



Aging School Buildings & Infrastructure Deficit



*Facilities Services
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May 3, 2011*

Agenda

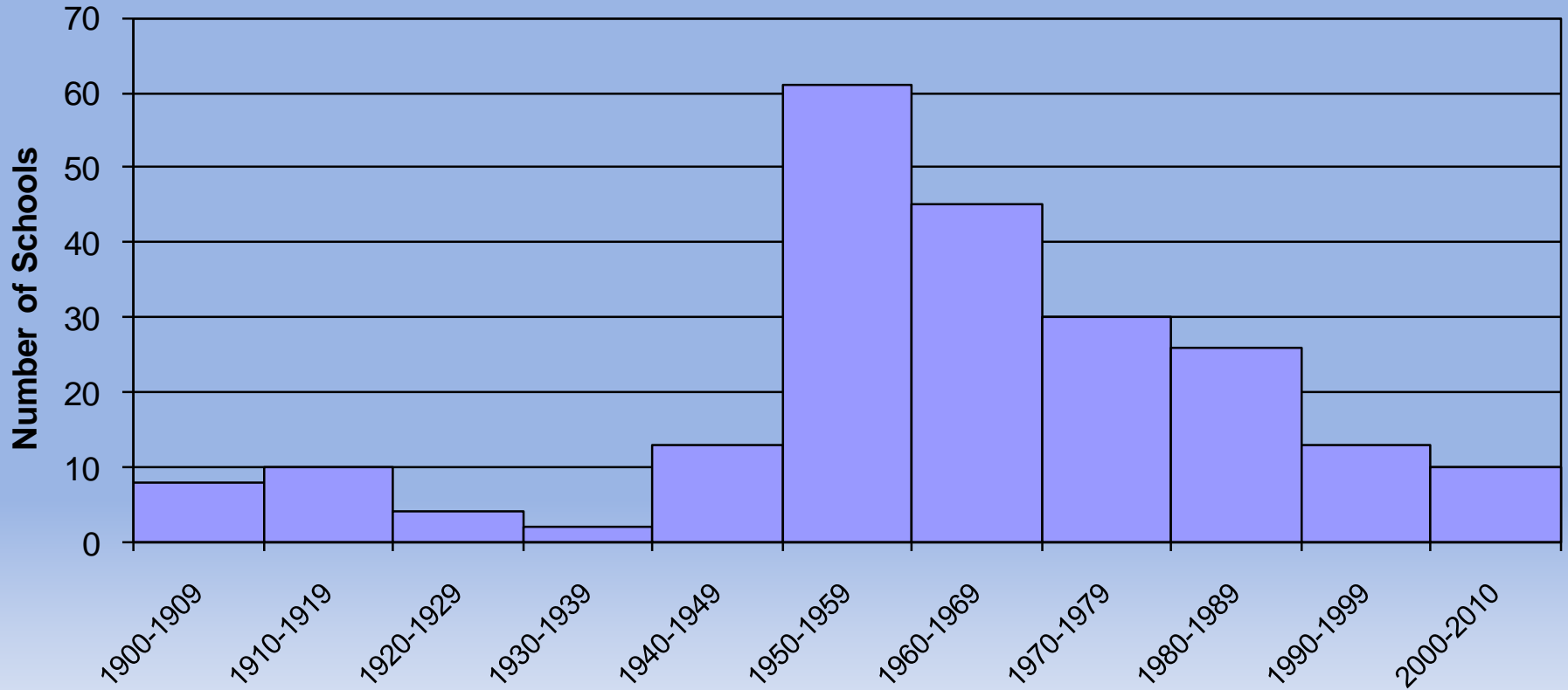
1. Age of Buildings & Components
2. Condition Assessment
3. Infrastructure Deficit
4. Hazardous materials
5. Functional Deficit
6. Working with the Provincial Gov't & others

Diverse Facility Inventory

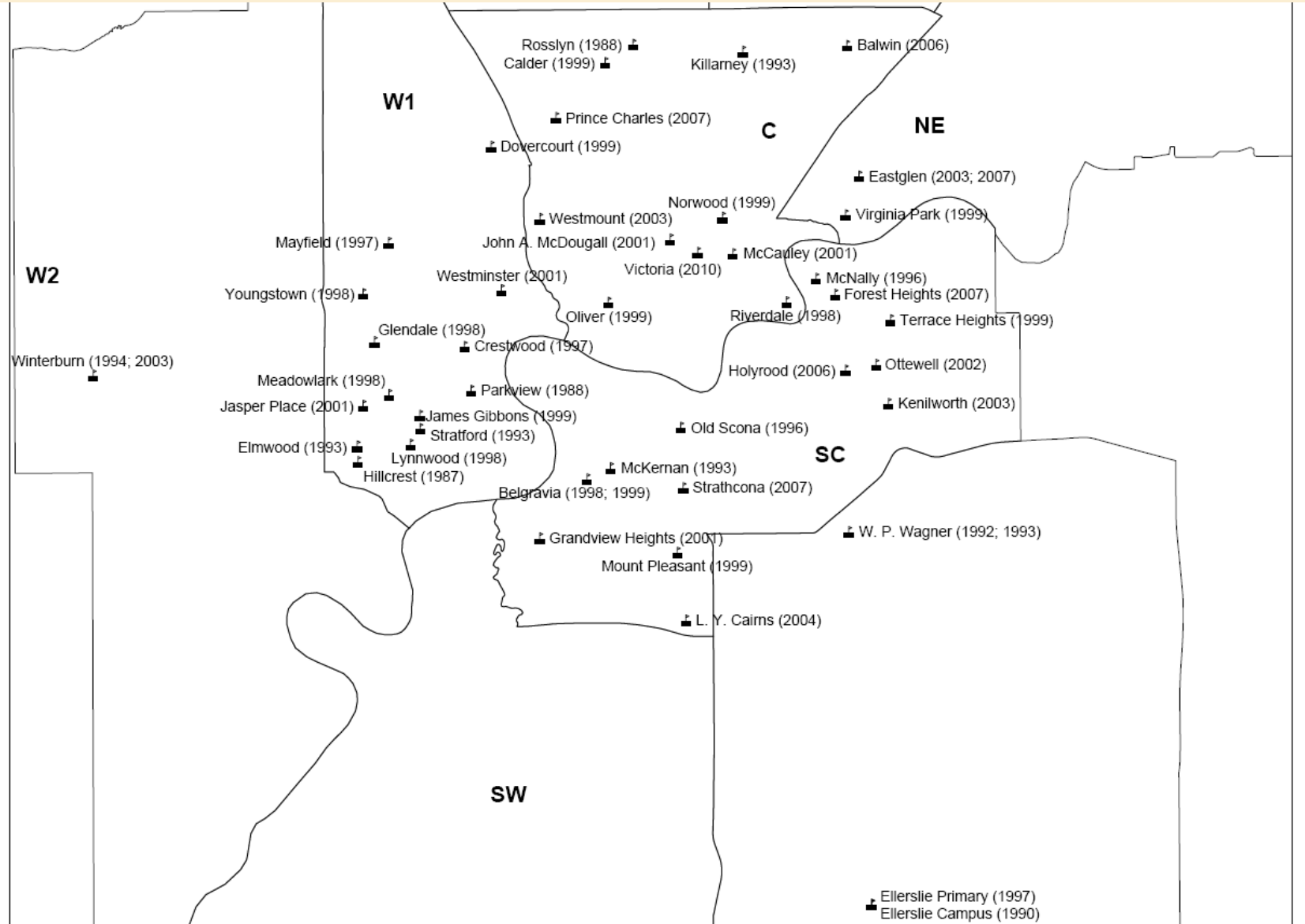
- ▶ Age
- ▶ Method of Construction
- ▶ Quality of Construction
- ▶ Construction Materials
- ▶ Hazardous Materials
- ▶ Functional Design
- ▶ Maintenance Responsibility–ASAP I&II

1. Age of Buildings & Components

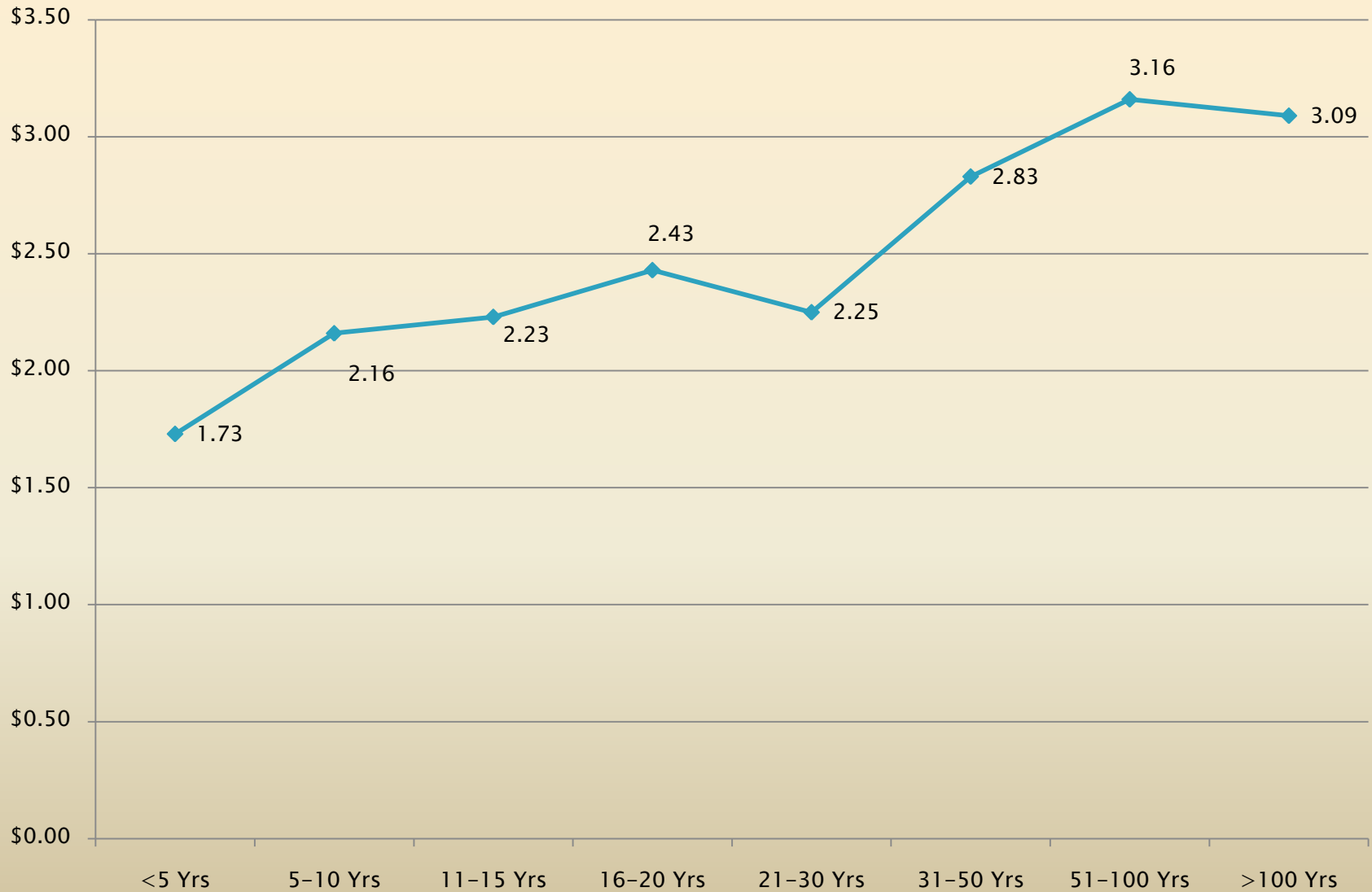
Year of Construction for EPSB Schools



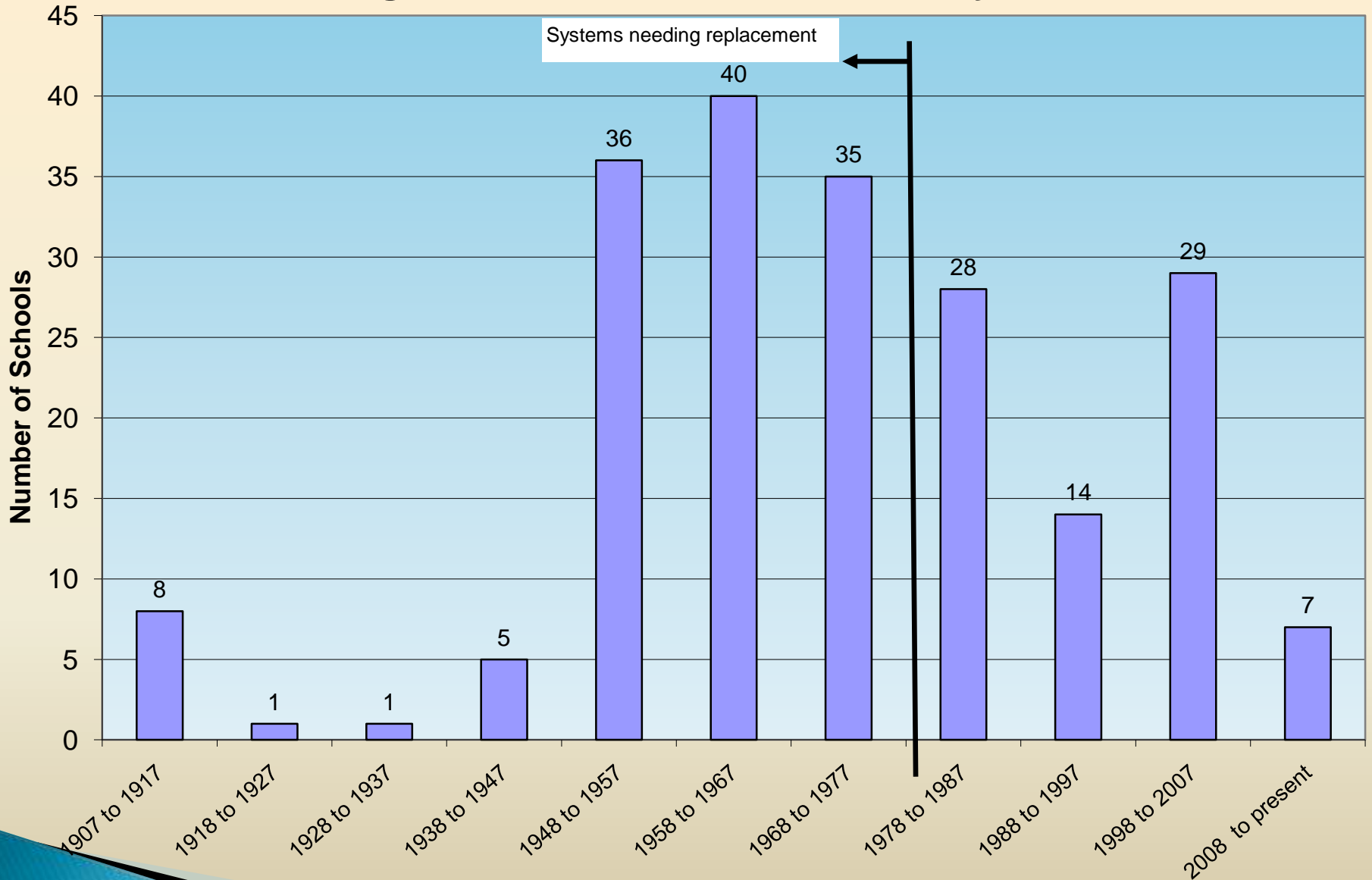
Preservation Projects Completed from 1988 to 2010



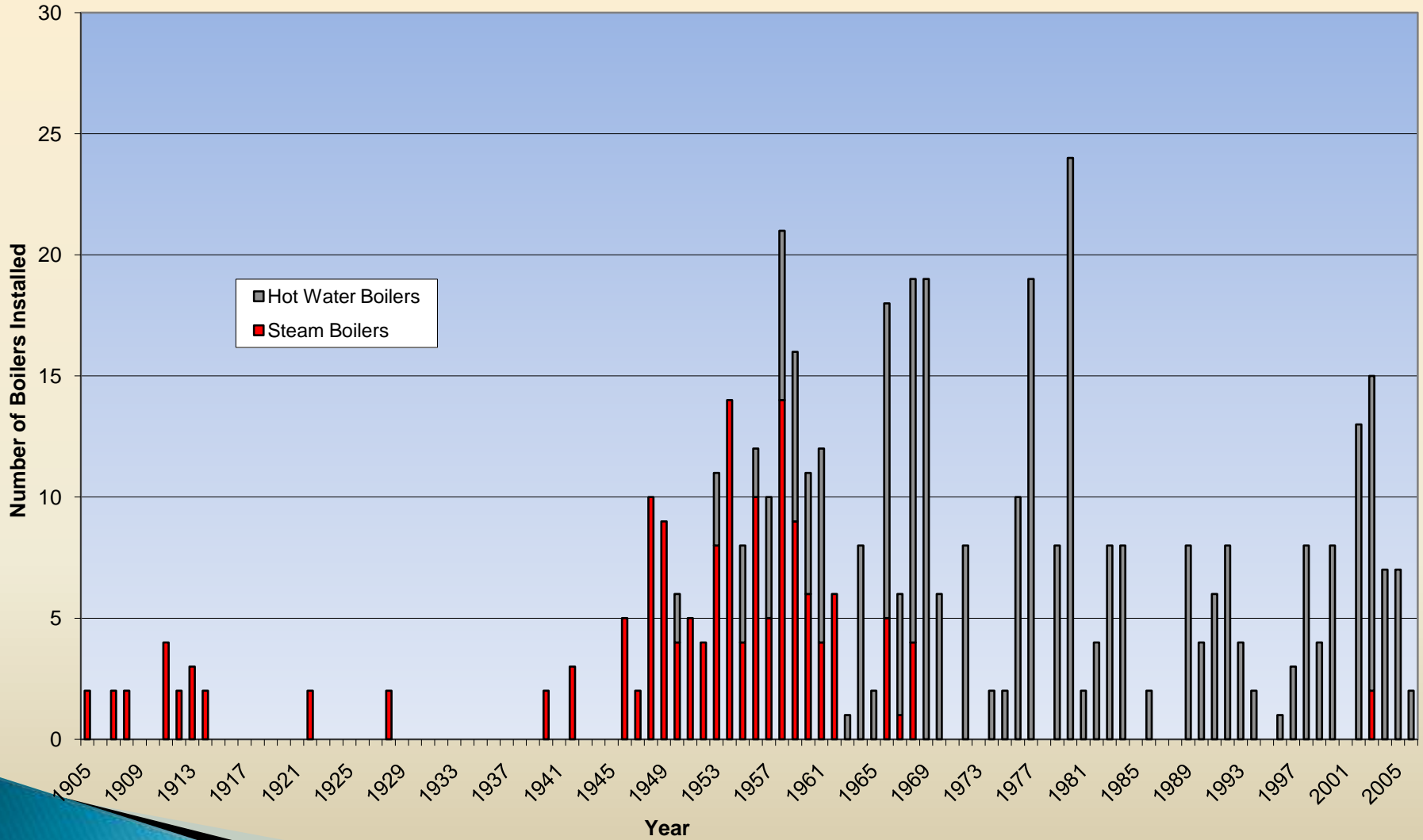
IFMA Maintenance Costs by Facility Age (\$/RSF)



Age of Mechanical & Electrical Systems



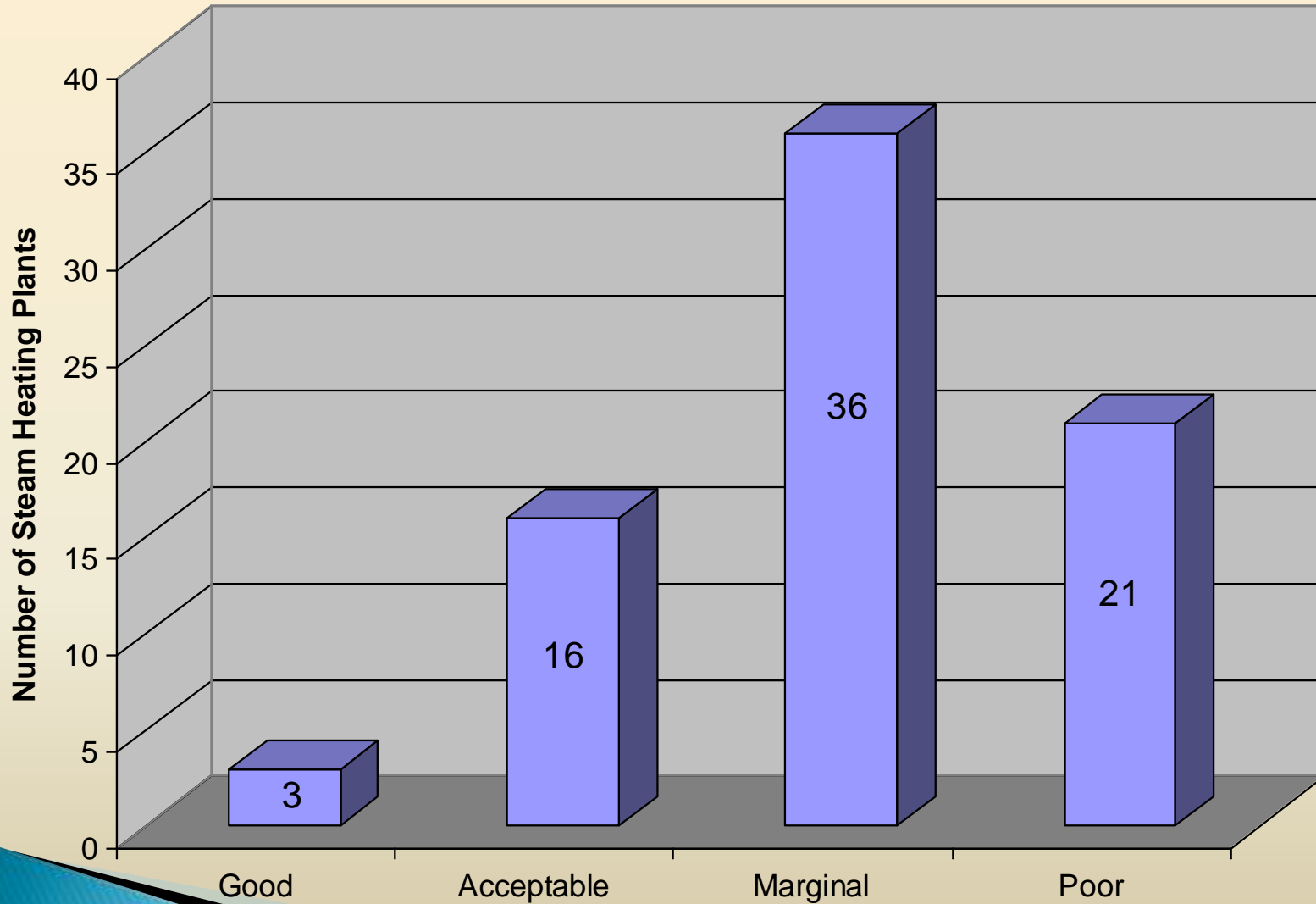
Number of Steam & Hot Water Boilers Installed By Year





Steam Heating Plant Condition

(Source:ReCAPP)



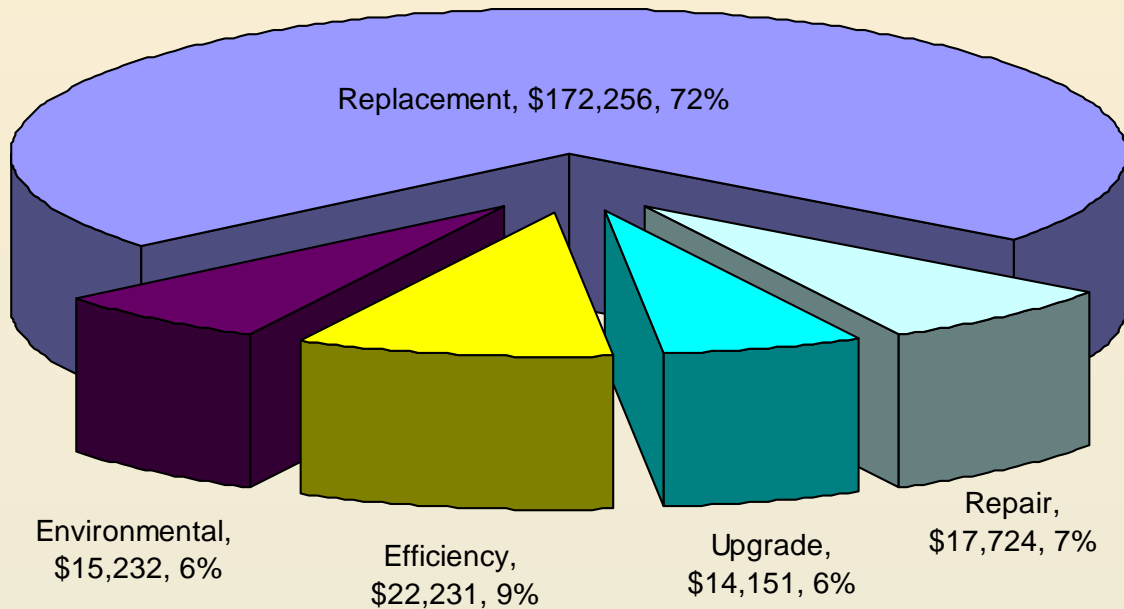
EPSB Infrastructure Deficit Pie

Chart (in K\$)

Source: ReCapp Events (June 2008)

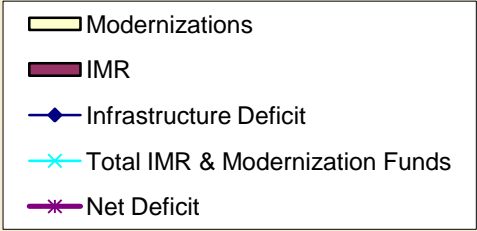
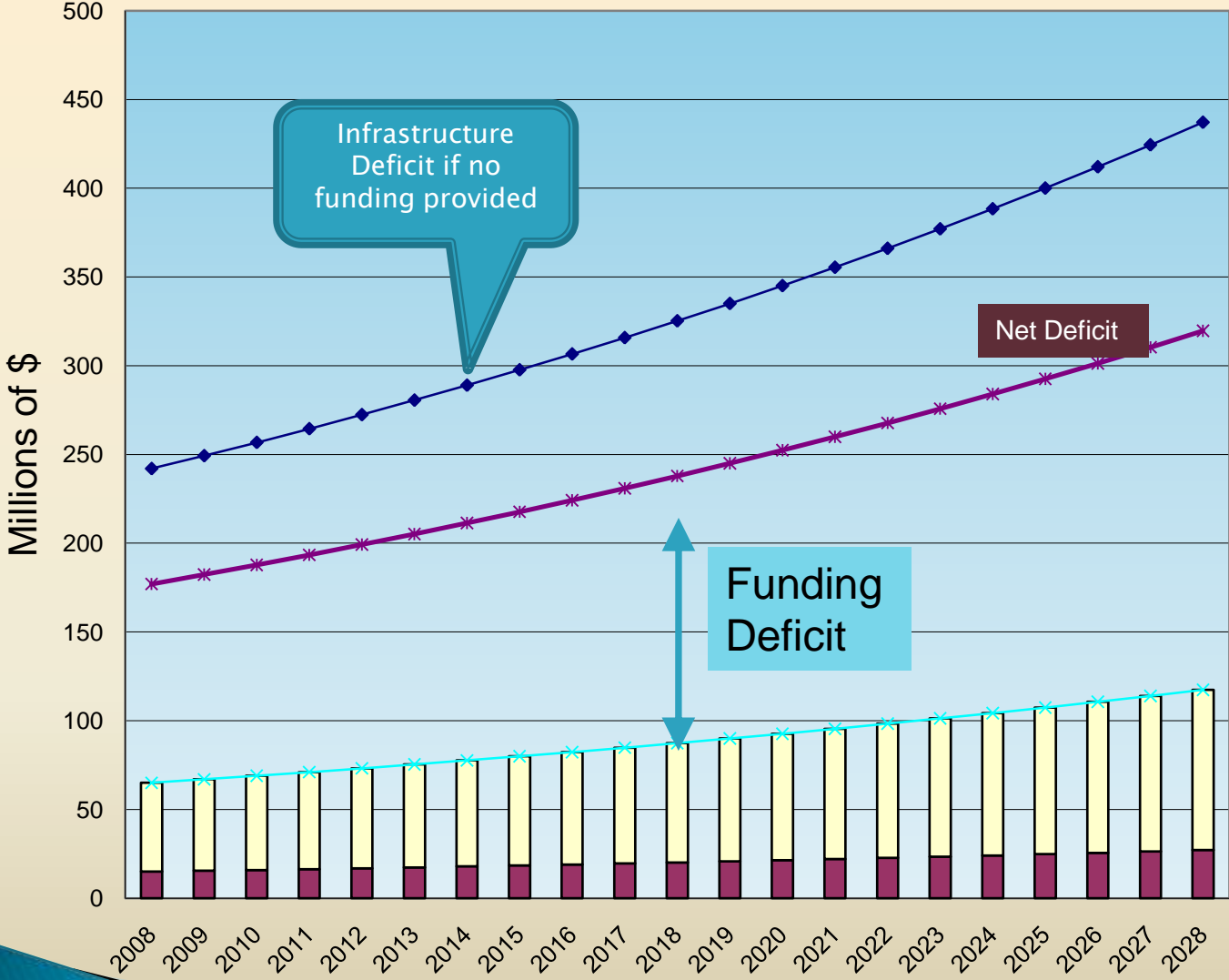
Probability - Imminent & Likely

Impact - Significant & Moderate



Event Area	Event	K\$	Total K\$
Replacement	Failure	151,343	
	Lifecycle	20,913	
			172,256
Repair	General	11,234	
	Code Repair	4,913	
	Preventative Maintenance	1,578	
			17,724
Upgrade	Program Upgrade	5,115	
	Code Upgrade	4,610	
	Barrier Free Access Upgrade	4,427	
			14,151
Efficiency	Energy	13,223	
	Operating	9,008	
			22,231
Environmental	Indoor Air Quality Upgrade	8,428	
	Hazardous Material Abatement	6,804	
			15,232
GRAND TOTAL =			241,594

Estimated Infrastructure Deficit



- Assumptions:**
1. Escalation estimated to be 3% per year.
 2. IMR funding to increase the same amount.
 3. Modernization funding is consistent and begins at \$50M/Yr.

Hazardous Materials

- ▶ When renovating schools removal of hazmat is approximately 10% of the total construction costs.
- ▶ Asbestos is commonly found in all buildings built prior to 1980
- ▶ PCB's for lighting and motors was in common use up to the 1980's
- ▶ Hazmat materials are a continuing liability for facility owners and must be removed prior to demolition.

Fuctional Deficit

- ▶ The three story schools common to the first half of the 20th century were not built to accommodate today's student mobility and other special needs.
- ▶ Older schools are prohibitively expensive or next to impossible to renovate to meet modern educational needs.
- ▶ Schools were not designed for computerized classrooms and the added electrical and heating load.

Funding Sources

- ▶ The Provincial Gov't provides the District with three main sources of facility funding:
- ▶ Plant Operations and Maintenance
 - Grants are based upon a per pupil basis, not area based for operating costs such as utilities, cleaning, and day to day maintenance
- ▶ Infrastructure Maintenance and Renewal
 - Grants are provided for renewal and replacement of major building systems.
- ▶ Capital construction
 - New school construction, including ASAP I & II
 - Modernization of existing facilities subject of value management analysis and costs less than 65% of new.

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Funding restrictions

- ▶ POM is insufficient to operate the districts current operating facilities.
- ▶ IMR is insufficient to close the Infrastructure Gap, the inventory is aging faster than we can replace it.
- ▶ Closed schools and administrative support buildings are not eligible for any Provincial support funding, i.e no POM, IMR or Capital.

Working with Others

- ▶ EPSB is actively engaged with AI/AE both formally and informally on several levels
- ▶ We sit on the Sustainable Stewardship Committee:
- ▶ We participate with the City of Edmonton and the University of Alberta and others in comparing situations and resource sharing.

In Conclusion

- ▶ The district strives to proactively extend the life of assets in the district, but most of our efforts are reacting to system failures, such as windows or imminent failures such as boiler systems.
- ▶ We have insufficient funding to allow us to make progress on the district's outstanding infrastructure deficit.
- ▶ We are approaching a critical point where our financial ability to operate some of our older facilities is in doubt. The explosive facilities growth during the 1950's, '60s and '70's and their future renewal costs is about to overwhelm us.
- ▶ The functional condition of significant amounts of our inventory are inconsistent with today's inclusive education.
- ▶ We are no different than other school jurisdiction, or government throughout the country – we are all faced with rising infrastructure replacement demands.