

**A Henderson Consulting
Services, Inc. Report**

**Playgrounds in the
Nation's Largest
School Districts**

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Introduction

Scope and contents of the survey report.

Number of Playgrounds Operated

Distribution, mean, and median number of playgrounds and number of preschool and elementary students per playground, implications for play activity.

New and Renovated Playgrounds

Distribution, mean and median number of new playgrounds planned 2006-2011, number of planned playground renovations, and annual percentage of existing playgrounds to be renovated. New construction and renovation budgets and funding sources.

Playground Equipment and Protective Surfacing

Types of equipment and protective surfacing currently used and planned on school district playgrounds.

Summary and Conclusions

Recap of survey findings and significance for playgrounds in large school districts.

Appendix 1

School Districts surveyed.

Appendix 2

Information on Henderson Consulting Services, Inc.

Introduction

This report summarizes the results of a survey of playgrounds and playground planning in the nation's largest school districts. The survey was conducted among school districts with the twenty five largest student populations. These included the school districts of many of the largest US cities as well as a number of countywide districts. The countywide districts were concentrated in the mid-Atlantic and southeastern states, most notably in Florida, which contains seven of the nation's largest twenty five school districts. Also included is the Hawaii Department of Education, a statewide school district. A complete list of school districts surveyed, ranked by student population, appears in Appendix 1.

The report contains information on the number of playgrounds in each district; plans for new playground construction and renovation of existing playgrounds during the next five years; and equipment and protective surfacing used and planned on district playgrounds.

Number of Playgrounds¹ Operated

The range in the number of playgrounds in school districts surveyed was quite wide, from a low of 30 (in a district which provides playgrounds at only a few schools) to a high of 800 in two of the nation's largest school districts. Most districts provided a playground at each of their elementary schools. As might be expected, the number of playgrounds generally followed the size (in student population) of districts surveyed, although there was some variation among districts in the ratio of number of students per playground. The distribution of playgrounds in districts surveyed is summarized below in Exhibit 1.

Exhibit 1
Distribution of Playgrounds Operated

Number of Playgrounds Operated	Number of Districts Reporting
< 100	6
100-149	7
150-199	5
200-299	4
>300	3
<i>Mean (average)</i>	<i>195 Playgrounds</i>
<i>Median (midpoint)</i>	<i>140 Playgrounds</i>

Combining data on the number of playgrounds operated with that on district preschool and elementary student population allowed calculation of the number of students served by each playground. This data is shown in Exhibit 2 on the following page.

¹ A "playground" as used here refers to a grouping of equipment to serve a school's student population. In most cases two or more pieces of equipment, targeted for different grade levels, will be involved, often in separate play areas

**Exhibit 2
Students (Pre-K- 5th) Per Playground**

Students per playground	Number of Districts Reporting
400-499	7
500-599	5
600-799	6
800-999	5
>1000	2
<i>Mean (average)</i>	<i>745 students/playground²</i>
<i>Median (midpoint)</i>	<i>600 students/playground</i>

The exhibit shows that about half the districts surveyed had less than 600 students per playground and almost three-quarters less than 800 students per playground.

The capacity of most composite (i.e. multi-play event) equipment ranges from 40 to 100 children. Therefore, in order to avoid overcrowding; most districts must hold staggered recess periods; provide more than one piece of equipment per playground; provide alternative, non-playground equipment based recess activities; or, most likely, a combination of these strategies.

New and Renovated Playgrounds

New Playgrounds

Almost all districts surveyed planned construction of one or more new playgrounds during the next five years, most often as part of a new school. Exhibit 3 summarizes new playground construction plans.

**Exhibit 3
New Playground Construction
2006-2011**

Number of New Playgrounds Planned 2006-2011	Number of Districts Reporting
None	3
1-9	8
10-29	6
30-39	7
>40	1
<i>Mean (average)</i>	<i>18 new playgrounds planned</i>
<i>Median (midpoint)</i>	<i>10 new playgrounds planned</i>

Strong new playground construction activity in a number of rapidly growing districts lead to an average of 18 new playgrounds per district during the next five years.

² If the district having only 30 playgrounds, covering only a fraction of its elementary schools, is eliminated, the mean decreases to 630 students/playground

Planned spending on new playgrounds (for playground equipment, playground surfacing, and installation) was generally less than \$100,000 per playground. Exhibit 4 shows the distribution of expected spending among districts.

**Exhibit 4
New Playground Construction Spending
2006-2011**

New Playground Construction Budget, \$000	Number of Districts Reporting
10-49	8
50-99	6
100-150	5
<i>Mean (average)</i>	<i>\$ 71,000</i>
<i>Median (midpoint)</i>	<i>\$ 65,000</i>

Three districts did not report their new playground budgets.

Funding for new playground construction was mainly from bond issues (16 districts), state funds (9 districts), and local property or sales taxes (8 districts). Some districts used more than one funding source.

Playground Renovation

The majority of school districts surveyed planned some playground renovations during the next five years. These renovations usually will involve replacement of old playground equipment and protective surfacing with new materials, essentially creating a “new” playground. About half the districts surveyed planned renovation of five or more playgrounds each year during the next half decade. Exhibit 5 below summarizes this planned playground renovation activity.

**Exhibit 5
Planned Playground Renovation
2006-2011**

Number of Playgrounds Renovated Per Year	Number of Districts Reporting
None	6
1-9	11
11-29	7
> 30	1
<i>Mean (average)</i>	<i>8 playgrounds</i>
<i>Median (midpoint)</i>	<i>5 playgrounds</i>

It is also important to analyze renovation activity compared to the existing playground base. This is done in Exhibit 6 on the next page, which shows playgrounds renovated each year in each district as a percent of total existing playgrounds.

**Exhibit 6
Planned Playground Renovations
As a Percent of Total Playgrounds
2006-2011**

% of Playgrounds to be Renovated Each Year	Number of Districts Reporting
None	6
1-3%	7
4-5%	3
6-10%	8
11%	1
<i>Mean (average)</i>	<i>4% renovated per year</i>
<i>Median (midpoint)</i>	<i>2% renovated per year</i>

The data indicate that about 45% of the districts surveyed planned on renovating 5% or more of their playgrounds each year, corresponding to a 20 year replacement cycle. Twenty years is the expected service life for most playground equipment. Of the districts planning little or no renovation activity, about half did so because of limited funding resources, with other half having mostly new or recently renovated playgrounds, obviating the need for much renovation in the 2006-2011 time period.

Playground renovation budgets, for new equipment, surfacing, and installation, were generally similar for those for new playgrounds.

**Exhibit 7
Playground Renovation Budgets
2006-2011**

Renovation Budget, \$000	Number of Districts Reporting
10-49	10
50-99	4
100-150	4
<i>Mean (average)</i>	<i>\$ 60,000 per playground</i>
<i>Median (midpoint)</i>	<i>\$41,000 per playground</i>

One district did not report its playground renovation budget.

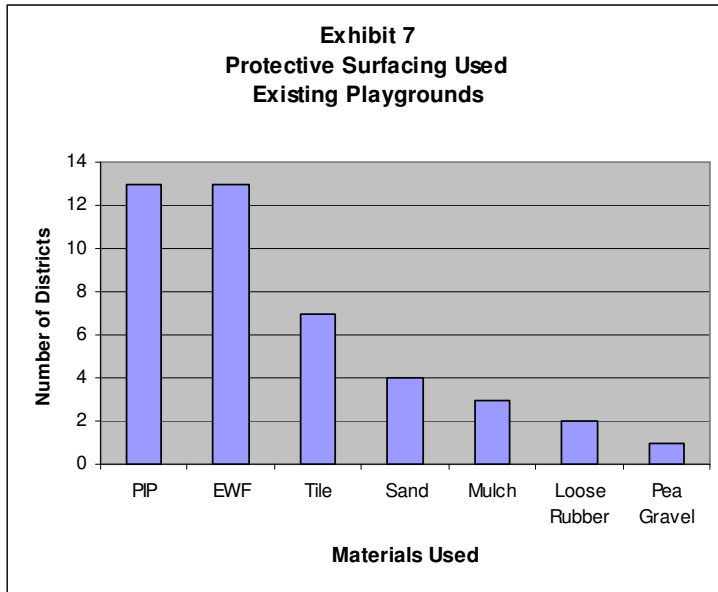
Funding for playground renovation came from a variety of sources, with many districts using more than one funding source. Renovation revenue sources reported in the survey were local bond issues (9 districts), maintenance and operating budgets (7 districts), PTA funding (7 districts), local sales and property taxes (6 districts) and state funds (5 districts).

Playground Equipment and Protective Surfacing

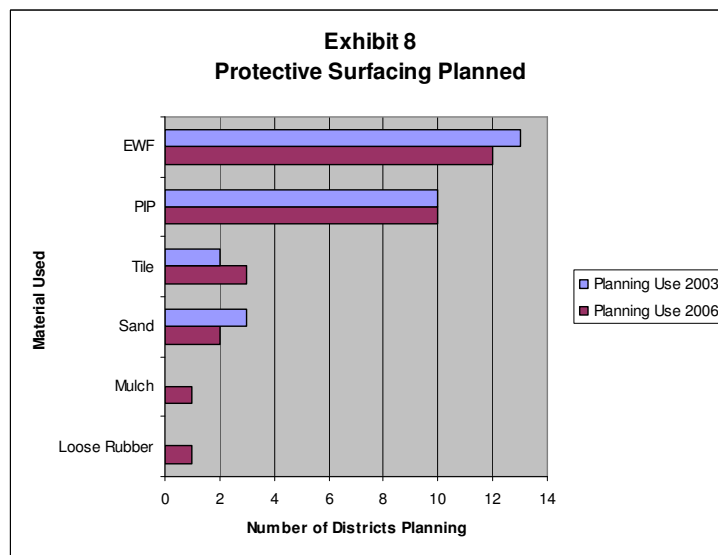
Playground Equipment

All districts install both equipment for both kindergarten and elementary (1st-5th grade) school students. Many districts also provided equipment for preschool children when required.

Protective Surfacing



A wide variety of protective surfacing materials are installed on existing playgrounds, reflecting the many types of surfacing available. Poured in place rubber surfacing (PIP) and engineered wood fiber (EWF) are the most widely used. Many districts had more than one type of protective surfacing on playgrounds throughout their schools. Exhibit 7 shows surfacing currently used by districts surveyed.



Protective surfacing planned for new and renovated playgrounds was similar to that on existing playgrounds, with engineered wood fiber the most popular surfacing, closely followed by poured in place rubber. Tile, sand, loose rubber and wood mulch surfaces are also planned. Exhibit 8 shows types of surfacing planned for new and renovated playgrounds during the next five years and also shows types planned by districts in a similar survey done in 2003.

Summary and Conclusions

Almost all districts surveyed provided playgrounds for most of their preschool and elementary students. The number of these students per playground in most districts ranged from 400 to 800, indicating a need for staggered recess periods, several pieces of playground equipment on each playground, non-equipment related student playground activities, or a combination of these approaches, in order to avoid overcrowding.

Plans for new playground construction during the next five years were strong, with most districts planning playgrounds at their new elementary schools. Districts surveyed planned an average of 18 new playgrounds during the 2006-2011 time frame. Funding levels for new playgrounds were modest. Most districts budgeted less than \$100,000 for new playground equipment, surfacing and installation, with the average new playground budget about \$71,000.

Most districts also planned renovation of existing playgrounds during the next half decade, although six districts planned no renovations. About 45% of the districts planned to renovate at least 5% of their existing playgrounds each year. A 5% renovation rate corresponds to a 20 year replacement cycle, 20 years being the expected life of most playground equipment. About half of the districts planning limited renovation activity did so due to lack of funding, the other half having mostly new or newly renovated playgrounds, and thus having no near term renovation requirements. Renovation budgets, like new playground construction budgets, were modest, averaging \$60,000 per playground for equipment, surfacing and installation.

Local bond issues were the most popular type of funding for both new and renovated playgrounds. Other important funding sources were state funds, local property and sales taxes, and PTA funds.

All districts provided playground equipment for both kindergarten students and students in grades one through five. Engineered wood fiber and poured in place rubber were the most popular protective surfaces for playgrounds. Both materials, when properly installed and maintained, meet federal and industry guidelines for shock attenuation and accessibility.

In conclusion, the survey demonstrates that the nation's largest school districts, in the face of heavy demands on their human and financial resources, have found ways to provide playgrounds for the vast majority of their preschool and elementary school students, playgrounds on which these students can play, learn and grow.

Appendix 1

School Districts Surveyed

(Ranked by student population)

New York City Department of Education
Los Angeles Unified School District
Chicago Public Schools
Dade County (FL) Public Schools
Broward County (FL) Public Schools
Clark County (NV) Public Schools
Houston Independent School District
School District of Philadelphia
Hawaii Department of Education
School District of Hillsborough County (FL)
Detroit Public Schools
Palm Beach County (FL) Public Schools
Dallas Independent School District
Fairfax County (VA) Public Schools
Orange County (FL) Public Schools
San Diego Public Schools
Montgomery County (MD) Public Schools
Prince Georges County (MD) Public Schools
Duval County (FL) Public Schools
Gwinnett County (GA) Public Schools
City of Memphis Public Schools
Pinellas County (FL) Public Schools
Charlotte-Mecklenburg (NC) School District
Baltimore County Schools
Wake County (NC) Public Schools

Appendix 2

Henderson Consulting Services, Inc.

Henderson Consulting Services, Inc. offers a variety of consulting services for recreation professionals.

Services include:

- market research
- product evaluation
- specification development
- regulatory compliance
- business analysis
- strategic planning
- marketing consultation
- expert testimony

Drawing on over twenty years of experience in the play equipment and recreational surfacing field, and a business and technical background, the HCS principal, Walter Henderson, provides expert, reliable, objective consulting advice to clients throughout the recreation community.

For more information on Henderson Consulting Services, log on to www.hendersonconsult.com.