



# CITY OF MERCER ISLAND CITY COUNCIL MEETING AGENDA

Thursday  
October 16, 2014  
5:00 PM

**Mayor Bruce Bassett**

**Deputy Mayor Dan Grausz**

**Councilmembers Debbie Bertlin, Jane Brahm,  
Mike Cero, Tana Senn and Benson Wong**

Contact: 206.275.7793, council@mercergov.org  
www.mercergov.org/council

All meetings are held in the City Hall Council Chambers at  
9611 SE 36th Street, Mercer Island, WA unless otherwise noticed

“Appearances” is the time set aside for members of the public to speak to the City Council about any issues of concern. If you wish to speak, please consider the following points:

(1) speak audibly into the podium microphone, (2) state your name and address for the record, and (3) limit your comments to three minutes.

*Please note: the Council does not usually respond to comments during the meeting.*

## SPECIAL JOINT MEETING WITH MISD BOARD

**CALL TO ORDER & ROLL CALL, 5:00 PM**

### SPECIAL BUSINESS

1. Youth and Family Services: Task Force Update; Funding Challenges; Needs Assessment
2. Alternative Fuels
3. Building Projects
4. Community Solar
5. Boil-Water Advisory Debrief

### ADJOURNMENT

# **Mercer Island School District #400 and City of Mercer Island Board of Directors and City Council**

**October 16, 2014**

## **Briefing Paper for the Study Session**

### **1. Youth and Family Services**

By Cynthia C. Goodwin, Director  
City of Mercer Island

#### a) Task Force Update.

Human Services are provided to Mercer Island residents through the City's Youth and Family Services (YFS) Department. YFS staff will report back on the work conducted over the summer by Island parents/professionals to explore root causes and underlying conditions that contribute to risk behaviors of Island youth. At the last joint City Council-Mercer Island School District (MISD) Board meeting, Cynthia Goodwin and MISD School Superintendent Dr. Gary Plano provided the rationale for exploring risk behaviors specific to youth in the Mercer Island Community.

The current effort, coined the "Healthy Youth Initiative" and supported by the Department of Youth and Family Services and championed by Island pediatrician Dr. Dannette Glassey, convened a task force of local parent-professionals. This group analyzed multiple data sources to identify root causes of risk factors to youth development in the community beyond those contributing to underage alcohol and other drug use (already targeted by CTC). Professional disciplines represented on the task force include pediatrics, epidemiology, public health, child development, general education, special education, family therapy, mental health, early child development, domestic violence, and community psychology/systems change.

The Healthy Youth Initiative Task Force met three times throughout the summer under the direction of professional facilitator Sherry Burke who is affiliated with the Social Development and Research Group in the University of Washington's Department of Social Work. Findings from the assessment of Mercer Island youth development data (WA State Healthy Youth Survey, 40 Developmental Assets Survey, MOST Of Us Social Norms Survey, Dr. Suniya Luthar's Survey of MI Youth, school discipline records, and informal data from parent and youth focus groups and surveys) suggest areas of strength and also identify specific areas of concern for Mercer Island youth.

In general, data suggests that the "culture of success" has gone too far in pushing youth to achieve in certain areas while under-supporting other areas of social-emotional development that leave Island youth at elevated risk for problems with mental health, substance use, school performance, and transition to early adulthood. In addition, this "norm" is found to be embedded across multiple sectors of the social ecology: youth themselves; parents/families; schools; youth serving organizations; and, the community as a whole.

Task Force findings will be summarized and recommendations for next steps will be presented. The effort is an expansion of the type of prevention work currently utilized by the Communities That Care Coalition (CTC) in that an assessment of local factors contributing high risk youth behaviors are analyzed and addressed via a comprehensive strategic logic model and action plan that focus on population-level strategies such as policies, norms, and laws/rules.

#### b) Funding Challenges and (c) Needs Assessment

In the upcoming 2015-16 biennium, funding for Human Services will hit the anticipated, critical juncture of revenues failing to meet program expenses.

YFS was created in 1973 as a private and public partnership. There are 15 YFS organizations throughout King County with the mission to support, provide, advocate and coordinate human services for residents within their respective cities. Public and private sources of revenue are integral to the funding base for the department.

Mercer Island YFS funding sources include:

- donations from community organizations and individual contributions
- maximizing stewardship of donations to the Thrift Shop
- grants
- MIYFS Foundation fundraising contributions
- client fees
- interest from the Endowment Fund
- Interlocal Agreement for Services with Mercer Island School District.

Department positions are funded by a funding matrix that includes the City's General Fund and several other sources that include the Mercer Island School District, County, State and Federal contracts, private contributions, Thrift Shop revenues, and MIYFS Foundation support. There are no base positions or privately funded positions except in the case of contracts, grants, or specifically designated donations or bequests. Department positions are prioritized based on mission critical work. The YFS Department service configuration is determined by professional protocols for Human Service planning: best practice research, targeted community needs assessment, and client and professional input. The Department director presents to the City Council, through the budget approval process, and council presentations as needed, the mix of services that would best serve the children, youth, families, adults and seniors of the community.

In 2002 a 10-year revenue/expenditure projection was developed. The revenue projection document was developed to facilitate department program planning as well as fundraising and donor development. Unforeseen at this time were public funding cuts, the recession's change in the philanthropic community and the resulting decrease in Foundation fundraising as well as cuts to contracts. Multiple contract reductions and the economic downturn, along with the rising costs of health care, IT and general maintenance and expenses have slowly eroded the Department's ability to have revenues cover the full cost of services.

With the strides made in fundraising over the past 10 years and the strong growth of the Thrift Shop between 2003 and 2012, the YFS Department hit the anticipated juncture of

revenues failing to meet program expenses two to four years later than expected. Funding for full Department services is available for 2015.

For 2016, the Department deficit will be significant. As a result of this projected deficit the Department will undergo a planning process and needs assessment with community stakeholders such as the school district to prioritize services while simultaneously working with City leadership and community partners to explore funding options to allow services to remain at their current level for 2016 and into the future. In addition, the needs assessment will also provide the City with information on how services that are presently delivered might be changed to meet the changing needs of families and students, in conjunction with school teams. The 2015 planning process will direct the future service configuration as well as any required decreases to service.

## **2. Alternative Fuels**

By Todd Kelsay, Director of Transportation and Emergency  
Mercer Island School District

Summary of Alternative Fuel Study for Mercer Island School Buses.

The increasing use of alternative fuel vehicles in the United States is an undeniable, accelerating trend. Hybrid cars were practically non-existent 10 years ago but in the U.S. today, there are over 3 million on the road. The fact that some fuel alternatives are more environmentally friendly, perhaps less expensive and are domestically produced necessitates thorough examination of options for Mercer Island school buses.

The school bus industry has been slow to adopt fuel alternatives primarily due to budget constraints and lack of available school bus options from the few school bus manufacturers. This stands in contrast to municipal fleets of buses and other vehicles currently on the road using a variety of alternative fuels.

In the last 10 years, there have been limited attempts by the school bus industry to move to such fuels as biodiesel, hybrid-electric, natural gas and propane. As of today, only natural gas and propane appear to be viable alternative fuel options for school buses and the industry appears to now be favoring propane.

(Continued on next 5 pages)

## School Bus Type

There are three main types of school buses available.

### Type A

Type A buses are smaller, have a driver's door, are built on a light duty van chassis and are typically designed to carry no more than 20 passengers.



TYPE A SCHOOL BUS

### Type C

Type C buses are large front engine buses with the passenger door behind the front wheels. Type C buses are often referred to as "conventional style".



TYPE C SCHOOL BUS

### Type D

Type D buses are large with the passenger door in front of the wheels. Type D buses are often referred to as "transit style".



TYPE D SCHOOL BUS

## **Mercer Island Fleet Configuration and Servicing**

Mercer Island purchases Type A unleaded fuel buses with and without wheelchair lifts, primarily to support SPED transportation. For regular education and trips, MISD purchases 84 passenger, Type D, rear engine, ultra-low sulfur diesel buses.

Type C, conventional buses are not an option due to the nature of Mercer Island roadways and the reduced visibility and significantly wider tail-swing during turning associated with them.

MISD currently owns 25 Type D buses and 15 Type A buses (5 with wheelchair lifts).

MISD has no facility nor trained staff to do anything other than minor service and repair work. The majority of service work is done by Bellevue School District. This fact tends to limit MISD purchase options to only those buses that BSD can fully support.

## **Alternative Fuel Options**

### **Biodiesel**

This fuel option emits significantly less exhaust pollutants when compared to petroleum diesel engines not equipped with after treatment devices (selective catalytic reduction systems) and can be used in all current MISD diesel buses.

Known drawbacks however, including the solvent/corrosive nature of the fuel, reduced engine power, higher cost per gallon, and the tendency for it to gel when cold are serious concerns. In addition some data suggest that when the entire biodiesel production process is evaluated the environmental impact may actually be a net negative, at least in certain regions of the world.

To mitigate some concerns, a blend of no more than 20% biodiesel plus 80% petroleum diesel must be used which decreases emission benefits by the corresponding amount. All MISD diesel buses purchased since 2010 are equipped with selective catalytic reduction systems so for these buses, the potential benefits of biodiesel are even less.

Other factors to consider:

- A separate fuel station is required adding to the cost and complexity
- Once biodiesel is used in an engine, the vehicle can not use regular petroleum diesel
- Maintenance costs increase as certain part replacement schedules shorten due to the solvent nature of the fuel
- There are very few school buses using biodiesel in the U.S. particularly in cold weather climates and there are none in Washington.

### **Compressed Natural Gas (CNG)**

CNG is a fuel alternative comprised primarily of methane. In the U.S., there are currently about 250,000 vehicles of all types using CNG (5,500 of these are school buses) and approximately 500 fueling stations (3 in the Puget Sound area).

Natural gas vehicles (NGVs) reduce carbon emissions, lessen dependence on foreign oil and can possibly lower overall transportation costs in high mileage vehicle fleets. Despite

this, CNG school buses face major obstacles in adoption primarily due to the following factors:

- Per vehicle cost is approximately \$30,000 more for a CNG bus
- CNG fueling infrastructure is largely unavailable and a fueling station costs between \$1.0 and \$1.5 million.
- CNG operational facilities such as maintenance garages must be retrofit due to the likelihood of methane leakage and the possibility of fire or an explosion
- A typical diesel bus requires fueling once per week and takes about 5 minutes. A CNG bus travelling the same distance will require fueling at least every other day and will take 12-15 minutes to fill in a sophisticated “fastfill” facility.
- Loss of storage space on school buses due to larger fuel tank requirements
- Federal incentives for purchasing NGVs or constructing CNG fueling stations expired in 2012
- In Washington State, there are no CNG school buses available for purchase on the 14/15 State Bus Contract

The average Mercer Island large bus will be in operation for 13 years and will travel about 100,000 miles. At current fuel prices, each CNG bus could save up to \$25,000 in fuel over its life, which falls short of the \$30,000 premium to purchase it. In addition significant costs associated with infrastructure changes and fueling time must be considered. The lack of under bus storage compartments would impact the ability to use these vehicles for field and sports trips.

Mercer Island’s current service provider, Bellevue School District has determined it will not buy CNG vehicles nor will it upgrade its facilities to service CNG vehicles for the foreseeable future.

### **Diesel/Electric Hybrid**

At this time, there are no major school bus manufacturers offering electric or hybrid electric options. There are less than 1,000 hybrid/electric school buses nation-wide. In past years, limited hybrid options were available for purchase but the substantial additional cost of the bus (\$75,000-\$100,000) alone made it an unattractive option.

Other issues include:

- Reliability
- Range
- Power
- Battery life and replacement (every 5-7 years at \$12,000 per bus)
- Limited bus configurations (no type D available)
- Loss of storage compartment

### **Propane**

Propane, also known as liquefied petroleum gas or Propane Autogas, is an alternative fuel powering about 300,000 vehicles in the U.S. (4000 are school buses) There are about 2750 fueling stations (10 in the Puget Sound area).

As with CNG, propane is significantly cleaner than diesel or gas generating 24% less greenhouse gases, 20% less Nitrogen Oxide and 60% less Carbon Dioxide. Propane supply in the U.S. is about 99% domestically produced.

When compared to CNG though, propane has advantages including:

- Per vehicle cost is approximately \$10,000 more for a propane bus compared to \$30,000 for CNG
- Propane fueling infrastructure is more widely available and relatively inexpensive
- Propane Autogas vendors are likely to provide a free on-site fueling station in exchange for a fuel contract
- No changes to facilities are required due to the safer nature of the fuel
- Fueling time is about equal to that of a diesel bus
- Adequate bus storage compartments are available
- In Washington State, there are propane buses available for purchase on the 14/15 State Bus Contract (currently Type A only)

At current fuel prices, each Mercer Island propane bus could save up to \$20,000 in fuel over its life, which more than covers the \$10,000 premium. However, at this time there are no Type D propane school buses being manufactured.

### **OSPI/State Bus Contract**

Each year, OSPI manages the state bidding process for school buses and publishes the specifications and quotes. School districts, including MISD use the publication to streamline the purchase process and to ensure best possible price.

The quotes are segmented by bus type, capacity and engine type (fuel). Diesel/electric hybrid and propane engine buses were available for purchase between 2009 and 2013. However, due to issues with diesel/electric school buses and resulting low demand, this year's quotes have only propane engine alternatives available (Type A buses). According to a Bryson Motors representative, it is expected that Type C and Type D propane buses will likely be available for purchase on the state contract in the next few years.

### **Bellevue School District Pilot Program**

After studying alternative fuel options and ruling out a CNG option, BSD decided to go forward with a Propane Autogas test program. This year, it took delivery of 2 Type A propane buses and it will take delivery of 2 Type C propane buses in the next year. The district plans to use these buses to assess the efficiency, costs and reliability of propane buses in order to help map their future strategy for their fleet.

Initial problems with the 2 buses were significant and kept them from being put into immediate service. The issues may not be tied to the propane engine however. As on September 29, 2014 one bus is still out of service. The other is in use and performing as expected.

### **Recommendation**

In the next few years, it is likely that either Propane Autogas or CNG will emerge as the standard alternative fuel for school buses. Based on current facts, it is highly likely to be Propane Autogas.



In any case, the recommended course of action is to pursue a propane bus pilot program in conjunction with the City of Mercer Island:

1. Continue to closely monitor the Bellevue School District propane pilot program while waiting for the school bus industry to provide viable Type A and Type D alternative fuel options. This waiting period has the added benefit of avoiding early-adoption issues that are being experienced by BSD. MISD's efficient use of buses does not support having multiple test vehicles unable to take to the road.
2. Once MISD determines a viable Type A option is available:
  - a. Purchase a single vehicle replacing a fully depreciated Type A bus
  - b. Share a single fueling station with the City of Mercer Island (assumed to also be in propane pilot phase)
  - c. Share information regarding vehicle performance, efficiency and service records with City of Mercer Island to help make longer-term decisions.

If propane emerges as the main alternative fuel and the pilot program is successful, MISD can quickly move to an on-site fueling station and begin to replace fully depreciated buses with propane engine buses. This assumes that both Type A *and* Type D propane buses are available.

If CNG becomes the alternative, MISD would clearly need to partner with another close proximity agency such as the City of Mercer Island to share the major expenses associated with the fueling station and facilities. In addition, more transportation levy funds would likely to be required to purchase CNG buses.

### **3. Building Projects Update**

By Brandy Fox, Construction Planning & Management  
Mercer Island School District Owner's Representative

In February of this year the Mercer Island community overwhelming approved construction bonds for three projects to target overcrowding in the schools. All three projects are on schedule and within budget:

**Mercer Island High School** – The project consists of adding approximately 15,000 square feet to the building and provides 3 new physics classrooms, a Material Science classroom, 4 general purpose and 2 Special Education classrooms by extending each of the 100, 200, and 300 wings. Associated site work includes reconfiguration of the existing front parking and drop off area, and frontage improvements along SE 92<sup>nd</sup> with a new sidewalk and bus loading area. The District was able to complete the parking lot reconfiguration this summer and work is underway on the addition which is scheduled for occupancy in the summer of 2015.

**Elementary No. 4** – The project consists of the demolition of the North Mercer facility and the creation of a new, 77,000 square foot elementary school. Country Village Day School moved from the old buildings into their new facility at the end of September. CHILD School is moving into their new building over the weekend of October 11<sup>th</sup>/12<sup>th</sup>. The District received 7 bids for the abatement and demolition work and has awarded the contract. Work is scheduled to begin the week of October 13<sup>th</sup> and will continue through the end of the year.

The design for the new school is progressing nicely. It received final Design Commission approval this month and is schedule for building permit submittal later in October. We are still on target to open bids for the project early in 2015.

**Islander Middle School** – This project includes a new building of approximately 88,000 square feet, a complete reconfiguration of the parking area off 84<sup>th</sup>, and complete reconstruction of the detention pond off of 72<sup>nd</sup>. The new building will provide space for an enlarged commons and dining facility; 2 gymnasiums and a fitness center; a Music wing that includes classrooms, practice spaces and storage; 8 new general purpose classrooms and 2 science rooms on two levels that are centered on shared learning spaces; a Special Education suite; Library; and Administration offices. A portion of the existing Gym/Commons/Music building will be removed during construction to allow space for the new building. Once complete, the remaining portion of that building will be demolished and a new courtyard will be created.

The design of the school is progressing well. It received preliminary Design Commission approval this month and is scheduled for final approval in November. Building Permit submittal is scheduled for November as well. Portables were moved this summer in anticipation of the construction work and the project is on schedule to open bids in early 2015.

The new Elementary and Middle School projects include extensive rain gardens, outdoor learning spaces, green roofs, LED lighting, energy efficient mechanical systems, and full infrastructure for 100 kw solar arrays. Green dashboards are also being included at both projects to enable the staff and students to track, learn, and incorporate the building's energy usage into the curriculum.

The District has established a website to keep the community up to date on the progress at each site. Current graphics, photos, and regular updates can be viewed by clicking on the "Construction Updates" tab on the District's home page.

#### **4. Community Solar**

By Ross Freeman  
Sustainability and Communications Manager  
City of Mercer Island

There is no written report. This topic will be discussed and shared at the meeting.

#### **5. Boil-Water Advisory Debrief**

There is no written report. This topic will be discussed and shared at the meeting.