	A second name associated with the parcel, if any (e.g. No Town State Forest)

Field Name	Width	Type	Description
ATT_DATE	8	DATE	Date of last attribute edit
BASE_MAP	6	C	MassGIS base map number (Legacy field from initial data collection effort (1993-1997))
SOURCE_MAP	6	C	Code linking to the Source Map Worksheet delineating the specifications of the map that the polygon information was taken from. (Legacy field from initial data collection effort (1993-1997))
SOURCE_TYPE	10	C	Text code indicating what the source data was to give a better estimation of the quality of the polygon attributes. This will be used for the entire polygon. For more specific source information on the arcs bounding the polygon, see the OPENSOURCE_ARC feature class.
COMMENTS	255	C	
LOC_ID	15	C	Link to MassGIS standard parcel data (MA SPC NAD83 Meters coordinates of the centroid of the parcel)
DCAM_ID	7	I	7-digit integer for linking to the DCAM data tables via the ARC_ID field
FEESYM	20	C	Used for symbolization of ownership
INTSYM	20	C	Used for symbolization of owner category / state agency
OS_ID	9	C	Primary key comprising TOWN_ID and POLY_ID
CAL_DATE_R	8	DATE	Calendar date deed was recorded. If only year is known, it is set to January 1st of that year. <i>Formerly CAL_DATE_REC.</i>
FORMAL_SITE_NAME	120	C	Formal site name (not yet populated)
CR_REF	38	I	Unique ID number applied to conservation restrictions administered by EEA. (For EEA use only).
OS_TYPE	50	C	Descriptive information as to the type of open space. For example: cemetery, conservation area, park (active outdoor recreation), park (passive green space, etc.) Fee-interest would prevail over other legal interest in making the determination as to the type of open space. (Not yet populated)

Field Name	Width	Type	Description
EEA_CR_ID	50	C	Unique ID applied to conservation restrictions administered by EEA. It is tied to the traditional conservation restriction number assigned by EEA with the town ID appended as a prefix (For example: 035_CR_1 represents Boston CR #1).

* The fields **OLI_n_ORG**, **OLI_n_ABRV**, **OLI_n_TYPE** and **OLI_n_INT** together describe any enterprise holding a legal interest on the land.

Note: The former field names were changed as part of the February 2008 update.

CR_REF, **OS_TYPE** and **EEA_CR_ID** were added as part of the December 2020 update.

Fields in the **OPENSOURCE_ARC** attribute table (a list of code descriptions appears below):

Field Name	Width	Type	Description
CODE	2	N	Coincidence with geographic features.
SRCTYPE_PRIM	10	C	Primary source type. <i>Formerly SOURCE_TYPE_PRIM.</i>
SRCTYPE_SEC	10	C	Secondary source type. <i>Formerly SOURCE_TYPE_SEC.</i>
ARC_DATE	8	DATE	Date geometry was entered.
DROPLINE	10	C	Code used for dropping internal lines when mapped.
COMMENTS	100	C	

Note: The **ARCSYM** field was dropped as part of the February 2008 update.

[0](#)

Code descriptions for the OpenSpace polygon attributes:

(Within each section all codes are applicable to all fields)

[1](#) 0. TYPE CODES

Fields	Code - Description
OWNER_TYPE	F- Federal
MANAGR_TYPE	S - State
OLI_1_TYPE	C - County
OLI_2_TYPE	M - Municipal
OLI_3_TYPE	N - Private Nonprofit
	P - Private for profit

B - Public Nonprofit
 L - Land Trust
 G - Conservation Organization
 O - Other / None of the above (e.g. joint ownership)
 X - Unknown
 I - Inholding (a piece of unprotected property surrounded on all sides by a protected property or a recreational facility)
 Unconfirmed:
 1 - EOEEA or alternate state agencies
 2 - EOEEA or non-profit
 3 - EOEEA or municipality
 4 - EOEEA or private landowner

2 (). INTEREST CODES

Fields	Code - Description
OLI_1_INT	CR - Conservation Restriction
OLI_2_INT	APR - Agricultural Preservation Restriction
OLI_3_INT	CAPR - Conservation/Agricultural Preservation Restriction
	AQR - Aquifer Protection
	AR - Air Rights
	HPR - Historic Preservation
	EASE - Easement (official restriction only)
	WR - Watershed Restriction (local)
	WRP - Wetlands Restriction (Program)
	ROW - Right-of-Way
	LH - Lease Holding
	DR - Deed Restriction
	LIC - License

3 (). GRANT PROGRAMS

Fields	Code - Description
GRANTPROG1	State programs:
GRANTPROG2	ALA - Aquifer Lands Acquisition
	SH - State Self-help
	USH - Urban Self-help
	SURF - Strategic Urban Recreation Facilities
	CPA - Community Preservation Act
	DWSP - Drinking Water Supply Protection
	CP - Conservation Partnership
	FLA - Forest Legacy Area
	LWCF - Land and Water Conservation Fund
	GC - Gateway Cities Parks

4 (). PUBLIC ACCESS CODES

Field	Code - Description
PUB_ACCESS	Y - Yes (open to public) N - No (not open to public) L - Limited (membership only) X - Unknown

5 (). PRIMARY PURPOSE CODES

Field	Code - Description
PRIM_PURP	R - Recreation (activities are facility based) C - Conservation (activities are non-facility based) B - Recreation and Conservation H - Historical/Cultural A - Agriculture W - Water Supply Protection S - Scenic (official designation only) F - Flood Control U - Site is underwater O - Other (explain) X - Unknown

6. LEVEL OF PROTECTION CODES

Field	Code - Description
LEV_PROT	P - In perpetuity T - Term limited L - Limited N - None X - Unknown

7 (). ORGANIZATION ABBREVIATIONS

Fields	Code - Description
OWNER_ABRV	e.g.. M<town-id> SD= Town of <town-id> School Department
MANAGER_ABRV	e.g.. M004 = Town of Adams
OLI_1_ABRV	e.g.. M004SD = Town of Adams school department
OLI_2_ABRV	MGLT = Mount Grace Land Trust
OLI_3_ABRV	DR = Deed Restriction. May be term limited or in perpetuity. (A file containing all abbreviations used in these fields, such as SD and MGLT above is available upon request.)

[8 \(\)](#). ACQUISITION SUPPORT PROVIDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

Field	Code - Description
EOEAINVOLVE	0 - No EEA involvement 1 - a. Fee ownership or other legal interest held by an EEA agency or b. EEA contributed or administered acquisition funds 2 - Acquired by an EEA agency with non-state funds agency 3 - Gifted to an EEA agency 4 - Land not controlled by EEA or agency but with legal interest held by EEA 5 - Conservation restriction registered with DCS and not held by an EEA agency 6 - Land not controlled by EEA or agency but managed by an EEA agency 9 - EEA involvement is unknown

[9 \(\)](#). ARTICLE 97 CODES

Field	Code - Description
ARTICLE97	1 - Yes (protected under Article 97) 0 - No (not protected under Article 97) 9 - Unknown (Article 97 status unknown)

[\(\)](#)

Code descriptions for the OpenSpace arc attributes:

Field	Code - Description
CODE	0 - Not coincident 1 - Town boundary 2 - Road 3 - Stream 4 - Pond or lake shoreline 5 - Coastline 6 - Railroad line 7 - Road right-of-way 8 - Utility right-of-way 9 - Not sure if feature is coincident

Maintenance

While MassGIS hosts and distributes these data, EOEEA is responsible for any updates. Verified updates and corrections are regularly sent to MassGIS for publication. Please refer to the OS_ID when informing us of incorrect data. Anyone wishing to volunteer to gather information for their town for inclusion in this datalayer should contact Ben Smith at EOEEA at benjamin.smith@state.ma.us (<mailto:benjamin.smith@state.ma.us?subject=Open%20Space%20Data>) or (617) 626-1076.

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