Acknowledgements

Project Staff
Robin Grimwade, Strategy, Finance and Business Development Manager
Brett Horner, Strategic Planning Manager
Janet Bebb, Strategic Projects Manager (former)
Patty Freeman, Landscape Architect, Project Manager

The following PP&R staff provided information, technical advice, and assistance:
Bryan Aptekar (former)
Joe Ashlock (former)
Randy Webster (former)
Lydia Kowalski (former)
Greg McGowan
Barbara Aguon
Josh Darling
Gary Devore
Judy Baker-Johnson (former)

Playground Forum Participants:
Susan Glotsman, Principal, MIG
Joe Ashlock
Barbara Aguon
Lydia Kowalski
Gary Devore
Sue Donaldson
Gregg Everhart
Laura Gordon
Jim Ringelberg, Northwest Recreation
Ellie Justicee, Portland State University Helen Gordon Child Development Center
David Yamashita

Creative Play Charette contributors:
Deborah Lev
Riley Whitcomb
Jim Sjulin
Rod Wojtanik

Cover photo: Courtesy of Bob Schulz

Portland Parks & Recreation
1120 SW Fifth Avenue, Suite 1302
Portland, OR  97204
503-823-PLAY
www.PortlandParks.org

Dan Saltzman, Commissioner
Zari Santner, Director
Portland Parks and Recreation contributes to the city’s vitality by:

- Establishing and safeguarding the parks natural resources and urban forest that are the soul of the city; ensuring that green spaces are accessible to all;
- Developing and maintaining excellent facilities and places for public recreation; building community through play and relaxation, gathering and solitude;
- Providing and coordinating recreation services and programs that contribute to the health and well being of residents of all ages and abilities.
Executive Summary

Portland Parks and Recreation (PP&R) strives to provide play areas that are evenly distributed, safe, accessible, and designed to meet the needs of urban children and their families.

The goals of the plan are to provide:
- Sufficient play areas across the city that serve children from ages 2 to 12.
- Well-designed, imaginative high quality facilities that support intensive use.
- Destination play areas that provide a range of different experiences and are distributed equitably throughout the City.
- Ample opportunities for creative and nature-based play.

Existing Conditions

Portland has 121 play areas at 109 sites ranging from scattered stand-alone play equipment to accessible curbed areas with drainage and safety surfacing. They vary in size and include a few special destination play areas.

Issues
- Many play areas are not adequate in size and condition.
- Not all play areas meet Americans with Disabilities Act (ADA) standards.
- Distribution of play areas is uneven and many parts of Portland do not have access to any public play areas.
- Funding is not sufficient to meet major maintenance needs.
- Vandalism takes a large toll on the usability of play areas.
- Play areas do not have equipment that is appropriate for pre-teens.

Trends
- The need for, and trend towards, creative and nature-based play is growing.

Desired Level of Service

Provide three levels of service:
1. A small play area within walking distance (10 minutes or ½ mile) of every resident.
2. Larger play areas in larger parks that can accommodate more children with separate areas for bigger/older and smaller/younger kids and more extensive creative play settings.
3. Special destination play areas that may feature adventure play, water play, or nature play themes.
Recommendations

CAPITAL IMPROVEMENTS

1. Address safety issues in existing play areas.

2. Address gaps in the provision of play areas in the following locations:
   - Build a play area in Cathedral Park.
   - Construct play areas as proposed in the following PP&R Master Plans: East Holladay, Hillsdale, Errol Heights.
   - Include play areas to fill service gaps where possible in park properties slated to become developed parks.
   - Utilize school properties to provide a good distribution of play areas throughout the city. Specifically:
     - Assess the adequacy of school play areas adjacent to Beech, Cherry, West Powellhurst, Gilbert Heights, Lynchwood, Sacajawea and Thompson Parks during the master planning process to see if they can fill gaps. Include amenities such as benches and drinking fountains.
     - Assess school play areas in other locations with no play areas. Build or improve play areas where school playgrounds do not meet minimum play area standards.
     - Formalize joint use and maintenance agreements for use of school property.
     - Acquire land and develop parks with play areas in areas with no park land.

3. Estimate the cost of acquisition and development for new park land and play area construction.

4. Bring all play areas up to ADA guidelines and standards.

5. Improve drainage, equipment, and capacity for existing playgrounds that do not meet current expectations and needs.

6. Include nature-based or creative play in new play areas and play area renovations. These are labeled “Free-play” in the cost estimate found in Appendix A.

7. Provide a minimum of two special destination play areas: one in southeast or east Portland, and one in north or northeast Portland.

---

1 Cost estimates are in Appendix B.
MANAGEMENT STRATEGIES

- Work with PP&R Support Services to develop a “Playground Design Guidelines” handbook.
- Identify issues related to maintenance of commercial play equipment. Develop lists of acceptable and unacceptable commercial play equipment.
- Develop a resource guide to holistic/creative play.
- Assess the current strategy to address vandalism. Explore strategies including equipment selection, replacement budgeting, and community involvement.
- Develop a library of images to use in public meetings to assist the public in envisioning the potential for creative play. Develop a PowerPoint presentation for design staff to use in design workshops to educate participants about the range of options.
Chapter 1: Introduction

This document is one in a series of technical papers prepared by Portland Parks & Recreation (PP&R). Their purpose is to provide information on the existing conditions and distribution of our facilities. They describe current capacity and service areas, identify gaps in service, and suggest actions needed to provide citywide service for a particular kind of experience or activity – in this case, play areas.

Taken together the papers cover the broad array of built facilities that provide public recreation opportunities in the PP&R system. They form the basis for developing system-wide facility plans and policies to guide park development and management and will inform decision making for administrators, managers, staff and the general public.

In addition to play areas, topic-specific technical papers have been prepared for:
- Aquatic facilities
- Community centers
- Community gardens
- Skate parks
- Sports courts (tennis and basketball)

Future papers will cover sports fields, group picnic areas, botanic gardens and water recreation on the Willamette River.

The papers will be used in conjunction with other studies, reports and public involvement to develop system-wide facility plans and policies to guide park development and management to help us realize the vision, goals and objectives of the Parks 2020 Vision Plan and our Mission.

Play Areas in Portland

Outdoor play is essential in the lives of children, and Portland has great places to play outdoors. In urban areas, parks provide the best opportunity for outdoor play and that may be the only contact urban children have with nature. Unfortunately, not everyone has access to a playground, and many existing ones are inadequate. While children play in many places, this document focuses on PP&R’s outdoor play areas, with information on the role that school play areas have in creating a system of play areas.

This document uses the term “play areas” instead of “playgrounds”. A play area is defined as an area in a park where play equipment and related amenities are grouped in proximity. This typically describes either a curbed area with wood chips and play
equipment or stand-alone play equipment scattered in a lawn area. This definition can include other features such as spray pools or merry-go-rounds.

This paper examines existing conditions and needs in detail, identifies trends, and recommends priorities for play area improvements.

PP&R’s 198 developed parks have 121 play areas in 109 parks. Several parks have more than one play area, as reflected in Appendix B. Marshall Park, a mostly natural park, has play equipment that will be replaced with more natural play elements.

Substantial improvements have been made to play areas in the last 20 years. Many wood play structures have been replaced with durable powder-coated metal structures. Renovated play areas have been brought up to ADA standards. Nearly all new play areas have internal drainage to prevent standing water and the consequent deterioration of wood chips. The 1989 Levy replaced seven play structures. The 1995 Parks Bond renovated 50 play areas. The 2002 Levy provided funds for many playground safety improvements.

Providing enough great, safe places to play in Portland involves eliminating hazards and providing sufficient well designed play areas. And it means meeting children’s needs for creative and stimulating play.

Children and Outdoor Play

Play is essential to the healthy growth and development of children. This includes physical, emotional, social and intellectual development. Outdoor play has a special role in childhood development. It is where children learn about the natural world, where they are most likely to interact in social groups and gain related skills. As Richard Louv said in his book, *Last Child in the Woods, Saving our Children from Nature-Deficit Disorder*, a growing body of evidence indicates that contact with nature is as important to children as good nutrition and adequate sleep.

While Portland is well endowed with both natural areas and play areas, nature-based, free-form play is not generally available to most children. Since intensive play is not appropriate in natural areas, we have to create it in the developed parks.
A Brief Playground History

THE EARLIEST PLAY AREAS IN AMERICA

The playground movement in America began in 1885 when the Massachusetts Emergency and Hygiene Association (MEHA) put a pile of sand in the yard of the Parmenter Street Chapel in Boston. Called a Sand Garden, its purpose was to provide a supervised place for immigrant children to play. It became so popular that MEHA expanded their program of sand gardens and coined the term “playground”. Word of this new idea spread beyond Boston and by 1900, 14 US cities had playgrounds. When the Playground Association of America (PAA) was formed in 1906, it was clear that a movement was underway.

The first public playground in Portland, pictured below, was built about 1910-11 in the North Park Blocks just south of Burnside. The South Park Blocks had an early play area at its south end as did Eastmoreland with a playground on Crystal Springs Drive.

In 1911, investment in park play areas increased substantially. The Portland Park Board hired 26 playground instructors, more than double the number hired in 1910. That year they also created a committee to plan “a more satisfactory system of playgrounds” in conjunction with the Board of Education.
PLAY AREA EVOLUTION

Play areas have evolved from their modest beginnings as a sand pile in a church yard. The Stanford Park playground built in 1907 was an extensive and elaborate matrix of linked ladders, poles and overhead connectors, looking very much like circus apparatus. Early play areas in Portland contained scattered pieces of “stand alone” equipment, such as swing-sets, slides, and small merry-go-rounds. While these pieces are still popular and common in play areas, many do not meet ADA requirements.

In the 1960s, landscape architect Steve King conceived of “continuous play” for a design school project by connecting various play components together. He later founded Landscape Structures, a play equipment manufacturer. Early composite structures were made of wood, but splinters and rot limited their appeal. In the early 1980s, structures began to be made of metal posts and were powder-coated with bright colors. Some elements such as slide chutes are now often made of heavy plastic, which tolerates Portland weather well, but is prone to vandalism.

Adventure Playgrounds originated in Europe after World War II when a Danish landscape architect noticed that children preferred to play everywhere but in the playgrounds that he built. He watched children playing in the “normal” asphalt and cement playgrounds and found that they preferred playing in dirt and lumber from the post war rubble. He realized that children had the most fun designing and building their own equipment and manipulating their environment.

Adventure playgrounds provide many key experiences of creative play: open-ended materials, settings that do not dictate how they are to be used, and moveable parts. They often include water. Children have the opportunity to modify the setting and materials, and may actually get dirty doing it!

The Hamill Family Play Zoo, in the Brookfield Zoo, Chicago, Illinois, 2006
There have been periodic attempts over the years to provide play equipment or play areas that encouraged more use of children’s imaginations, or invited children to move in new ways. The “do it yourself” play areas of the seventies were free-form compositions of logs, tires, mounds, and wood structures. These were not all equally successful in terms of appeal, safety and durability, and most have not survived.

The play area in Couch Park is a notable exception. It was a custom design when the park was developed, and is well-loved by the community. More recently, companies such as Kompan, a Danish company, and Berliner Seilfabrik of Germany have developed structures that have playful designs and are not explicit as to how they should be used. This type of equipment is gaining popularity.

The Americans with Disabilities Act and an influx of money from the 1995 Portland Parks Bond brought significant changes to Portland play areas in the last decade. New composite structures have been installed, and existing ones modified to include transfer platforms for children in wheelchairs. A portion of all new play equipment is accessible to children with disabilities.

Current play area design has play equipment of all kinds grouped inside a curbed area built flush with the adjacent grade outside the play area. They include wood chips that compact to provide wheelchair access. Ramps transition from the adjacent grade down to the wood chip level to allow wheelchairs to enter the area. Drainage is installed below grade so that the wood chips are not in standing water during wet weather.
Chapter 2: Goals and Objectives

PP&R has identified the following goals and objectives for play areas:

Goals

Provide the following:
- Sufficient, accessible play areas across the city that serve children from ages 2 to 12.
- Well-designed, imaginative high quality facilities that support intensive use.
- Destination play areas that provide a range of different experiences and are distributed equitably throughout the City.
- Ample opportunities for creative and nature-based play.

Objectives

The following statements describe the desired outcomes for PP&R’s play areas:

- Opportunities for creative play are distributed equitably throughout the city.
- A sense of community develops as play areas provide places for social interaction.
- Adequate facilities exist to meet current and future needs.
- Best management practices result in effective management.
- Children’s play experiences promote social, physical, emotional and intellectual growth.
- Sufficient funding supports installation and maintenance of all play areas.

The following chapters describe the challenges, opportunities and possible ways to realize these outcomes.
Chapter 3: Issues

Distribution

Neighborhood-scale play areas are currently not distributed equitably throughout the City, as shown on the map on page 19, either in parks or on school property.

A few play areas such as Jamison Square and Washington Park provide exciting, unusual facilities and draw families from all over the City, but they are concentrated in or near downtown.

There are few play areas for pre-teens aged 10 to 12.

Quality

Quality of play areas varies substantially, and many are inadequate. They may contain very little play equipment, equipment in very poor condition, or simply equipment that provides very little challenge.

Some still contain hazardous wooden elements that decay over a relatively short amount of time and are not safety compliant.

Drainage issues are a problem in some areas.

ADA Standards

Currently, over 30 percent of play areas do not meet ADA standards.

Vandalism

Vandalism degrades many play areas and impacts the frequency and cost of periodic and major maintenance. Structural vandalism accounts for about 90% of the maintenance costs related to vandalism.

Creative Play

There are insufficient settings for creative and nature-based play in neighborhood parks throughout the city.
Chapter 4: Existing Conditions

Play areas are provided mainly in parks and elementary schools, but there are numerous gaps in service.

Distribution and Gaps in Service

The map on page 19 shows park locations with play areas and ½ mile (ten-minute) walking distance around each one, as well as ½ mile service area around public school play areas. The map clearly shows the gaps in service, and the location of park lands that could fill those needs. School play areas are taken into account in areas where there are none in parks.

These service areas are modeled using the street network, so dead-ends do not model as access. Roads with four lanes or more are considered to be barriers to safe access for children.

In locations where school play areas can fill gaps in play area distribution, school play areas need to be evaluated for their ability to meet children’s needs. Parks in these areas may still need to include play areas.

SCHOOLS CURRENTLY FILLING PLAY AREA GAPS

Smith Elementary School  Cherry Park Elementary School
Markham Elementary School  West Powellhurst Elementary School
Stephenson Elementary School  Mill Park Elementary School
Abernethy Elementary School  Arthur Academy
Richmond Elementary School  Gilbert Heights Elementary School
Irvington Elementary School  Margret Scott Elementary School
Wilcox Elementary School  Menlo Park Elementary School
Alameda Elementary School  Glenfair Elementary School
Rigler Elementary School  Wilkes Elementary School
Faubion Elementary School  Alder Elementary School
Sacajawea Center  Lynch Meadows Elementary School
Prescott Elementary School  Lynchwood Elementary School
Shaver Elementary School

Many gaps in distribution occur in growth areas where park acquisition and improvements can be funded through Parks Systems Development Charges. However, SDC funding cannot be used to address existing service gaps.
Facility Condition and Issues

While much has been done in the last decade, substantial work remains to address play area issues in the system. These include the remaining wood play structures in poor condition, play areas that do not meet ADA guidelines, equipment that does not meet today's safety standards, worn equipment that is too costly to be replaced using routine maintenance funds, and drainage problems. Some parks such as Pier Park simply have inadequate equipment for the scale of the park and the groups it serves. Appendix B lists these issues by park and the type of work needed.

The quality of play equipment varies greatly in the schools, as does the level of challenge and amount of risk the district is willing to assume. To understand if school play areas can fill the gaps, the facilities must be evaluated and each district's risk management policies taken into account.

PLAY EQUIPMENT

All play equipment is not created equal. Some types, like tall swing-sets and slides of all kinds, are perennially popular, others are less well used.

Composite structures with equipment that meets ADA Accessibility Guidelines (ADAAG) ensure that disabled children have the opportunity to use play equipment with their peers and they provide settings for group play and interaction for all children.

Popular composite structure elements include:
- Steering wheels attached to railings on elevated platforms that offer some opportunity for fantasy play.
- Double slides and other opportunities for parallel play.
- Equipment that moves, including merry-go-rounds and track rides.

Overall, parents say that children want more challenges to work up to, such as climbing walls, tall slides and pieces requiring overhead strength. Children quickly lose interest in equipment with low challenges, and they seldom play with theme panels.

SPECIALTY PLAY AREAS

Portland has several unique opportunities for children’s play, including a large play area in Washington Park and several wonderful fountains. Nearly all of these special play attractions are in or near downtown Portland:
- Rose Garden Children’s Park at Washington Park
- Ira Keller Fountain
- Salmon Street Springs
- Jamison Square Fountain
- Holladay Park Fountain

While these are wonderful play spaces, they are limited in scope and are not distributed equitably. The fountain in Holladay Park is the only special play opportunity on the east side of the river. There are currently no adventure play areas, no play areas designed around nature themes, nor creative play areas of the genre designed by MIG, Inc. and others.

SAFETY

The goal to provide safe play opportunities must be balanced with the need to provide the opportunities to take perceived risks. Play areas must be designed and maintained with safety as a priority. The US Consumer Product Safety Commission’s *Handbook for Public Playground Safety* is the basis for PP&R play area design.

The biggest safety challenges in Portland’s play areas are due to aging equipment, especially wood play structures. These need to be removed or replaced. Wood members are rotting and splintered, and targets for vandals with knives. There are seven wood play structures or pieces of equipment that currently need replacement.

Additionally, some play equipment does not meet today’s safety guidelines. Examples are slides without platforms and canopies, or with head entrapment potential, and swing-sets with inadequate safety zones.

SUMMARY OF EXISTING PLAY AREA PROBLEMS

- Aging wood equipment that is no longer structurally sound.
- Play equipment that does not meet current safety standards.
- Merry-go-rounds with inappropriate safety surfacing such as wood chips or poured-in-place rubber in poor condition.
- Play areas with no drainage system, resulting in high cost to replace rotted wood chips.
- Swings and slides with no rubber mats.
- Play areas that do not meet ADA guidelines.
- Inadequate play areas that do not serve the local population, either because they are too small, or because the range of equipment is not varied enough. Several parks have accessible play areas for small children, but no equipment that meets ADA requirements for children ages 5-12.
- Stand-alone play equipment scattered in turf areas.
Chapter 5: Current Use

The 2003 Citywide Godbe Public Opinion Survey included the following information on play areas:

Respondents fell into four statistically significant profiles: Playground Parents, Active Outdoorsmen, Cautious Caretakers, Empty Nesters.

- Of these, Playground Parents is the largest segment of Portland residents, about 32%, with the highest intensity of use of traditional parks and recreation facilities.
- They were the second highest percentage of respondents who were defined as park users (85%).
- 25% of respondents use a playground weekly.
- 38% wanted to focus on developing neighborhood parks with traditional recreational amenities.
- The importance of playgrounds decreases with increases in income – in other words, playgrounds are more important to families with lower incomes.
- Residents reported high satisfaction with the availability of playgrounds, but somewhat lower satisfaction with the quality of playgrounds.

Play areas are intensely used and popular. The need for them is greatest in lower income areas.
Chapter 6: Trends

Outdoor play for children in America is likely to be very different from that of their parents. There are several reasons for this:

- Fewer children have access to undeveloped, untamed open space.
- Parents are reluctant to let their children play in unsupervised areas due to a general perception of danger.
- Today’s children have little free, unstructured time. Hours spent on school, homework, and organized sports all contribute to this.
- Free time is often spent at a computer or television.

Nature-based Play

A growing body of research tells of the importance of creative, free form and especially nature-based play. Children who have early and significant positive exposure to nature and nature-based play are more apt to thrive intellectually, spiritually and physically. Researchers have observed that children, when allowed to make free choices about where to play, are consistently drawn to the rough edges, ravines, the natural vegetation. Nature-based play experiences during formative years provide children with an affinity for the natural world for which there is no substitute.

While classic parks with grass and trees provide some experience of nature, the benefits to be had from that type of nature experience are minimal compared to the benefits of interaction with wilder nature. As the city becomes more dense and urban, vacant land is becoming more scarce. Untamed landscapes that invite free play are unavailable to most children. Competition for unclaimed, unprogrammed open space in developed parks highlights the need to designate space for this type of use while it is still available.

Although the city is rich in natural resource areas, they are not appropriate for intensive uses like play areas. Natural areas close to urban areas already get higher visitation and sustain more adverse impacts than natural areas outside of urban areas. While they are a source of unique opportunities for urban children to experience nature, learn about natural systems, and have hands-on opportunities for stewardship, those areas cannot sustain intense and unlimited children’s play.

The way to provide creative, free-form, nature-based play is to integrate it into all of our neighborhoods and into existing, more traditional play areas. Nature-based play is important in providing settings where children develop motor skills and test their strength and balance. It provides sensory stimulation, encourages children to invent their own games and offers opportunities for manipulation, discovery, and inescapable education. It provides an experience of nature that goes far beyond the mown lawn and
large trees found in traditional developed parks. The following images illustrate some nature-based play concepts.

Field of Sunflowers

Orchard Planting

Camperdown Elm Tree Fort

Field of Fireweed

Mini-Orchard

Tree grove with interior space to discover

Copse with deck, a sort of “Tree House”
Chapter 7: Desired Levels of Service

PP&R strives to provide a park system with a range of excellent opportunities for outdoor play. The most basic need is a public play area within a safe 10-minute (approximately half-mile) walk from home.

All play areas must meet ADA requirements and include a variety of interesting, enjoyable and challenging equipment and play opportunities.

Levels of Service

Provide the following levels of service as possible, depending on the conditions and opportunities:

- A small play area within walking distance of every resident with as much variety as can be accommodated.
- Larger play areas in larger parks that can accommodate more children with separate areas for bigger and smaller kids and provide more extensive creative play settings.
- Special destination play areas with adventure play, water play, and nature play themes.
- Play areas near where older siblings may be playing field sports.

Play areas are currently designated as “People-People” places in PP&R’s range of recreation settings since many people come together to use the facilities. One goal is for them to become more “People-Nature” places by integrating more creative, nature-based play settings and opportunities.
Chapter 8: Draft Recommendations

- Provide a neighborhood-scale play area within a 10-minute (half-mile) walk of every residence in Portland. These can be of a modest scale, but provide enough variety, challenge and opportunities for creative play that children do not lose interest quickly.

- Every play area should provide settings for creative and nature-based play. Provide opportunities for adventure play and nature-based play in a range of ways. Include these elements in new projects and as major play area renovations occur.

- Coordinate playground design, summer recreation programs in play areas, and environmental education to ensure that Portland’s children have rich opportunities to connect with and learn about nature.

- Fund safety and deferred maintenance problems from the General Fund.

- Assess the condition of all play areas on a regular cycle, and constantly update capital needs.

- Bring all existing play areas up to a standard level of quality in terms of safety, durability, accessibility, and play opportunities.

- Eliminate stand-alone play equipment in lawn areas where curbed play areas can be built to incorporate them.

- Provide associated amenities that support children’s play and serve caregivers such as benches, drinking fountains, shade, stroller parking and accessible paths.

- Develop structured and unstructured play opportunities to meet the needs of older children. Play areas should serve children up to 12 years old.

- Assess the current approach to dealing with vandalism in parks, especially at play areas. Examine alternatives and develop appropriate strategies.

PLANNING

1. Work with Support Services to develop a Playground Design Guidelines handbook. Include play equipment manufacturer information, definitions of the three tiers of play areas and the components, scale, and quality goals each should meet. Outline creative and nature-based goals and expectations. Direct handbook users to other
sources of information. Provide standard details and specifications. Identify playground design “dos and don’ts”.

- Identify issues related to maintenance of commercial play equipment. Develop lists of acceptable and unacceptable commercial play equipment.
- Develop a resource guide to holistic/creative play.

2. Assess current strategies for addressing vandalism. Explore strategies including equipment selection, replacement budgeting, and community involvement as ways to reduce vandalism.

3. Develop a library of images to use in public meetings to assist the public in envisioning the potential for creative play. Develop a PowerPoint presentation for design staff to use in play area design workshops to educate participants about the range of options.

CAPITAL PROJECTS

Note: Costs do not include administrative overhead unless noted otherwise. See Appendix B for more details on items 1 -4. Costs below have been generally adjusted to 2008 dollars; costs in Appendix B have not. All costs need to be reviewed and revised prior to construction.

1. Address safety issues in existing play areas such as safety surfaces at whirls, etc. $850,000.

2. Bring play areas that do not meet ADA guidelines up to standards: $2.7 million. Incorporate creative and nature play elements into these play areas where possible during this process.

3. Improve existing playgrounds that do not meet current quality expectations, for drainage, inadequate equipment, inadequate scale for the park, etc.: $1.7 million.

4. Include some nature-based or creative play in every play area design. Labeled “Free-play” in the cost estimate, several of these would be triggered by major play area renovations. The cost for this work is $2.6 million and would address 34 sites. Adding creative or nature-based play areas is estimated at $17,000 for neighborhood parks and $138,000 for larger parks, construction costs only.

5. Projects in existing parks:
   - Cathedral Park: $465,000 (may require path access or other additional amenities).
   - East Holladay, Hillsdale, Errol Heights, Senn’s Dairy: $708,000.
- Develop the following parks and include play areas where appropriate:

<table>
<thead>
<tr>
<th>Park</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clatsop Butte</td>
<td>Mill</td>
</tr>
<tr>
<td>Cully North Powellhurst</td>
<td>Richmond</td>
</tr>
<tr>
<td>Dickinson Richmond</td>
<td></td>
</tr>
<tr>
<td>Floyd Light Spring Garden</td>
<td>Terrace Trails</td>
</tr>
<tr>
<td>Gates</td>
<td></td>
</tr>
<tr>
<td>Gilbert Heights The Fields</td>
<td>Thomas</td>
</tr>
<tr>
<td>Glenfair</td>
<td></td>
</tr>
<tr>
<td>Kingsley Bundy</td>
<td></td>
</tr>
</tbody>
</table>

6. Assess adjacent school play areas during PP&R master planning process and develop with appropriate play areas at:
   - Beech
   - Cherry
   - West Powellhurst
   - Gilbert Heights
   - Lynchwood
   - Sacajawea
   - Thompson

Play areas at all of these sites: $2.5 million in 2008 dollars, including modest associated improvements such as access routes and seating. This number includes soft costs.

Develop at least one play area in South Waterfront.

7. Build play areas on school grounds in areas with inadequate park and school playgrounds. Assess school play areas first.

8. Acquire land and develop parks with play areas in areas with no park land, assume approximately 22 new park parcels and small play area construction, excluding acquisition and additional amenities: $2.15 million.

9. Provide a minimum of two special destination play areas: one in east or southeast Portland, and one in north or northeast Portland. These should be designed to promote one of the following types of play: adventure play, water play, or nature play. Potential sites are: Fernhill, Thomas Cully, Brentwood and Normandale. An ideal location on the east side would be in conjunction with the East Portland Community Center where there is good road access and parking, but probably not enough land.
Chapter 9: Management

Design

Play areas should be safe, inviting and comfortable for both the children and the parents who accompany them. They should engage a child’s innate sense of curiosity and experimentation, and encourage physical challenges.

Recent play area design in Portland does this while meeting code-related and functional requirements. The resulting play areas consolidate equipment within a curb containing wood chip safety surfacing. These areas have accessible routes, and contain a ramp allowing users to transition to the wood chip surfacing. Good drainage below the soft-surface keeps the wood chips dry in the rainy season. The play equipment consists of composite elements that disabled children can use with some assistance.

These areas meet ADA requirements and provide ease of supervision for parents. They offer a wider range of play options in commercial play equipment than earlier play areas.

The Americans with Disabilities Act Accessibility Guidelines (ADAAG) were adopted in 1991. PP&R uses the Accessibility Guidelines for Play Areas, issued in 2000 to guide playground improvements, although they have not yet been formally adopted.

The playground guidelines address accessible routes, accessible play components both at ground level and elevated, transitions between elevated components, and clearances. When play areas are built or modified, they need to incorporate compliance with these guidelines. The surest way to accomplish this is with modern composite play structures that include transfer decks, ramps, and accessible transitions.

Play areas offer opportunities to introduce a theme or an element into play that can be exciting and evocative for children. Themes might be building, orchards, agriculture, nature, or telling regional stories. Children especially love water and changing its flow, tall grass, and mechanisms that they can manipulate.

PP&R held a small design charette in 2006 with designers and ecologists to imagine how more creative and nature-based play could be incorporated into play areas in neighborhood parks. The images on page 22 help illustrate some of the elements of other environments, both natural and artificial or manipulated, that might successfully

---

2 These guidelines would create a Section 15, Recreation Facilities, in the ADAAG, and elaborate on Section 15.6, Play Areas.
be introduced. Some elements are grassy mounds, climbing walls, narrow path circuits, groves of trees with clearings or view corridors left open, meadows and fields with crop plants that could be manipulated by children. See Appendix D for complete Play Charette Notes.

Challenge levels

Children need opportunities to challenge themselves and take small risks to learn new skills. At sites where PP&R responded to initial requests from the community for play equipment for young children, we have heard from parents that these play areas are not effective. Children lose interest in them quickly, and parents have to go further to find more satisfying play areas.

Elements that add challenges include a wide variety of play equipment, tall slides, tall swing-sets, overhead elements that require upper body strength, spinning elements that move fairly fast, and climbing walls.

Play areas need to include elements that challenge pre-teens and ours seldom do. Some older children may move on to other activities such as skateboarding or mountain biking, but these sports are not for everyone. While there are pieces of play equipment that may appeal to older kids such as tall spiral slides and climbing walls, these do not provide broad enough opportunities. Creative, nature-based play may better serve this group.

The St. Kilda Adventure Playground in Salisbury, Australia (photo below) is a wonderful example of the type of facility that would provide a unique play opportunity.
Play Area Elements

Play area design should address an age range of 2-12. Toddlers need space to play at their ability level, safe from the more rambunctious play of older children. Play areas should be sited near spaces where adults can gather. They should be well separated from Dog Off-Leash Areas, speeding cyclists and other incompatible uses.

Elements of play areas include: Shade, seating, drinking water, path access, a sense of security, ADA-compliant elements, traditional play equipment and creative/nature play.

The following is an image of a play area integrating various types of play. The size of the play area and number of elements can be adjusted depending on the area and available funding.

Elements:
- Sloping lawn for rolling
- Steeply sloping rock climbing wall
- Accessible play area with diverse traditional equipment
- Benches and picnic tables
- Drinking fountain
- Hand pump-fed water play with river rocks and boulders
- Tall grass area
- Tree grove

Typical Neighborhood Play Area:
- 3,500-6,000 square feet curbed area or two sub-areas for ages 2-5 and 6-12.
- Swing-set – 10’ high unless space does not allow. A minimum of two bays, three is preferable.
- Composite structure to meet ADA. Accessible route to 4’ slide, taller slide for higher challenge level.
- Other play equipment as appropriate.
- Creative/nature play integrated into the vicinity of the play area. These will be sized based on the specific design.
Typical Larger Play Area:
- 6,000-10,000 square foot curbed area or two sub-areas for ages 2-5 and 6-12.
- Provide at least a three-bay 10’ high swing-set if possible.
- Provide composite structure to meet ADA guidelines, more extensive than for a smaller site.
- Other play equipment as appropriate.
- Creative/nature play integrated into the vicinity of the play area. These will be sized based on the specific design.

Destination Play Areas:
- Portland would benefit from a wider range of options for adventure play, environmental play, creative play, and special play areas. These facilities should be distributed equitably around the city.
- Large-scale play areas designed to accommodate a minimum of 20 children at a time. Art, waterworks, and engineering themes are worth exploring.

Management Practices

Routine Inspection and Maintenance
Play area maintenance is done through a combination of routine inspections, work orders and capital projects. All play areas receive a routine daily walk-through by the park technician to rake wood chip safety surfacing into place, check bolted connections and remove obvious hazards such as broken glass. This takes five to fifteen minutes per site. Once a month the park technician spends about an hour per site examining play equipment in detail, including connector tightness. Every six months, the play equipment maintenance mechanic does a structural inspection to ensure that there is no cumulative damage. Other maintenance, including vandalism, is addressed by work order. This can include burned plastic, broken springs on spring toys, and graffiti.

<table>
<thead>
<tr>
<th>Regular Tasks</th>
<th>Average annual cost at all sites¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily Prep and Clean by park tech</td>
<td>$350,000</td>
</tr>
<tr>
<td>Graffiti Removal</td>
<td>$3,390</td>
</tr>
<tr>
<td>Other Vandalism</td>
<td>$23,689</td>
</tr>
<tr>
<td>General Maintenance</td>
<td>$233,030</td>
</tr>
<tr>
<td></td>
<td>$610,109</td>
</tr>
</tbody>
</table>

¹ Maintenance costs are from two sources. Daily park “prep and clean” work information is from interviews with Park Maintenance Supervisors. Calculations were based on average daily time spent on a single play area, recognizing the variation between play areas of different sizes and the effects of seasons on time requirements. All other numbers are from the MS 2000 database and include all work related to play area maintenance. MS 2000 data was averaged for 2003-2006.
While our maintenance strategies are efficient, they are chronically under-funded, so that relatively high-cost maintenance is deferred and accumulates. This accumulation is difficult to fund, and challenges us to accomplish quality and distribution goals.

Vandalism

PP&R needs more information to determine the best way to respond to vandalism, whether to maintain the status quo or change our strategy. This is true not only for play areas, but for other park amenities as well. People who provide public amenities assume that a certain amount of vandalism is a given. The strategy in the last ten years has been to avoid play equipment that is a commonly vandalized. To this end we have eliminated mirror panels, clear plastic bubble window panels, and are minimizing the use of other plastic play components. The challenge that arises is in the design of composite play structures, which is the best way to meet ADA requirements. While some manufacturers provide stainless slide options, the most unique, exciting slide designs are made of roto-molded plastic.

To be more effective as a bureau in dealing with vandalism, we should explore the following alternatives:

- Increase the annual maintenance budget for replacement of equipment due to vandalism to avoid closures and reduction of play options.
- Completely eliminate the use of items that are frequently vandalized.
- Use the replacement costs of essential but commonly vandalized parts as a criterion for determining acceptable play equipment manufacturers.
- Examine the cost-benefit of involving neighborhood residents, especially pre-teens and teenagers, in the design, construction and/or maintenance of the play area since studies indicate that greater community ownership minimizes vandalism.

Deferred Maintenance

Currently, the total estimated cost to eliminate deferred maintenance is $3.98 million. This includes eliminating safety problems and maintenance issues, and addressing ADA requirements. When essential renovation triggers a project that substantially renovates a play area, the estimate includes a line item for providing creative play as part of the larger play area renovation. This could be a strategy for funding and implementing creative play goals incrementally.

See Appendix B for details.
Funding

The immediate goal is enough money to complete all play area safety work within the next five years. Other play area needs should be met over the following 15 years so that the play area service goal is fully implemented over the next 20 years.

Funding for play areas is intermittent since funds come from levies, bonds and tax increment financing. Each source of public funding creates opportunities to leverage the money by using it for grant matches, which we have done very successfully. Most of this funding is for capital improvements and so deferred maintenance continues to accumulate.

The following is a snapshot of total project costs for the play area portion of capital projects, extrapolated from total design and construction budgets, demonstrating the myriad of ways PP&R funds play areas.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Levy</td>
<td>$39,000</td>
<td>$103,009</td>
<td>$135,342</td>
<td>$145,870</td>
<td>$423,221</td>
</tr>
<tr>
<td>PDC</td>
<td>$34,320</td>
<td>$91,031</td>
<td>$74,998</td>
<td>$200,349</td>
<td></td>
</tr>
<tr>
<td>Grant</td>
<td>$21,240</td>
<td>$50,000</td>
<td>$91,635</td>
<td>$80,769</td>
<td>$243,644</td>
</tr>
<tr>
<td>General Fund</td>
<td>$26,056</td>
<td>$50,000</td>
<td>$91,635</td>
<td>$80,769</td>
<td>$243,644</td>
</tr>
<tr>
<td>SDC</td>
<td>$450,960</td>
<td>$50,000</td>
<td>$91,635</td>
<td>$80,769</td>
<td>$77,894</td>
</tr>
<tr>
<td>Citizen Fund-Raising</td>
<td>$1,000</td>
<td>$20,000</td>
<td>$30,769</td>
<td>$51,769</td>
<td></td>
</tr>
<tr>
<td>Willamette Park Trust Fund</td>
<td>$77,894</td>
<td>$77,894</td>
<td>$77,894</td>
<td>$77,894</td>
<td></td>
</tr>
<tr>
<td>In-kind Donation</td>
<td>$9,000</td>
<td>$9,000</td>
<td>$9,000</td>
<td>$9,000</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$188,256</td>
<td>$255,876</td>
<td>$343,508</td>
<td>$332,406</td>
<td>$1,138,393</td>
</tr>
</tbody>
</table>

This helps illustrate the challenges of funding needed improvements in an efficient and orderly manner. It takes a great deal of effort to assemble a relatively small amount of money. While it is time consuming, we do it very successfully.

Using this approach, we will construct nine new or vastly improved play areas and fund necessary work backlog. But, necessary work, such as safety problems, must not be left to chance, public mood, or private fund-raising. This should be addressed in a timely manner using the City’s General Fund.

Other service providers

Elementary schools in the Portland area provide play areas on a fairly consistent basis, but many public schools are unable to maintain their play equipment. Many school play areas have limited challenge levels for the equipment they provide. School play areas can and do contribute to the citywide resources, but need to be evaluated on an individual basis.
Volunteer involvement

Citizens want to contribute to the park system, and often wish to do this by providing labor to install play equipment. This has been a challenging issue to address because of public safety and liability issues on one hand, and public perception of bureaucracy on the other hand. PP&R wants to encourage citizens to contribute to the parks in many ways. In 2003, PP&R developed a policy to allow volunteer play equipment installation under professionally supervised circumstances. This policy requires approved design drawings, secure funding, and a licensed, bonded and insured contractor to supervise the installation.

Volunteer involvement in play area maintenance is limited. Volunteers can paint equipment and shovel wood chip safety surfacing. PP&R sees approximately three volunteer maintenance projects per fiscal year.

Cost/Benefit

Building and maintaining play areas is an essential service provided by PP&R. It is a constant effort to strike a balance between constructing what is desired by the public and what is cost-effective to maintain. Portland needs a financially sustainable play area strategy, including a large enough cash infusion for deferred maintenance to be addressed, and a realistic annual allotment to keep pace with community needs.

Sustainability

The Parks 2020 Vision set a goal for a sustainability-minded bureau. This includes play areas. One example of using recycled materials is the rubber tile surfacing under merry-go-rounds. It is a highly durable, successful product.

PP&R should look for other opportunities to use products made from recycled materials and renewable resources. We should also identify those products that use environmentally friendly manufacturing processes and specify products that are durable and meet installation and maintenance costs.
Appendices

Appendix A: The Role of Play Areas in PP&R Mission and Vision

Appendix B: Play Area Improvement Costs to Address Deferred Maintenance

Appendix C: Play Forum Notes

Appendix D: Meeting Notes for Playground Design Charette, July 12, 2006
Appendix A: The Role of Play Areas in PP&R Mission and Vision

Play areas are so fundamental to developed public parks in America that we seldom question their essential role in a park bureau’s mission. At the same time, play areas are so taken for granted that there is little City policy to address their role, importance, priority or to identify need levels in the City. They are understood as a component of the second bullet point in the mission statement below.

PP&R MISSION STATEMENT

Portland Parks and Recreation contributes to the city’s vitality by:
- Establishing and safeguarding the parks natural resources and urban forest that are the soul of the city; ensuring that green spaces are accessible to all;
- Developing and maintaining excellent facilities and places for public recreation; building community through play and relaxation, gathering and solitude;
- Providing and coordinating recreation services and programs that contribute to the health and well being of residents of all ages and abilities.

Goal 11 in Portland’s Comprehensive Plan encompasses play areas in parks.

COMP PLAN: GOAL 11, PUBLIC FACILITIES

Maximize the quality, safety and usability of parklands and facilities through the efficient maintenance and operation of park improvements, preservation of parks and open space, and equitable allocation of active and passive recreation opportunities for the citizens of Portland.

2020 VISION

The Parks 2020 Vision document outlined a goal of providing developed neighborhood parks within a half-mile of every resident. Play areas are an essential facility for public recreation, and one of the most common components of a developed park. While not every developed park needs a playground, every child in the City should be able to walk safely to a play area designed to allow children to play together in groups or individually.
Notes: Costs are estimated using 2006 figures and include mobilization. Small stand-alone projects are likely to have inflated costs. Estimates do not include administrative overhead.

Where major renovations are needed, creative/nature-based (free play) play element has been included.

<table>
<thead>
<tr>
<th>Play Area</th>
<th>Park</th>
<th>General Information</th>
<th>1 – Safety</th>
<th>2 – ADA</th>
<th>3 – Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Large</td>
<td>Notes</td>
<td>Man</td>
<td>Wheel surfacing</td>
</tr>
<tr>
<td>1 1 15th &amp; Holman</td>
<td>Non-essential, remove</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 2 Albert-Kelly</td>
<td>Levy lead abatement</td>
<td>X</td>
<td></td>
<td></td>
<td>$111,950</td>
</tr>
<tr>
<td>3 3 Alberta</td>
<td>Levy lead abatement</td>
<td>X</td>
<td></td>
<td></td>
<td>$22,000</td>
</tr>
<tr>
<td>4 4 April Hill</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 5 Arbor Lodge</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 6 Argay</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td>$10,000</td>
</tr>
<tr>
<td>7 7 Berkeley</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 8 Berrydale</td>
<td>X</td>
<td>$12,000</td>
<td>Yes</td>
<td></td>
<td>$76,000</td>
</tr>
<tr>
<td>9 9 Bloomington</td>
<td>X</td>
<td></td>
<td>$8,000</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>10 10 Beaumond</td>
<td>X</td>
<td>X</td>
<td>Yes</td>
<td></td>
<td>$114,000</td>
</tr>
<tr>
<td>11 11 Brooklyn School</td>
<td>X</td>
<td>Levy</td>
<td></td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>12 12 Brooklyn</td>
<td>X</td>
<td>$15,000</td>
<td>$4,500</td>
<td></td>
<td>$9,000</td>
</tr>
<tr>
<td>13 13 Buckman Field</td>
<td>X</td>
<td>$15,000</td>
<td>$4,500</td>
<td></td>
<td>$9,000</td>
</tr>
<tr>
<td>14 14 Burlingame-north</td>
<td>$12,000</td>
<td>X</td>
<td>Nonessential</td>
<td>X</td>
<td>$12,000</td>
</tr>
<tr>
<td>15 15 Clinton</td>
<td>X</td>
<td>X</td>
<td>$76,000</td>
<td>$125,000</td>
<td>$201,000</td>
</tr>
<tr>
<td>16 16 Col. Summers</td>
<td>X</td>
<td>X</td>
<td>$76,000</td>
<td>$15,000</td>
<td>$91,000</td>
</tr>
<tr>
<td>17 17 Columbia</td>
<td>X</td>
<td>X</td>
<td>$76,000</td>
<td>$15,000</td>
<td>$91,000</td>
</tr>
<tr>
<td>18 18 Columbia Annex</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 19 Couch</td>
<td>X</td>
<td>$100,000</td>
<td>$76,000</td>
<td>$15,000</td>
<td>$91,000</td>
</tr>
<tr>
<td>20 20 Creston</td>
<td>X</td>
<td>X</td>
<td>$8,500</td>
<td>$22,000</td>
<td>X</td>
</tr>
<tr>
<td>21 21 Custer</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>22 22 Darwun</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>23 23 Delta-East</td>
<td>X</td>
<td>$76,000</td>
<td>$15,000</td>
<td>$91,000</td>
<td></td>
</tr>
<tr>
<td>24 24 Dewitt</td>
<td>X</td>
<td>$76,000</td>
<td>$15,000</td>
<td>$91,000</td>
<td></td>
</tr>
<tr>
<td>25 25 Eastmoreland Play</td>
<td>future lead, needed for distribution</td>
<td>X</td>
<td></td>
<td></td>
<td>$76,000</td>
</tr>
<tr>
<td>26 26 Ed Beniefict-west</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>27 27 Essex</td>
<td>X</td>
<td></td>
<td>X</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>28 28 Farragut</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>29 29 Fiddill</td>
<td>X</td>
<td>X</td>
<td>$76,000</td>
<td>$125,000</td>
<td>$201,000</td>
</tr>
<tr>
<td>30 30 Flavel</td>
<td>X</td>
<td>$12,000</td>
<td>$76,000</td>
<td>$15,000</td>
<td>$91,000</td>
</tr>
<tr>
<td>31 31 Forest Heights</td>
<td>X</td>
<td>$0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32 32 Frazee</td>
<td>X</td>
<td>$33,000</td>
<td>$33,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33 33 Fulton</td>
<td>X</td>
<td>$10,000</td>
<td>$12,000</td>
<td>$5,700</td>
<td>$21,700</td>
</tr>
<tr>
<td>34 34 Gabriel</td>
<td>X</td>
<td>$7,000</td>
<td>$7,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35 35 Gammons</td>
<td>X</td>
<td>$4,000</td>
<td>$24,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36 36 George</td>
<td>X</td>
<td>$22,500</td>
<td>$15,000</td>
<td></td>
<td>$17,500</td>
</tr>
<tr>
<td>37 37 Gallant Primary</td>
<td>X</td>
<td>$76,000</td>
<td>$15,000</td>
<td>$91,000</td>
<td></td>
</tr>
<tr>
<td>38 38 Glenhaven</td>
<td>X</td>
<td>$76,000</td>
<td>$125,000</td>
<td>$201,000</td>
<td></td>
</tr>
<tr>
<td>39 39 Glenwood</td>
<td>No photos</td>
<td>X</td>
<td>$0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 40 Grant</td>
<td>X</td>
<td>X</td>
<td>Drainage?</td>
<td>X</td>
<td>$76,000</td>
</tr>
<tr>
<td>41 41 Hamilton</td>
<td>X</td>
<td>X</td>
<td>$0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42 42 Hancock</td>
<td>X</td>
<td>$12,000</td>
<td>$2,000</td>
<td>$76,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>43 43 Harney</td>
<td>X</td>
<td>$5,000</td>
<td>X</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>44 44 Harrison</td>
<td>X</td>
<td>$12,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>45 45 Healy Heights</td>
<td>X</td>
<td>X</td>
<td>Needed for service</td>
<td>X</td>
<td>$15,000</td>
</tr>
<tr>
<td>46 46 Hillsdale</td>
<td>No photos</td>
<td>X</td>
<td>X</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>47 47 Irving</td>
<td>X</td>
<td>$95,000</td>
<td>$95,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48 48 Johnson Creek</td>
<td>X</td>
<td>$18,000</td>
<td>$15,000</td>
<td>$73,000</td>
<td></td>
</tr>
<tr>
<td>49 49 John Luby-north</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>$0</td>
</tr>
<tr>
<td>50 50 John Luby-south</td>
<td>X</td>
<td>$12,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51 51 Kemper</td>
<td>X</td>
<td>$10,000</td>
<td>X</td>
<td>$12,000</td>
<td></td>
</tr>
<tr>
<td>52 52 Kern</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>53 53 King School</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>54 54 Knott</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>55 55 Lark Hill</td>
<td>X</td>
<td>$12,000</td>
<td>X</td>
<td>$12,000</td>
<td></td>
</tr>
<tr>
<td>56 56 Lomasdale</td>
<td>X</td>
<td>$76,000</td>
<td>$15,000</td>
<td>$91,000</td>
<td></td>
</tr>
<tr>
<td>57 57 Malvern</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>58 58 Mallory Meadows</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>$0</td>
<td></td>
</tr>
<tr>
<td>59 59 Marshall</td>
<td>X</td>
<td>X</td>
<td>Needed for service, Natural resource issues</td>
<td>X</td>
<td>$76,000</td>
</tr>
<tr>
<td>60 60 McCoy</td>
<td>X</td>
<td>X</td>
<td>$0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play Area</td>
<td>Park</td>
<td>Large Notes</td>
<td>Mat</td>
<td>Surfacing</td>
<td>Wood Structure</td>
</tr>
<tr>
<td>-----------</td>
<td>---------------</td>
<td>-------------</td>
<td>-----</td>
<td>-----------</td>
<td>----------------</td>
</tr>
<tr>
<td>70</td>
<td>McKenna</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>71</td>
<td>Mariner</td>
<td>Low priority - 1/4-mile</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>72</td>
<td>Montavilla</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>73</td>
<td>Mt. Tabor</td>
<td>Not public</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>74</td>
<td>Mt. Tabor (Northeast)</td>
<td>Need for distribution</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>75</td>
<td>Mt. Tabor (Harrison)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>76</td>
<td>Mt. Scott</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77</td>
<td>Multnomah Art Center</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>78</td>
<td>Normandy</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>79</td>
<td>North Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>80</td>
<td>Northgate</td>
<td>Needs area for older kids</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>81</td>
<td>Oregon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>82</td>
<td>Overlook Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>83</td>
<td>Place</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>84</td>
<td>Patton</td>
<td>06-07 project</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>85</td>
<td>Peninsula</td>
<td></td>
<td></td>
<td>$15,000</td>
<td>$9,500</td>
</tr>
<tr>
<td>86</td>
<td>Piccolo</td>
<td>Neat wood</td>
<td></td>
<td>$35,000</td>
<td>$1,700</td>
</tr>
<tr>
<td>87</td>
<td>Pier</td>
<td>May need two small areas, in different locations</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>88</td>
<td>Portland Heights-Upper</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>89</td>
<td>Portland Heights-lower</td>
<td>Grades do not allow ADA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>90</td>
<td>Portland Heights-lower</td>
<td>Grades do not allow ADA</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>91</td>
<td>Portsmouth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>92</td>
<td>Powell</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>93</td>
<td>Portland Heights-Upper</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>94</td>
<td>Raymond</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>95</td>
<td>Rose City</td>
<td>$11,000</td>
<td></td>
<td>$18,000</td>
<td>$15,000</td>
</tr>
<tr>
<td>96</td>
<td>Sellwood CC</td>
<td></td>
<td></td>
<td>$21,000</td>
<td>$1,700</td>
</tr>
<tr>
<td>97</td>
<td>Sellwood Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>98</td>
<td>Sorex Sunset</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>99</td>
<td>South Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>St Johns Park</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>101</td>
<td>Sunnyvale</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>102</td>
<td>Terwilliger</td>
<td></td>
<td></td>
<td>$85,000</td>
<td>$13,000</td>
</tr>
<tr>
<td>103</td>
<td>Terwilliger</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>104</td>
<td>Washington</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>105</td>
<td>Washington</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>106</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>107</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>108</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>109</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>110</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>111</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>112</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>113</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>114</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>115</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>116</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>117</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>118</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>119</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>120</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>121</td>
<td>Wash., (Rose Garden)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Matls. install/cont.** $110,771
**Profit/Mob** $199,949
**Const. total** $1,117,500
**Contingency** $76,000

<table>
<thead>
<tr>
<th>Matls. install/cont.</th>
<th>Profit/Mob</th>
<th>Const. total</th>
<th>Contingency</th>
</tr>
</thead>
<tbody>
<tr>
<td>$110,771</td>
<td>$199,949</td>
<td>$1,117,500</td>
<td>$76,000</td>
</tr>
</tbody>
</table>

**Profit/Mob**

- $199,949

**Const. total**

- $1,117,500

**Contingency**

- $76,000

---

Play Area Technical Paper 43
Appendix C  Play Forum Notes  
Wednesday, March 8, 2006

In attendance:  
Joe Ashlock, PP&R, Ellie Justice, Helen Gordon Early Childhood Center, Susan  
Goltsman, MIG, Laura Gordon, Mount Tabor neighborhood, Jim Ringelberg, NW  
Recreation

The group began with a round of introductions and each person told the group where  
they most liked to play when they were children. It was notable that a large percentage  
of the group remembered fantasy play, playing in a natural area and relatively  
unsupervised.

Child Development  
Ellie Justice spoke to the group about early childhood development. She told the group  
that the earliest play developed sensory awareness and motor skills, such as repetitive  
motion. Kids have an innate ability to think symbolically. They begin make-believe  
play early, and it becomes very sophisticated. They develop their own games with  
rules, and begin to develop negotiation skills. Play is a way to develop skills at social  
interactions. “When playing, children are a head taller than themselves”. Kids need  
free, unstructured play, which increases physical development and is essential for full  
brain development. Kids need to run, jump, balance, throw, and swing. Play has  
therapeutic value – kids act out and process what’s on their mind.

Currently we make decisions about places for kids to play based on fear: Parents seldom  
leave kids unsupervised, for fear of injuries, abuse or kidnapping. One of the ways kids  
used to learn about the world was by experimenting, testing their limits, and sometimes  
getting hurt. This is seldom possible now. Kids spend most of their time in settings  
that impede imaginative play. Free play has been replaced by group care and organized  
sports. There is increased childhood obesity because of computers and sedentary kids.

Issues  
During the course of the forum the group identified a number of issues related to play  
areas in Portland. Portland has only 12% kids. Many kids in urban areas have “nature  
deficit disorder”. Contact with nature affects childhood development.

Meaningful play experiences will contribute to the health of the City. If changes to the  
way we do play are perceived as important, money will follow.
**Play Needs**

Kids need opportunities for safe unsupervised play. They need to experience initiative, choice, freedom, challenge and a sense of control. They need daily contact with the natural world. Play needs to create stimulus to develop brain. Portland’s outdoor play areas need to provide opportunities for more diverse play.

The community needs play spaces where all ages’ needs are addressed, including the adults. These need to be barrier-free and designed with maintenance in mind. Children need parents to supervise play. And as a practical matter, the community wants play areas that are separate from off-leash areas, and free of dog waste.

**Holistic Play**

Susan Goltsman of MIG did a thought-provoking presentation on holistic play area design. Her company designs play settings for the entire family, involving the community in the process. They use the design process as catalyst for community development of play improvements. They work to promote community ownership by having the community contribute rocks, palm prints, help fund-raise and install.

Themes of play should be based on the history of location, and can educate kids. Interpretive signs can explain the meaning of some of the improvements. Themes the firm has used include ranch, farm, desert, ocean, fishing pier, farmers’ market, water play, garden, saddles on play horses so kids learn to ride, dinosaur discovery, musical instruments, wild garden, nurseries. Elements of play settings include natural features (trees, plants, logs, boulders), a plopping bench, shade, other types of seating, food, kid-activated water play. Kids love piles of dirt, loose parts, sculpture – we could use discards from various industries – bamboo, wood, etc. Ideally, we should create settings that kids can modify.

Susan told the group that kids love to play with sand and water. When the issue of feline users of sand was raised, she indicated that they had found that to be less of a problem than anticipated. The sun helps to clean the sand, or it can be covered with netting at night. The topic of play and safety arose. She spoke of design that looks dangerous or at least challenging, such as stepping stones using rubber rocks or rocks spaced appropriately.

**Current PP&R Practice**

Patty Freeman presented a summary of current PP&R playground design practice

1) Understand overall community needs (deficiencies, nearby facilities, etc.)
2) Talk with communities about what they want, location
3) Bubble Diagram of all park uses
4) Site/play area design including:
   ♦ Ramp
Woodchips
Seating
Drinking fountain
Shade

5) Community group helps select equipment, children can vote for elements with photos using dots
6) Review
7) Construct
8) Maintain: Daily walkthrough, wood chips, remove hazards (needles, glass)

Play area design parameters:
- Construction budget
- ADA
- Safety and code design requirements
- Drainage
- Age range
- Parental supervision

Vision
The group began to articulate their vision for a new, holistic type of play setting that would involve changing and broadening PP&R’s view of how to provide play opportunities, and the role of play areas in the community.

PP&R should develop play settings that meet family needs. We should avoid doing traditional equipment by itself, but instead integrate it into a setting that has more to offer. We should develop environments for free play – water, sand, rocks, moveable parts, interactive. Museums are currently offering this type of play and may be sources of examples. We should keep in mind the need for a space that allows people to be outdoors in all weather.

Some big goals for this new approach to play settings were articulated. Gary Devore suggested that it should be our mission to offer unique play experiences, not to duplicate what others are doing. The importance of contact with nature was a constant topic of the forum, and one goal was to provide ways to play that mimic experiences in natural areas without providing play in our existing natural areas. The intent was to protect urban natural areas but provide kids the experiences they can offer. Participants felt that Portland needs a large adventure play area or sculpture play garden, or both.

As we develop park play settings, we should be sure that we keep in mind the needs of teens, and that we address emerging sports: skateboards, mountain bikes, and bmx bikes. These are ways for youth to test their skills and take risks in urban settings, where unsupervised play in natural areas is seldom available.
Play areas have the potential to teach kids an environmental ethic. People, and especially kids, should have access to nature in daily life, throughout the city, and within walking distance. The community needs parks and play areas to be islands of safety. The community should work to address kids’ fear of other kids who seem threatening in public settings like parks. The design can also demonstrate sustainability – it can measure and limit water use, reuse as grey water, avoid chemicals. Design should address off-leash dogs/waste in play areas, at least by separating the uses as much as possible.

This new vision for play in parks would involve educating staff/designers, and should include travel to see successful play areas. On the topic of educating parks staff, it was suggested that we initiate planner/maintenance staff exchanges, so that staff understand each other’s jobs.

The vision, if implemented, has the potential to help attract and keep families in the city.

**Holistic PP&R**

Providing holistic play in Portland should involve many sections of PP&R. A bigger vision for a Portland recreation program would ensure that playground programs and neighborhood programs include urban forestry, outdoor rec, and community gardens. We should provide trips to nature for urban kids – regularly.

One way to ensure that the community has access and knows what is available is to provide signage and trails to connect sites, and to help the community understand what is available and nearby.

**Process**

Playgrounds are already designed in public meetings, but the group envisioned more of a workshop setting. The intent of these workshops would be to broaden the community discussion, reframe questions, and show more possibilities for what play areas could be so that play equipment isn’t seen as the only answer. Part of the process would need to be education about what kids need developmentally, the issues of urban areas and the lack of opportunities for the types of play kids need, and what other communities are doing. The workshops should be structured to include kids in the design process, not just younger kids, but also teens.

**Maintenance and Vandalism:**

Play area design must address liability, maintenance, and safety of maintenance staff. Several points were made related to wear and tear and vandalism in play areas. One was the notion of educating the public up front about the life expectancy of park improvements, including play equipment. We should always try to use durable
materials, especially metal, in play equipment. Plastic has not shown itself to be durable, and it should be avoided or used minimally. Water degrades rubber surfacing, so if we choose to use this type of costly material, we need to consider replacement costs. Maintenance staff would like to see the bureau articulate what level of damage triggers replacement of a piece of equipment. Currently, we have problems removing broken or damaged materials quickly because this involves funding for replacement of costly items, such as old wood play structures. Even when a piece is being replaced, it is challenging to ensure public safety during the 6-8 week lead-time. A strategy for how to protect the public during this period would be helpful.

We cannot construct a playground with high potential for vandalism and high replacement costs in a neighborhood that is too destructive of their park. Parks can’t fix a broken neighborhood. However, when we have a chronic vandalism problem on a site, we should look at using the neighborhood social network. We may be able to identify an individual and work with them to teach them the impact of what they have done. This has been successful in other communities to solve vandalism problems. And the bottom line is that we need to ensure sufficient resources for maintenance and vandalism response.

**Short-term Goals/Actions**
The group identified a number of short-term goals and actions to chart a new direction for PP&R play area development, and to address existing issues. First, as part of the current effort to write a Strategic Management Plan for Playgrounds, we should:

- Identify successful, popular play equipment items.
- Identify and inventory play areas and equipment that we already have in Portland, including looking at other providers.
- Discuss balance between need for kids’ play in natural areas and the potential resulting environmental damage, and identify existing opportunities/alternatives.
- Evaluate manufacturers to identify poor quality and eliminate their use. Identify individual pieces that are not durable.
- Figure out what keeps maintenance staff from coming to planning & design meetings. Eliminate barriers to facilitate this.

We should also, in the short-term, educate design staff about CPSC safety guidelines.

The Strategic Management Plan should identify next steps that are beyond the SMP effort. Some of these might be:

- Look for examples of successes in other communities at developing holistic play
- Complete system plan and define desired play experiences, include diverse ones.
- Identify a strategy for PP&R to look at play, recreation and public education holistically. Involving outdoor recreation program staff, recreation program staff, park designers, and urban forestry would maximize the opportunities for creative interaction and idea-generation.
• Develop a library of images to use in public meetings that would assist the public in envisioning the potential for creative play
• Develop a power-point presentation for design staff to show in play area design workshops to educate the group and show them a range of potential options.
• Initiate behavior mapping in play spaces—planners, students.
• Do what we can to develop natural features near play areas, with trees, seasonal interest, color.

Fun ideas
And lastly, some fun ideas that were raised, that may be worth pursuing:
• Organize street closure events for ped/bike play
• Have a temporary adventure playground with moveable parts (construction remnants, etc.
• Create a temporary beach in a part of town where kids don’t have access to the river bank
APPRAOCH AND LARGER ISSUES:

- We need to design play areas that may entice a wide age range of users
- Remaining wild places need to be protected for habitat’s sake
- Our approach should be to create spaces that mimic natural areas, perhaps by naturalizing part of a developed park
- Nature-based play could happen in designed spaces near natural parts of hybrid parks, transition areas between people and nature. This approach would create “People-Nature” spaces
- Provide opportunities for manipulation, discovery, and inescapable education
- Design for and accept abuse and damage
- Accept that more play freedom holds inherent risk

THEMES

* Water:
  - Children especially love water, and changing its flow. We could design water courses where it flows through river rock, perhaps sand? Can we use sand? What are the issues? (cat feces, etc.)
  - The drain could be on a timer, so that a stream or pool fills then empties
  - Cistern & pump – could water crop or generate the stream, educate kids about water scarcity, historic ways to get water.
  - “Water works” theme playground – Pumping, diverting, cistern, windmill, wheel, closures – needs restroom! Could be seasonal. Could this happen at Parklane? Water Bureau site on 117th?

* Orchards, farming, agriculture:
  - Agriculture/nature themes – kids experience historic way of life
  - Put in a “Croprow”, with wheat, sunflowers, fireweed, corn. Could be fenced till established, then the kids could have at it till it’s kaput. Kids could create mazes, or it could be planted to create a maze or a pattern of openings in the row.
  - Corn
  - Wheat
  - Sunflowers

* Recreate nature:
  - Tall grass meadows
  - Wildflowers
  - Alder grove, densely planted with clearings
  - Log as “balance beam”
• Boulder circuit
• Grassy mounds
• Leaf piles

Senses:
Sound:
• Pipes to hit, vessels with water, bamboo,

Taste/scent:
• Herbs, wood sorrel, zucchini, pumpkin (These last two could be grown over a structure)

Building, how things work:
• Mechanics
• Treehouse: build tree grove with deck
• Lean-to
• Engineering mechanisms like pulleys, fulcrum, water wheel, incline plane, chute, conveyor belt
• Buckets and shovels – rec program in storage?

Telling regional stories
• A circuit of mounds with paths on the spines. Could create a geographic link to the region, create a stylized topographic map of the region
• Nurse Log – water
• Paving/rock maps

Art/play:
• Train saplings into fun forms
• Discovered patterns
• Mazes
• Sculpture
• Sun dials - Dee Wright observatory

Materials:
• Pea gravel
• Sand play with lid, opened and supervised by volunteer?
• Boulders
• Herbs
• Native plants
• Wildflowers
• Tall grass