

FY2013 Cambridge Environmental Goals and Related Activities

City Council Environment
Committee

November 22, 2011

Climate Protection Goals Status

Community: Goal to reduce GHGs by 20% below 1990 by 2010 has expired; new goals will be developed by early 2012. City Council adopted an 80% reduction by 2050 goal, but did not specify a base year. City is part of the ICLEI Climate Resilient Communities Program on adaptation.

Municipal: City departments are working on a municipal GHG reduction goal.

Schools: Cambridge Green Schools Initiative (CGSI) outlines goals to reduce the district's carbon output.



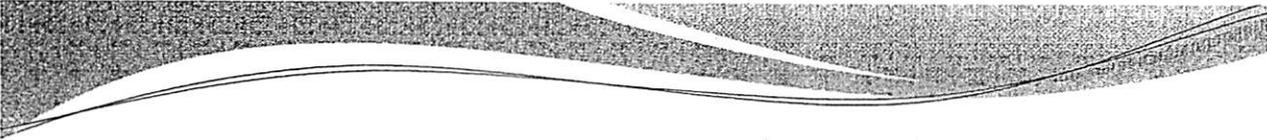
Climate Protection Initiatives

Community:

- Climate Protection Action Committee (CPAC) is developing recommendations for new climate vision, goals, objectives, and actions for release in 2012.
- Climate Change vulnerability assessment to start early 2012. RFP to be issued late 2011. Aiming to complete adaptation plan by 2014.
- Developing climate change communications & engagement strategy
- Various City initiatives relate to climate protection.

Municipal: Developing municipal GHG reduction goal.

Schools: Cambridge Green School Initiative (CSGI) outlines energy goals for reducing school district's overall carbon footprint, implementing energy-efficiency and renewable energy projects, incorporating energy-efficiency design into new building construction projects, and encouraging energy reduction practices among building occupants.

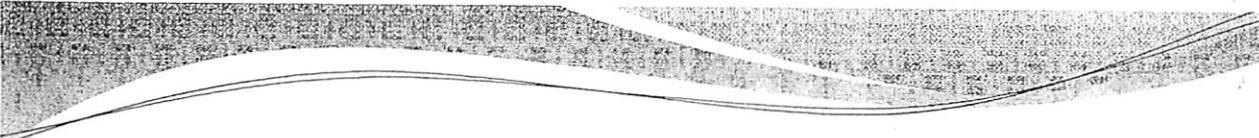


Building Energy Goals Status

Community: No numeric community goal set for building energy use.

Municipal: Green Communities Act commitment to reduce combined energy use in buildings and vehicles in 2008 baseline by 20% by 2013. New buildings not part of baseline.

Schools: CSGI outlines energy goals for reducing the school district's overall carbon footprint, implementing energy-efficiency and renewable energy projects, incorporating energy-efficiency design into all new building construction projects, and encouraging energy reduction practices among building occupants.



Building Energy Initiatives

Community:

- Cambridge Energy Alliance: community-wide campaign to facilitate energy efficiency primarily in residential and small commercial buildings working with variety of partners.
- Green building zoning amendments – LEED Silver certifiable.
- Partnering with DOER on commercial building energy labeling pilot; researching commercial building energy use disclosure ordinances.
- Working with Veolia & GenOn to expand district steam use.
- Developing strategy for engaging large businesses.

Municipal:

- Municipal energy tracking and efficiency implementation.
- LED street light conversions being planned; pilots conducted.
- Water Dept conducted comprehensive energy assessment & solar feasibility study.



Building Energy Initiatives (cont.)

- 7 LEED municipal projects.
- Continue to invest in energy retrofits and building upgrades at municipal and school buildings.
 - FY09-11: \$2.4 million in projects funded with \$900,000+ in City funds
 - FY12: \$900,000 in projects taking place (not including Sullivan Water Purification Facility.)
- Develop systems to evaluate installed efficiency measures and to diagnose and troubleshoot poor building energy performance and/or significant changes in energy use. This will be done using MassEnergyInsight data, energy management system data and other assessment tools to be developed.

Value of Completed Building Energy Efficiency Projects FY09 - present

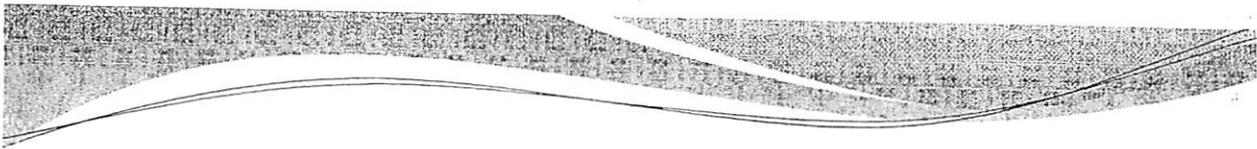
	Schools	Other City Buildings	Combined Total
Total Project Cost:	\$1,075,560	\$1,322,630	\$2,398,190
Grants and Utility Incentives	\$760,855	\$705,220	\$1,466,075
City Funds	\$314,705	\$617,410	\$932,115
Projected Annual Energy Savings/Avoided Use:			
Electricity (kilowatt hours)	1,068,350	1,256,220	2,324,570
Natural Gas (therms)	16,490	22,980	39,470
Projected Annual Savings/Avoided Costs:	\$203,870	\$349,670	\$553,540
Projects in FY12:	Schools	Other City *	Total
Total Projected Cost:	\$715,000	\$200,000	\$915,000
Proj. Utility Incentives	\$86,000	TBD	\$86,000
City Funds	\$629,000	\$200,000	\$829,000
* excludes Sullivan Water Purification Facility			

Renewable Energy Goals Status

Community: No numeric community goals set.

Municipal: 20% of municipal electricity from renewable sources by 2010. Goal currently met primarily through purchase of renewable energy certificates (RECs).

Schools: As part of the CGSI, renewable energy options are included in building design and renovation.



Renewable Energy Initiatives

Community:

- Developing Cambridge solar energy map with Harvard researcher.
- Developing small incentive program for solar hot water with EECEBG funds.

Municipal:

- Assessing renewable energy potential for City facilities. Various feasibility assessments conducted.

Schools:

- Including renewable energy options and consideration for all new renovation and construction projects where applicable. Track existing renewable energy projects (high school solar array).

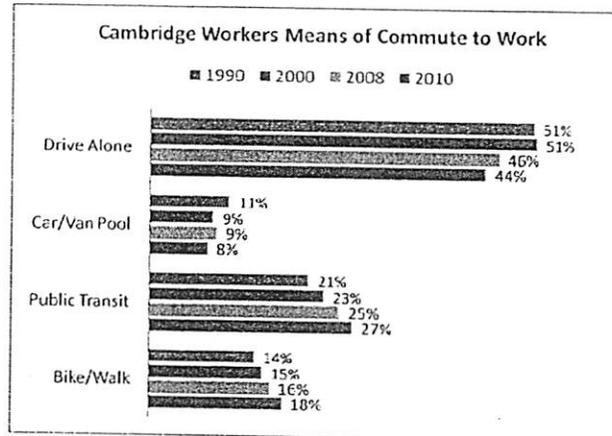
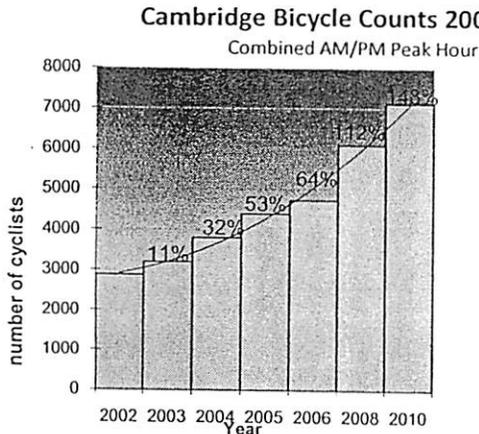


Transportation Goals Status

Community:

- Continue to increase percentage of trips made by sustainable modes through transportation demand management strategies and outreach and engagement campaigns.
- Reconstruct street and sidewalks throughout the City in accordance with our 5 year Plan, ensuring that public ways adequately provide for buses, cyclists, pedestrians, the disabled community and motor vehicles.

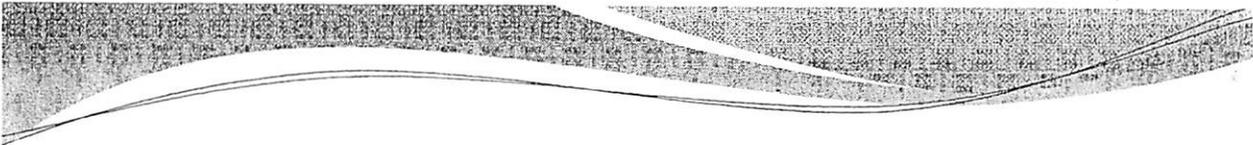
Transportation Outcomes



Transportation Goals(cont.)

Municipal: City green fleet policy sets to goals to increase average fuel economy, minimize VMT, minimize emissions, reduce vehicle size when appropriate, incorporate alternative fuel vehicles when feasible, reduce O&M costs, and eliminate unnecessary vehicles. City vehicle fuel use is counted toward the Green Communities 20% energy use reduction goal.

Schools: CGSI outlines transportation goals including lowering carbon footprint through tracking and Green Streets alternative transportation options for school district students and staff.



Transportation Initiatives

Community:

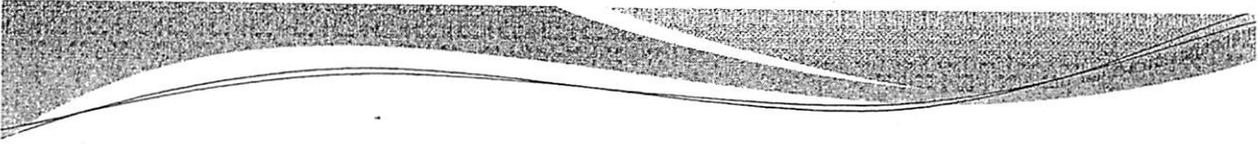
- PTDM Ordinance to reduce impact of new development
- Bicycle & pedestrian programs
- Hubway bicycle sharing system
- Electric vehicle recharging station installations
- Work with T to improve transit access and expand transit capacity

Municipal:

- Implementation of City green fleet policy
- Substantially construct the Western Avenue infrastructure project in FY13. The design includes a raised bike lane and significant improvements in the surface infrastructure that enhance the sidewalks for pedestrian and the disabled community.
- Complete Kendall Square street /sidewalk infrastructure design in FY13.
- Implement various traffic calming projects.

Schools:

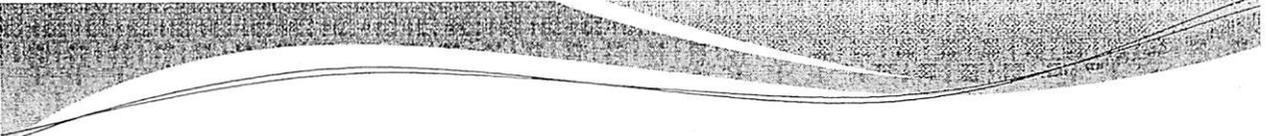
- Alternative green transportation for district staff and students.



Land Use Goals Status

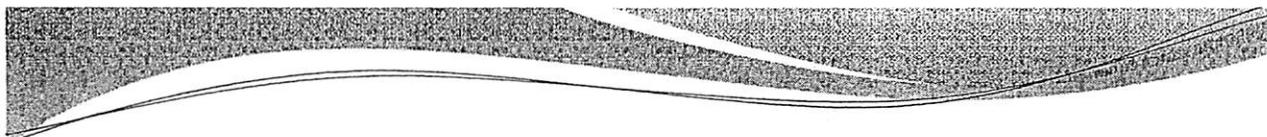
Community:

- *Toward a Sustainable Cambridge*, city growth policy.
- Zoning Ordinance and related planning studies that have been codified into the Zoning Ordinance. The goals are based on housing, economic development, and transportation imperatives.
- Environmental performance is addressed for new buildings through the Green Building Zoning Amendments adopted in 2010. Other issues such as urban heat island effect, climate change and other broader land use related issues being developed.



Land Use Initiatives

- Studying options for ensuring sustainable growth in connection with K2C2 study.
- Sustainable neighborhood planning.
- Researching urban heat island mapping techniques.



Stormwater Goals Status

Implement a comprehensive storm water management program in accordance with federal, state, and municipal requirements in order to improve water quality in the Charles River and Alewife Brook.

- Sewer and Stormwater Use Regulations.
- Land Disturbance Regulations.



Stormwater Initiatives

- CSO reduction program in the Alewife watershed.
Improving the water quality of the Alewife Brook by significantly reducing Combined Sewer Overflows (CSOs) to the Brook through sewer separation in the Fresh Pond area and further enhancing stormwater quality by integrating best management practices (BMPs) in the stormwater systems that are being built in the neighborhoods and catchment area as part of the infrastructure reconstruction program. The Fresh Pond sewer separation program will be completed by 2016.
- Ongoing sewer separation & stormwater management infrastructure program in the Charles River watershed.
- Continuing to make improvements in the quality of stormwater discharged to the Charles River from by:
 - (1) Completing the removal of common manholes in separated areas of the City by 2013
 - (2) Completing the infrastructure renewal project on Western Avenue by 2014
 - (3) Integrating stormwater best management practices in all of the various infrastructure projects in the Charles River watershed in Cambridge.
- Regulating & promoting stormwater best management practices in development projects & promoting stormwater consciousness, through education, outreach and public involvement.



Drinking Water Goals Status

Community:

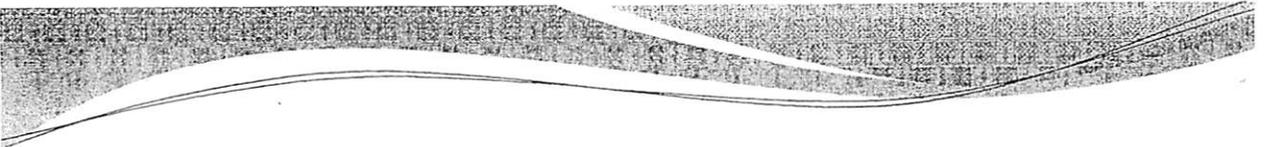
- Increase water conservation; no numeric goal has been set.

Municipal:

- Protect the water supply watershed.
- Increase water conservation.
- Assess unaccounted for water.

Schools

- To end distribution of for-sale bottled water options, increase and improve filtered tap water options.



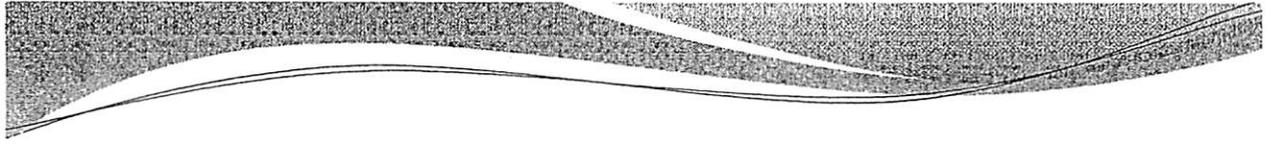
Drinking Water Initiatives

Community/Municipal

- Watershed Protection.
- Treatment System Upgrades.
- Water Conservation.
- Water Distribution System Rehabilitation.
- Reducing Unaccounted for Water.

Schools

- Ending distribution of for-sale bottled water options, all water filtration systems have been installed for filtered tap water, looking to expand program.



Waste Reduction Goals Status

Community: Preserve the environment by reducing the amount of refuse sent to landfills and incinerators. Reduce the amount of solid waste generated and require the recycling of recyclable materials to the fullest extent possible (Chapter 8.24.070 of the Cambridge Municipal Code "Mandatory recycling").

Municipal: Develop and implement a strategy to more accurately measure and track residential solid waste.

Schools: As part of CGSI, an in-depth analysis of waste use and reduction. Increase up-cycling, responsible materials disposal, recycling and composting, and lowering amounts purchased.



Waste Reduction Initiatives

Community:

- Reduce solid waste through the continued promotion of single stream recycling, expansion of public area and parks recycling, and expansion of school composting programs.
- Complete a feasibility of implementing a curbside composting pilot program through a recently awarded DEP grant.

Schools:

- As part of CGSI an in-depth analysis of waste use and reduction in place. All schools currently single-stream recycling, composting in partnership with City's DPW in 4 schools and expanding.



Urban Forestry Goals Status

Community/Municipal: Protect public health, welfare, environment and aesthetics through the preservation of existing trees and promotion of new tree planting (Chapter 8.66 of Cambridge Municipal Code "Tree Protection.")



Urban Forestry Initiatives

Community:

- Working with University of Vermont researcher to assess urban forest canopy cover.

Municipal:

- Utilize the results of recent comprehensive public tree inventory project to plan for and implement Urban Forestry program improvements.
- Continue to evaluate tree planting species in relation to potential impacts of various potential invasives, such as the Asian Longhorn Beetle, and consideration of new tree species that have not been utilized in the past.
- Further the implementation and focus of 'Back of Sidewalk' plantings during new construction, and in relation to individual resident tree planting requests, to help to minimize, where possible, conflicts with overhead utilities and considerations for sidewalk accessibility where sidewalk widths are not adequate for tree pit placement.

Testimony

USING FREE CASH TO ADDRESS THE CLIMATE EMERGENCY

Fact: The Cambridge residential tax rate is the lowest among surrounding communities and one of the lowest of any city in the Commonwealth

Fact: Cambridge has a lower commercial tax rate than most surrounding communities

Fact: Since 2008 Cambridge has instituted only one climate change tax/fee proposal citywide: a highly regressive increase in the parking pass fee, which did nothing to reduce auto use and emissions

Fact: Cambridge has used over \$40,000,000 in free cash since the 2008 economic collapse to largely benefit the 1%: MIT, Harvard College, and the richest corporations and property owners, instead of addressing the climate emergency and unemployment in an equitable and meaningful way.

In Cambridge the gap between the rich (the 1%) and the rest of us (the 99%) has never been greater, yet, even in these desperate times, the Cambridge City Council, over the past four years, has voted to use approximately **\$40,000,000** in free cash for property owners (free cash is an undesignated fund balance that can be used for appropriations to assist residents of the city). This past September the Council voted to use \$11.3 million. That may sound good, but which property owners receive most of the aid? Who receives no aid at all?

Over the past four years the major beneficiary of this use of free cash has been MIT and the dozen largest and richest corporations/property holders in the city. Over the past four years **MIT has received over \$4,000,000 from free cash!** This year alone MIT received more than \$1.3 million! The dozen largest corporations/property owners, including MIT and Harvard, have received over **\$13,000,000** (about one-third of the free cash that has been used in the past four years). MIT has a \$10 BILLION endowment and Harvard has a \$32 BILLION endowment.

Over the past four years the average resident homeowner in the least wealthy neighborhoods of the city has received less than \$75 a year from free cash! Residents of public housing receive nothing! Renters across the city receive no direct aid! The use of free cash favors corporations, big businesses, and large property owners, with relatively little savings coming to the average Cambridge homeowner.

In the past the City Council has refused to discuss who profits most from the use of "free cash", and they have refused to consider alternate uses of this money such as a substantial homeowner and small business weatherization/climate emergency program that also puts Cambridge residents back to work.

There are endless possible uses for free cash. Hearings should be scheduled to hear your ideas! Climate emergency committees should draw up proposed uses of free cash that could take advantage of citywide economy of scale cost savings as well as drawing fully on available grants and federal/state programs. A referendum could determine if the public supports this use of free cash rather than returning it to the 1%.

If \$40,000,000 would have been invested in a climate emergency program over the past four years every homeowner in the city could have received about \$3,000 to help weatherize their homes (and/or the apartments of their tenants) and buy energy efficient appliances. Cambridge residents could not only be trained but also HIRED to do weatherization. Homeowners would begin to save hundreds of dollars on their electric, gas, and oil bills which they could spend in the local economy. Cambridge residents would have gone back to work. Cambridge businesses would have provided weatherization supplies.

Demand that City Councilors support innovative and comprehensive climate emergency programs that benefit the 99%. End Free Cash subsidies of the 1%. Say **NO** to business as usual.

Contact: WE ARE THE 99 PERCENT – CAMBRIDGE

Email: wearethe99percentcambridge@gmail.com for more information.

Gerald Bergman, committee member, *We are the 99 percent Cambridge.*

Gerald Bergman
82 ELM ST.

2 attachments

From Page One

Your taxes are going up again

TAXES, from page 1

Residents noting upcoming information sessions about the soon-to-be-issued tax bills.

The majority of councilors praised Healy and his administrative team for their number crunching over the past fiscal year, despite a loss in state aid that totaled \$9.7 million. This was reduced by \$2 million after councilors adopted the local option that raised the city's hotel and meals tax.

The fiscal 2010 property tax levy of \$268.6 million reflects a 5.38 percent increase from last fiscal year. In total, 34.6 percent of the tax tab will fall on residents, but commercial property owners will bear the bigger

brunt with 65.4 percent. "While nobody likes increases, everybody likes services," Healy said.

Some residents spoke out against Healy's use of \$9 million in the city's "Free Cash," or budget surplus balance, that has been shifted around to help reduce the tax rate for both residential and commercial property owners.

Resident Gerry Bergman said the Council should be demanding more transparency on exactly where the money is spent. He argued the majority of the money would be spent as a property tax benefit to MIT, big corporations and wealthy homeowners.

"How about a \$9 million

weatherization program?" Bergman asked Monday night. "You would help good ole Mother Earth, and MIT and all the big property owners wouldn't be getting all that money."

Councilors approved a total of \$19 million from "free cash," overlay reserve and debt stabilization coffers to help keep the tax rate low. Along with the \$9 million in free cash authorized to lower the levy, councilors authorized \$2 million from the city's overlay surplus. To use as a revenue source for the city's general budget, councilors approved a transfer of \$8 million from the debt stabilization fund and \$2.8 million from the school debt stabilization fund.

Councilors also approved an increase of income limits — from \$22,281 to \$23,061 for a single person, and \$33,422 to \$34,592 for a married couple, along with asset limits from \$44,562 to \$46,122 for a single person and \$61,273 to \$63,418 for those who are married.

While the majority of residents will see up to \$100 more on their next bill, other homeowners — whose properties have recently undergone major renovations — will see an increase of up to \$500 or higher.

Councilors approved a residential exemption, or discount of 30 percent of the average property value, for qualified applicants with owner-occupied buildings.

Gerald Bergman
82 Elm St.

Why's the city giving tax benefits to MIT?

In the midst of the ongoing economic crisis facing Cambridge families, who would ever believe that the Cambridge City Council would give a \$1 million property tax benefit to MIT?

On Oct. 6, the City Council voted to use \$9 million in free cash (budget surplus revenues) for a property tax rate reduction that principally benefits big corporations, wealthy homeowners, and MIT and Harvard College. This tax benefit was given even though the Cambridge residential tax rate is already the lowest among surrounding communities and one of the lowest of any city in Massachusetts.

As a result of the vote, MIT received a benefit of more than \$1 million and Harvard College nearly \$250,000. The 10 largest real estate and commercial property owners in Cambridge benefited by nearly \$3 million. The City Council did not hold hearings on the impact of the vote, and alternative uses of the \$9 million budget surplus were not publicly discussed. MIT and other recipients of the benefits gave no evidence that the money would be used to impact rising unemployment or the local economy.

Wealthy homeowners received the biggest residential benefits. For example, a walk down Brattle Street shows that many individual homeowners benefited by between \$1,000 and \$3,000. In Area 4, where most condominiums and homes are assessed between \$200,000 and \$800,000, it is a different story. The approximate benefit for a homeowner with a residential exemption and an \$800,000 assessment was \$161. A homeowner with a \$400,000 assessment received about \$54, and a condominium owner with a \$200,000 assessment received nothing.

Cambridge tenants will see little or no change in their rents as a result of this property tax rate reduction.

These are not normal times. Unemployed people, young adults, the middle class, tenants, small property owners and small businesses need help now. The

council used free cash this year like they always do — with no awareness of the catastrophe unfolding around them.

A budget surplus of \$9 million could have been used for innovative programs to respond to the current economic crisis. Critical programs such as citywide Internet access, job training for new green jobs, expanded library hours, road and sidewalk repair, increased accessibility for the disabled, expanded and innovative nutrition programs, development of much needed open space, and increases in green affordable housing were not considered. Our neighborhood health system is in financial crisis and the City Council gives \$1 million to MIT. Unbelievable.

GERALD BERGMAN
Elm Street

City Manager Bob Healy responds

MIT receiving a property tax benefit of more than \$1 million is "hard to fathom," City Manager Bob Healy tells Chronicle reporter Jillian Fennimore.

"I don't think it calculates that way," he said, noting that he did not have the numbers in front of him.

Healy said commercial properties in total received a tax reduction of \$6 million, while residential properties were given \$3 million.

"It's hard to argue that those paying the most get the most increases," he said. "It's a rule of thumb. There's no conspiracy theory here."

Commercial properties normally pay the bigger brunt with two-thirds of the city's property taxes, while residential property's cover one-third.

In October, city councilors took out \$17 million from a "free cash" coffer of \$91 million to help with the city's debt stabilization fund, supplement the general budget, and help lower property taxes.

"You can't spend it all," Healy said. "How you operate in recession is not to spend all your free cash."

-but true

the 1%
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Gerald Bergman
82 Elm St.

The possibility of net zero schools

- The 3 architectural finalists that are to be interviewed are experienced with the net zero concept of design
- During the interview process we have already seen common design features that most have mentioned which include:
 - **Optimizing day lighting**, allowing maximum day lighting without overheating or creating glare
 - **Programming configuration and the building envelope**, super insulated walls and green roofs, capturing heat through solar gain, radiant floors
 - **Reduction of electrical lighting and plug loads**, natural lighting, light sensors, technology is a counter to reducing electrical loads. A DC voltage power supply with central charging stations powered from PV arrays has been presented
 - **Tapping the earth's energy**, geothermal
 - **Generating energy**, PV arrays
 - **Building a community of ownership**, student involvement with how the building saves energy, and how they have a responsibility to help maintain the goals of the design
- **Other points listed:**
Tap water to the schools, this is very easily built into the design. CRLS installed two in the cafeteria

PV's are usually possible depending on building roof design (flat, gabled, sloped), orientation for effectiveness, and structural requirements