

CITY OF LOS ALAMITOS

3191 Katella Ave.
Los Alamitos, CA 90720

AGENDA PARKS, RECREATION, AND CULTURAL ARTS COMMISSION MEETING

Wednesday, November 2, 2016 – 7:00 P.M.

This Agenda contains a brief general description of each item to be considered. Except as provided by law, action or discussion shall not be taken on any item not appearing on the agenda. Supporting documents, including staff reports, are available for review at the Recreation & Community Services Department or on the City's website at www.cityoflosalamitos.org once the agenda has been publicly posted.

Any written materials relating to an item on this agenda submitted to the Parks, Recreation & Cultural Arts Commission after distribution of the agenda packet are available for public inspection at the Recreation & Community Services Department, 10911 Oak St., Los Alamitos CA 90720, during normal business hours. In addition, such writings or documents will be made available for public review at the respective public meeting.

It is the intention of the City of Los Alamitos to comply with the Americans with Disabilities Act (ADA) in all respects. If, as an attendee, or a participant at this meeting, you will need special assistance beyond what is normally provided, please contact the Recreation & Community Services Department at (562) 430-1073, extension 540, 48 hours prior to the meeting so that reasonable arrangements may be made. Assisted listening devices may be obtained from the Parks, Recreation & Cultural Arts Commission Secretary at the meeting for individuals with hearing impairments.

Persons wishing to address the Parks, Recreation & Cultural Arts Commission on any item on the Parks, Recreation & Cultural Arts Commission Agenda should complete a yellow "Request to Speak" card and will be called upon at the time the agenda item is called or during the Parks, Recreation & Cultural Arts Commission's consideration of the item and may address the Parks, Recreation & Cultural Arts Commission for up to three minutes.

1. CALL TO ORDER

2. ROLL CALL

Commissioner Bell
Commissioner Carvajal
Commissioner Estrada
Commissioner Jempsa
Commissioner Jorge
Vice Chair Decker
Chair Wilson

3. PLEDGE OF ALLEGIANCE

4. ORAL COMMUNICATIONS

At this time, any individual in the audience may come forward to speak on any item within the subject matter jurisdiction of the Parks, Recreation & Cultural Arts Commission (PR&CA). Please state if you wish to speak on an item on the Agenda. Remarks are to be limited to not more than five minutes.

5. MINUTES

Approval of the minutes for the regular and special meeting of October 5, 2016.

6. STAFF REPORTS

A. Recap of 2016 Trunk or Treat Featuring the Treasure Hunt

This report provides the Parks, Recreation & Cultural Arts Commission a recap of the 2016 Trunk or Treat featuring the Treasure Hunt event.

Recommendation: Commission Receive and File.

B. Orville Lewis Park Playground Equipment Color Options

This agenda item is to inform and obtain direction from the Parks, Recreation and Cultural Arts Commission on the color options for the anticipated new Orville Lewis Park playground equipment.

Recommendation: Receive, discuss, and provide direction on the colors.

C. Park Playground Surfacing Options

This agenda item is to inform and obtain direction from the Parks, Recreation and Cultural Arts Commission on the various playground surfacing materials and color options at all City parks.

Recommendation: Receive, discuss and provide direction on playground surfacing materials and color options.

D. 2016 Winter Wonderland at the Plaza Preview

This report provides the Parks, Recreation and Cultural Arts Commission with a preview of the 5th Annual Winter Wonderland at the Plaza event.

Recommendation: Commission Receive and File.

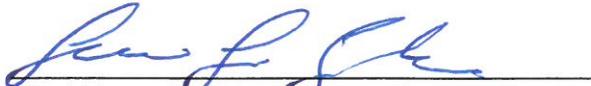
7. ITEMS FROM THE RECREATION & COMMUNITY SERVICES DEPARTMENT

8. COMMISSIONER REPORTS

At this time, Commissioners may report on items not specifically described on the Agenda that are of interest to the community, provided no action or discussion is taken except to provide staff direction to report back or to place the item on a future Agenda.

9. ADJOURNMENT

I hereby certify, under penalty of perjury under the laws of the State of California that the foregoing Agenda was posted at the Community Center, Museum and City Hall not less than 72 hours prior to the meeting. Dated this 27th day of October 2016.



Trini Zenovka, Department Secretary

**MINUTES OF PARKS, RECREATION AND CULTURAL ARTS COMMISSION
OF THE CITY OF LOS ALAMITOS**

REGULAR MEETING – WEDNESDAY, October 5, 2016

1. CALL TO ORDER

The Parks, Recreation and Cultural Arts Commission met in a Regular Session at 7:00 p.m., Wednesday, October 5, 2016, in the Council Chambers, 3191 Katella Ave., Chair Wilson presiding.

2. ROLL CALL

Present: Commission Members: Bell, Carvajal, Decker, Estrada, Jempsa, Jorge, Wilson

Absent: Commission Members: None

Present: Staff: Corey Lakin, Recreation & Community Svcs. Dir.
Emeline Noda, Recreation Manager
Ron Noda, Recreation Manager

3. PLEDGE OF ALLEGIANCE

Chair Wilson led the Pledge of Allegiance.

4. ORAL COMMUNICATIONS

Chair Wilson opened Oral Communications. There being no one present wishing to speak, Chair Wilson closed Oral Communications.

5. MINUTES

Motion/Second: Carvajal/Decker

Abstain: None

Unanimously Carried: The Parks, Recreation, and Cultural Arts Commission approved the revised minutes of the regular meeting of September 7, 2016.

6. STAFF REPORTS

A. Recommended Changes for 2017 Weekend of Art in Los Alamitos

Staff from the Recreation and Community Services Department provided a preview of recommended changes for 2017 Weekend of Art in Los Alamitos. This three-day visual art exhibition event is recommended to be moved up to March 17-19, 2017 in order to avoid conflicts with other local events and will continue to be held at the Community Center. The Commission approved recommended changes from staff.

B. Preview of 2016 Trunk or Treat featuring the Treasure Hunt

The Los Alamitos Recreation and Community Services Department provided a preview on the 5th annual Trunk or Treat featuring the Treasure Hunt at Little Cottonwood Park on Saturday, October 22, 2016. The event features the popular

costume contest, arts and crafts, a spooky photo area, carnival game booths, age-appropriate treasure hunt areas, inflatables, trick-or-treating from trunks, food trucks, and activities for the entire family. New this year, the event will be moved from the parking lot onto the field in order to expand the footprint of the event. Community members, local organizations, and businesses decorate their vehicles and participate in the event which is a great opportunity for local businesses to market themselves to approximately 2,000 residents.

C. City Hall Sundial

Staff from Recreation and Community Services Department provided the PR&CA Commission information on the Memorial Sundial located at City Hall per Commissioner Bell's request to look into what it would take to refinish the bronze sundial timepiece. Commissioner Bell provided staff with a contact for the Sculpture Conservation Studio in Los Angeles. Mr. Brandyberry and Mr. Lakin met with Andrea Morse from the Sculpture Conservation Studio who provided an estimate to polish the piece. The Commission reviewed the estimate and requested from staff to provide additional information on restoration of sundial timepiece to restore name plates, cost of replacing timepiece and research other possible memorials with the School District, Seal Beach and Rossmoor. The Commission recommended a rededication ceremony on Memorial Day when the Sundial restoration/replacement is complete and request funding from City Council. Motioned/Second: Carvajal/Bell.

7. ITEMS FROM THE RECREATION & COMMUNITY SERVICES DEPARTMENT

Corey Lakin, Director of Recreation and Community Services Department announced vacancies for the PR&CA commission and encouraged commissioners to reapply and share this information with neighbors and friends. Commission Dinner will be held at the Community Center on December 6, 2106. Winter Wonderland will be held at the Plaza on December 3, 2016, and Arrowhead Products is the presenting sponsor for this event. Chair Wilson has been instrumental in expanding the food drive with other charities for this event.

Emeline Noda, Recreation Manager announced that the Holiday Decorating Contest will be held on December 14, 2016 and invited commissioners to judge this event. A group photo of the Commission was taken and will be uploaded onto the website and another group photo will also be taken at the Commission Dinner. We are currently doing well on registrations for Race on the Base.

Ron Noda, Recreation Manager invited the PR&CA Commission to Trunk or Treat and participate in this year's event. Commissioners who are interested in attending this year's Trunk or Treat event are encouraged to contact Megan Shimada at the Recreation and Community Services Department.

8. COMMISSIONER REPORTS

Commissioner Jempsa, Bell, Carvajal, Decker, Estrada and Jorge did not have an item to report.

Commissioner Bell expressed how pleased he is with progress of Sundial timepiece.

Chair Wilson, provided information on how the Winter Wonderland Committee expanded the food drive with Summer Harvest Food and other local charities in our community to help families that are on the free and reduced lunch program. Summer Harvest distributes fresh and nutritious foods for families during the breaks from school and will collect now until event date.

9. ADJOURNMENT

The Parks, Recreation, and Cultural Arts Commission adjourned at 8:39 p.m.

Josh Wilson, Chair

Attest:

Corey Lakin, Director
Recreation & Community Services Department

**MINUTES OF PARKS, RECREATION AND CULTURAL ARTS COMMISSION
OF THE CITY OF LOS ALAMITOS**

SPECIAL MEETING – WEDNESDAY, October 5, 2016

1. CALL TO ORDER

The Parks, Recreation and Cultural Arts Commission met in a Special Session at 8:40 p.m., Wednesday, October 5, 2016, in the Council Chambers, 3191 Katella Ave., Chair Wilson presiding.

2. ROLL CALL

Present: Commission Members: Bell, Carvajal, Decker, Estrada, Jempsa, Jorge, Wilson

Absent: Commission Members: None

Present: Staff: Corey Lakin, Recreation & Community Svcs. Dir.
Emeline Noda, Recreation Manager
Ron Noda, Recreation Manager

3. ITEMS FROM THE RECREATION & COMMUNITY SERVICES DEPARTMENT

Orville Lewis Park Playground Equipment

Staff from Recreation and Community Services Department requested direction from the Parks Recreation and Cultural Arts Commission relating to the purchase of Orville Lewis Park Playground Equipment. The City of Los Alamitos received funding from the Tire-Derived Products grant through CalRecycle and applied for a grant with BCI Berke and intends to use the grants in conjunction with Park Development Funds. The grant expires on April 17, 2017 with one possible 45-day extension, if necessary. Staff would like to present recommendations from the commission to the City Council for approval at the October 17th City Council meeting.

Playground equipment color scheme recommendations: Green, Blue, Yellow Slide and add a toddler swing if possible. Motion/Second: Wilson/Bell

4. ADJOURNMENT

The Parks, Recreation, and Cultural Arts Commission adjourned at 9:20 p.m.

Josh Wilson, Chair

Attest:

Corey Lakin, Director
Recreation & Community Services Department

City of Los Alamitos

Parks, Recreation & Cultural Arts Commission

Agenda Report Staff Report

November 2, 2016
Item No: 6A

To: Chair Josh Wilson & Members of the Parks, Recreation and Cultural Arts Commission

Via: Corey Lakin, Recreation & Community Services Director

From: Megan Shimada, Recreation Coordinator

Subject: Recap of 2016 Trunk or Treat featuring the Treasure Hunt

Summary: This report provides the Parks, Recreation & Cultural Arts Commission a recap of the 2016 Trunk or Treat featuring the Treasure Hunt event.

Recommendation: Commission receive and file.

Background

The Los Alamitos Recreation and Community Services Department hosted its 5th annual Trunk or Treat featuring the Treasure Hunt at Little Cottonwood Park on Saturday, October 22, 2016 from 5:00-8:00pm. The event featured a costume contest, arts and crafts, a fun photo area, carnival game booths, age-appropriate treasure hunt areas, inflatables, trick-or-treating from trunks, food trucks, and activities for the entire family.

Discussion

An estimated 2,500 people visited Little Cottonwood Park to enjoy the 5th annual Trunk or Treat event. The event had three age-divided treasure hunt areas and costume contests.

The treasure hunt areas were split up into three areas according to the following ages:

- Ages 0 to 3
- Ages 4 to 7
- Ages 8 to 12

Community members, local organizations, and businesses were invited to decorate their vehicles and participate in the event as “trunks.” There were a total of 13 trunks that participated and Grateful Hearts was the recipient of the “Tricked Out Trunk” award. There were also 5 food trucks/vendors and 11 vendor booths. Below are the organizations that participated:

Trunks:

Robert Lambiotte’s Car Crew (2)
Get Air Surf City
Grateful Hearts
Gymboree
Little Gym of Lakewood
Los Alamitos Kids Resale
Los Alamitos Police Department
OptumCare
School Ghoul Run
Shelley Hasselbrink
Staples
The Branch Church

Food:

A & K Concessions
Burger Monster
Coda’s Kettle Corn
Rajun Cajun
Sweet Life OC

Vendors:

Ashley May Lula Roe
At First Sight 3D Imaging
Braithwaite Chiropractic
Damsel in Defense
Dr. Chirco Dentistry
Dr. Wicorek Dentistry
Mad Science
Mathobotix
Phoenix Nails and Spa
St. Hedwig School
Water Safe Swim School

The popular costume contest gave a chance for all youngsters from infants to 12 years old to get up on stage to showcase their costume. There were three categories that are separated according to age, similar to the treasure hunt.

New this year, the event was moved from the parking lot onto the field in order to expand the footprint of the event. The move was well received by the guests, vendors,

and trunks as it felt less impacted and improved the flow of foot traffic throughout the event area.

Fiscal Impact

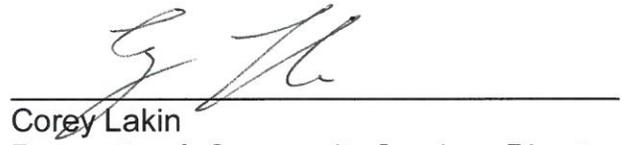
Funding for the event was budgeted for \$5,000 in expenditures and \$500 in revenue under the Special Events Division of the Recreation and Community Services Department. In finalizing the event budget, the actual expenditures are \$5,160 and revenues total \$3,375.

Submitted By:



Megan Shimada
Recreation Coordinator

Approved By:



Corey Lakin
Recreation & Community Services Director

City of Los Alamitos

Parks, Recreation & Cultural Arts Commission

Agenda Report
Staff Report

November 2, 2016
Item No: 6B

To: Chair Josh Wilson & Members of the Parks, Recreation & Cultural Arts Commission

From: Tony Brandyberry, Public Works Superintendent

Via: Corey Lakin, Recreation and Community Services Director

Subject: Orville Lewis Park Playground Equipment Color Options

Summary: This agenda item is to inform and obtain direction from the Parks, Recreation and Cultural Arts Commission on the color options for the anticipated new Orville Lewis Park playground equipment.

Recommendation: Receive, discuss, and provide direction on the colors.

Background

The City Council authorized the Public Works Department to solicit bids (with the Parks, Recreation, and Cultural Arts Commission recommendation) at its October 17, 2016 meeting for new playground equipment at Orville Lewis Park. This park will be the first “themed park” in Los Alamitos with an “airplane” as the play equipment. Staff is currently out to bid and must order the new play equipment on November 22, 2016 to receive the available grant funding. To make this deadline, staff will need to have a decision on the color combinations.

Discussion

During the October 5, 2016 Parks, Recreation and Cultural Arts Commission meeting, it was discussed to change the equipment slide color to yellow from grey. Staff would like to present the color options to the Commission to verify that the color scheme meets their expectations.

Below are a couple renderings of the new play equipment with the color options sheet attached (Attachment 1). Additionally, this playground will have pour in place rubberized surfacing instead of woodchip mulch. One idea by staff is to use the pour in place colors

to mimic a runway under the airplane, giving the allusion of the plane taking off. The pour in place color options will be discussed in a staff report later this evening.



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NU-9394

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Innovative
PLAYGROUNDS CO. LLC

LOS ALAMITOS - ORVILLE LEWIS PARK PROPOSAL: 513-87926-3



PROPOSAL: 513-87926-3

LOS ALAMITOS - ORVILLE LEWIS PARK

Innovative
PLAYGROUNDS CO. LLC

The PRCA Commission was also interested in changing out one of the swings to a toddler swing, but unfortunately due to Consumer Product Safety Commission (CPSC) and American Society for Testing and Materials (ASTM) regulations, one swing bay cannot house both types of swings. The proposed playground equipment is meant for 5-12 year olds and therefore, it is recommended to maintain the "belt" swings, rather than switching to the "bucket" swings. Additionally, there is not enough room to put in a second swing bay.

Fiscal Impact

There is no fiscal impact for choosing color options.

Submitted By:

Tony Brandyberry
Public Works Superintendent

Approved By:

Corey Lakin
Recreation & Community Services Director

Attachment: 1. Color Options

COLORS THAT MOVE YOU

Powder Coat Paint

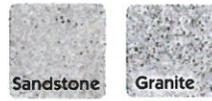


Rotomold Plastic

Shade Canopies



RockIt



Vinyl Site Amenities



Platforms



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City of Los Alamitos

Parks, Recreation & Cultural Arts Commission

Agenda Report
Staff Report

November 2, 2016
Item No: 6C

To: Chair Josh Wilson & Members of the Parks, Recreation & Cultural Arts Commission

From: Tony Brandyberry, Public Works Superintendent

Via: Corey Lakin, Recreation and Community Services Director

Subject: Park Playground Surfacing Options

Summary: This agenda item is to inform the Parks, Recreation and Cultural Arts Commission on the various playground surfacing materials and color options in order to obtain direction for the playground surfacing at all City parks.

Recommendation: Receive, discuss, and provide direction on playground surfacing materials and color options.

Background

Currently, the City is out to bid to purchase Orville Lewis Park Playground Equipment, as noted in tonight's previous Staff Report (Item No: 6B). Public Works will take the results of that bid to City Council for approval at the November 21, 2016 meeting. If approved, staff will order the equipment and solicit bids for installation of the play equipment along with the purchase and installation of playground surfacing.

The City of Los Alamitos applied for the Tire Derived Products Grant through CalRecycle and was awarded \$142,881 on June 29, 2015. These funds can be used for a variety of recycled rubberized materials, such as rubberized mulch and pour in place rubberized surfacing (like the Little Cottonwood Park Tot Lot).

This grant allows for the City to decide on three types of surfacing: rubberized mulch, rubberized mats/tiles, or pour in place rubber. All of these have advantages and disadvantages that will be discussed. The Parks, Recreation & Cultural Arts Commission should make a recommendation on the surfacing material, design and color scheme for Orville Lewis Park, as well as other City parks to best utilize the grant, if desired.

Discussion

Surfacing Options

The Tire Derived Products Grant through CalRecycle pays for three types of playground surfacing options: rubberized mulch, pour in place rubber mats/tiles, and synthetic turf infill. Besides the rubber materials, there are other options including sand, woodchips, and wood fiber. Each surface has its advantages and disadvantages. Attached to this staff report are reports from outside agencies with information regarding the various surfacing options. Listed below is a summary of these reports.

Playground Sand – fall height up to 4 feet

ADVANTAGE – This material is inexpensive, easy to find, and easy to move from place to place. It is a popular fill material because of its ability to absorb falls.

DISADVANTAGE – Playground sand requires constant maintenance. It must be raked and turned over to reduce compaction, remove sharp object or contraband, and remove animal feces. About 20% of the material must be replaced annually as it will get into socks, clothing, and into the nearby turf. Sand can scrape knees and get into open wounds if not properly covered. Sand is not an ADA compliant surfacing material.

Playground Woodchips – fall height of up to 10 feet

ADVANTAGE – This material is fairly inexpensive, easy to find, and easy to move from place to place. It is a good fall attenuating surface material. It is currently in all of the City parks and has worked well for many years.

DISADVANTAGE – This material requires constant maintenance. It must be raked and turned over to prevent decomposing and reduce compaction. Woodchips do not have good drainage qualities and about 25% of the material must be replaced annually. Woodchips can splinter, can be eaten or thrown, and are often scattered on the sidewalks and in the grass. Dangerous sharp objects or contraband can bury beneath the surface easily. Woodchips are not an ADA compliant surface material.

Playground Engineered Wood Fiber – fall height of up to 10 feet

PROS – This material is similar to the woodchips, as it is fairly inexpensive, easy to move from place to place, and does not splinter. However, it is more expensive than woodchips. This product is ADA accessible for both mobility and impact attenuation.

CONS – This material requires constant maintenance. Like sand and woodchips, this material can have sharp objects or contraband below the surface. Wood fiber does not have good drainage qualities and about 25% of the material must be replaced annually. Wood fiber can be eaten or thrown and scatters onto the sidewalks and in the grass. It is more expensive than woodchips, but has similar characteristics.

Rubberized Mulch – fall height of up to 10 feet

ADVANTAGE – While this product is still deemed ADA accessible for both mobility and impact attenuation, it is the least accessible of all the playground surfacing. That is not to say that it is extremely functional as a solid material, but it does meet the minimum requirements of the ASTM F1292. To be fully functional for ADA, a solid circulation path would need to be installed to the play area. The Tire Derived Product Grant through CalRecycle will pay for 100% of the rubberized mulch, but only 10% of the underlayment for the pour in place path.

DISADVANTAGE – This material has the potential to off-gas in high temperatures. It is also difficult to keep in the play area, out of the grass, and out of children’s cloths. Sharp objects and contraband can easily be stored under the surface. There have been recent articles written warning parents of the dangers with the potential of chemicals found in rubberized mulch. Testing is still taking place each year and low levels of various chemicals have been found, even though the EPA states those levels are acceptable. Staff was unable to locate any information regarding the replacement rate of the rubberized mulch. It is safe to assume it to be the same as the woodchip mulch at 25%, as it can be eaten, thrown and scattered onto the sidewalks and grass.

Pour in Place & Rubber Mats/Tiles – fall height of up to 12 feet

ADVANTAGE – These artificial surface materials exceed the ADA standards and are deemed universally accessible for children with disabilities. The most significant benefit of these surfaces, other than accessibility, is that daily maintenance is usually not required to ensure that safety is maintained. Tiles can be replaced individually instead of an entire section. Staff has been pleased with the performance of the pour in place material over the past 10 years at Little Cottonwood Park. It is the cleanest and nicest looking material when installed and provides an even and uniform look and feel to the surface.

DISADVANTAGE – Over time the edges of the tiles can turn up creating a trip hazard and expansion between the tiles can occur, causing debris to accumulate. The tiles have a tendency to come loose needing repair and/or replacement. The pour in place can crack and often wears in high traffic areas. It can be difficult to repair with a patch causing the surface can look “blotchy”. Life expectancy is usually shorter than advertised and costs are higher than the other options. The Tire Derived Products Grant only covers approximately 10% of the materials (base material below the top coat), as it only covers the recycled tire component.

Synthetic Turf with Fill – fall height of up to 12 feet

ADVANTAGE – A properly certified turf should have a soft, consistent surface that is ADA accessible for easy wheelchair access. Since the grass won’t displace like loose fill, such as sand, rubberized mulch, or woodchips, the safety rating is easy to maintain, even under play equipment.

DISADVANTAGE – Maintenance with synthetic turf is greater. If a child vomits or has an accident on the turf, it takes more staff hours to properly clean and disinfect the area compared to the other surfaces. The greater issue with this surface is the cost, which is significantly more than the costs of loose fill surfacing. The Tire Derived Products Grant only covers the rubber infill material (which some manufacturers do not use), as it only covers the recycled tire component. The rubber infill needs to be replaced as the pieces vacate the turf and the turf needs to be groomed, especially in the high traffic areas. Since synthetic turf is plastic, it can become very hot on hot and sunny days.

Orville Lewis Park

With the potential installation of airplane-themed play equipment, Orville Lewis Park can be further “themed” by altering the surfacing option by using colored pour in place surfacing to represent a runway, thus giving the imagery that the plane is landing or taking off (Attachment 1). This will require two to three color options placed into a design. When more colors are used the cost does increase, but this will finish off the look of an “airfield” in the park. Other options could include one or two solid colors in a specific design, or just one solid-looking color. The design, colors, and the total number of color options should be recommended to the City Council by the Parks, Recreation & Cultural Arts Commission. Staff wanted to give the Commissioners all the options for the various materials and colors.

Staff Recommendation

Staff looked at all the options and is recommending that Orville Lewis Park receive the pour in place material in the design of a runway since it is receiving new playground equipment. Additionally, staff would like to recommend that Little Cottonwood Park’s 5 to 12 year old playground be completed with the full pour in place material to eliminate the woodchips in this park altogether. Also, staff would like to replace the existing “Tot Lot” rubberized surface as it has seen 10 years of play and is worn down. Little Cottonwood Park is the newest playground (installed in 2007) and will likely remain in place at least another 10 years. Due to the cost of the pour in place, it would be worth the investment of the surfacing to improve the aesthetics and functionality of both playgrounds.

For the other parks, staff is recommending leaving the woodchips that are currently in place in order to keep costs down and maintain the high level of safety in the playgrounds. Even though it will likely mean returning some of the grant funding, it is not recommend to use the rubberized mulch since not enough thorough testing has been completed to warrant removing all natural playground woodchips. Additionally, staff would not recommend spending the money on the pour in place material on a 20-year old playground, since the grant only covers approximately 10% of the materials, leaving the General Fund to support the balance. As the City Council replaces playground equipment in the future, it would be recommended that the playground surfacing be replaced at that time with the pour in place to improve accessibility and decrease daily maintenance. The table below shows the age of the parks and square footage for future replacements.

PARK	AGE CATEGORY	SQUARE FOOTAGE	DATE INSTALLED
Orville Lewis	5-12	2460	1993
Labourdette	5-12	2880	1996
Roberts	2-5 & 5-12	2065	1997
Sterns	2-5 & 5-12	1900	1997
Soroptimist	5-12	2000	1999
Stansbury	5-12	3100	2001
Little Cottonwood	5-12	3991	2007
Little Cottonwood Tot Lot	2-5	875	2007

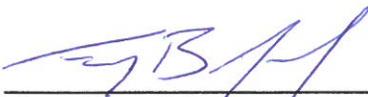
Fiscal Impact

The Tire Derived Products Grant through CalRecycle pays for 100% of the costs for the rubberized mulch material purchase and only covers up to 10% of the pour in place (underlayment). The rubberized materials can be customized with colors specifications and the pour in place can be designed with artwork. As more color options are added to the pour in place surfacing, the costs will rise slightly. The estimate per square foot costs for rubberized mulch and pour in place surfacing is:

- \$2.73 per square foot for rubberized mulch (\$400.00 per bag, with each bag covering approximately 147 square feet)
- \$18.00 per square foot for synthetic turf (no grant opportunity)
- \$25.00 per square foot for pour in place

There will be added construction costs for any material as staff does not know the condition of the current sub base material and drainage. This will be exposed once the woodchip mulch is removed. The City Council has authorized \$227,000 in matching funds from the Park Development Fund for the rubberized surfacing, along with the \$142,881 in received grant funds.

Submitted By:



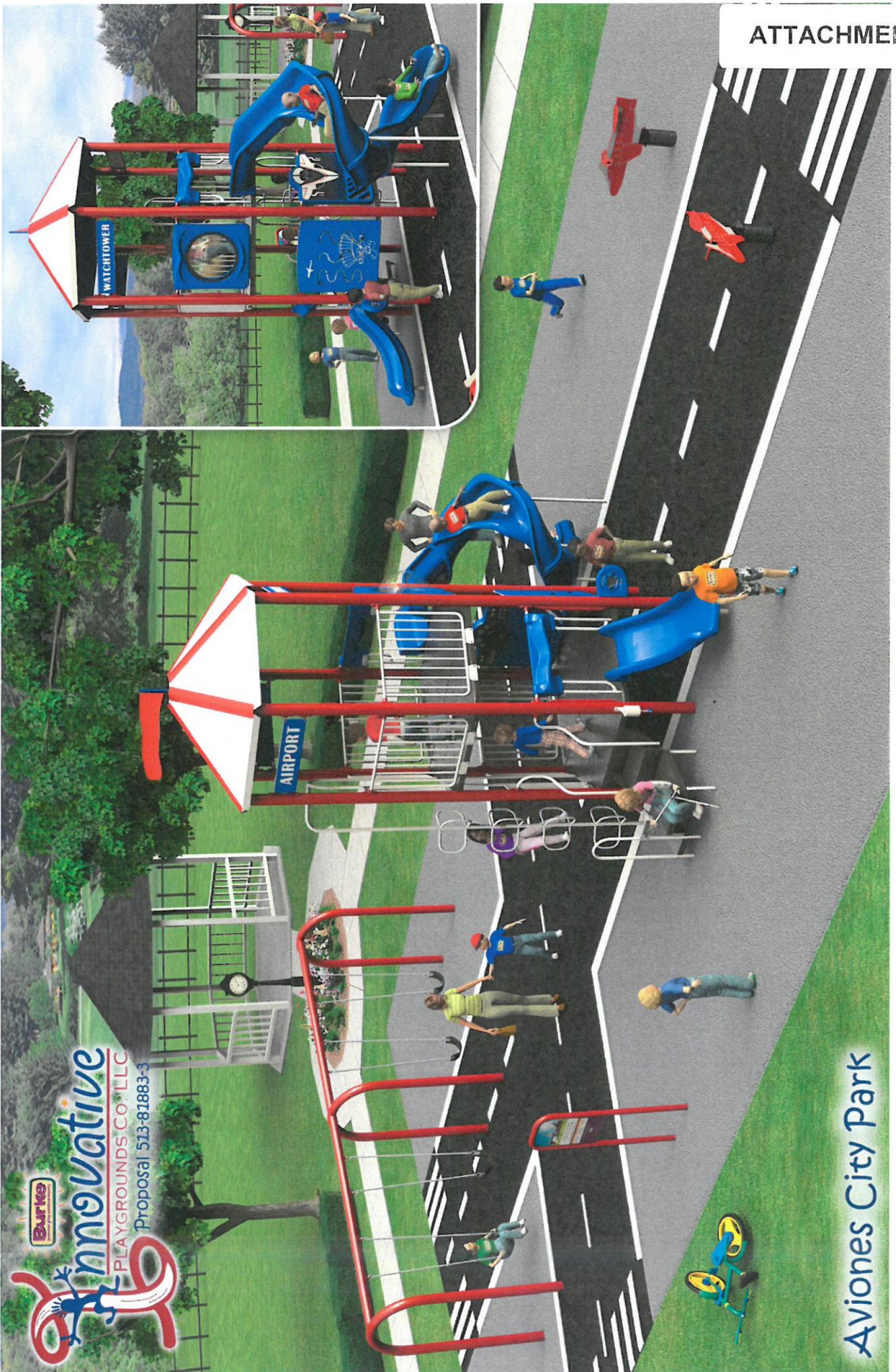
Tony Brandyberry
Public Works Superintendent

Approved By:



Corey Lakin
Recreation & Community Services Director

- Attachments:*
1. Example of Pour in Place "Runway"
 2. IPEMA FAQs about the various types of playground surfaces
 3. NJDEP Assessment of Crumb Rubber
 4. National Center for Health Research Article on Rubber Crumb



Burke
Innovative
PLAYGROUNDS CO. LLC
Proposal 513-81883-3

Aviones City Park

Burke
premier play environments



Airdate Playground



IPEMA

INTERNATIONAL
PLAY EQUIPMENT
MANUFACTURERS ASSOCIATION

Frequently Asked Questions about various types of playground surfaces.

FAQ's





Questions most frequently asked about poured in place rubber

1. What is a typical poured in place surface made of?

A typical poured in place (PIP) system consists of a cushion layer composed of recycled tire rubber that is buffed or ground to specific sizes and a wear course layer made of either EPDM (Ethylene Propylene Diene Monomer) or TPV (Thermal Plastic Vulcanized) granules that come in a variety of colors. The cushion layer and the wear course layers are held together by either a Aromatic or Aliphatic binding agents and typically installed over a crushed stone, asphalt, or concrete sub-base.

2. What is the installation process ?

The cushion layer is combined with the binding agents at specific ratios in a mortar mixer and poured onto the pad and troweled into place by hand using specified guide rods. Depending on the size of the project, the cushion layer is allowed to dry (over night if necessary) before the wear course is installed. Once the cushion layer is dry, the wear course granules are again mixed using specific amounts of binder and then applied with guide rods and trowels. The wear course is normally allowed to dry at least 48hrs before foot traffic is allowed.

3. Is poured in place surfacing accessible?

Yes. Provided the surface is installed within slope limit requirements by the ADA, PIP provides a safe, accessible surface. Ask the manufacturer to provide test results per ASTM F1951 from a qualified lab.

4. Does PIP come in different colors?

Yes. There is an exhaustive amount of colors available. Ask your PIP dealer for details.

4. How should PIP surfacing be maintained?

Loose debris such as sand, dirt and small stones on top of PIP surfacing can produce slip hazards and shorten the life of the surface. It is recommended that periodic removal of this loose debris be performed with a blower or vacuum every two to three weeks. Dry sweeping or scrubbing will remove the loose litter, but can force more fine particles into porous opening of some surfaces. Some cleaning agents can harm the binding agents and cause premature break down of the surface. Before using chemicals on the surface, ask the manufacturer for recommended maintenance practices for their particular surface system.

5. What can I use to remove snow or ice?

Calcium Chloride is an acceptable solution. Follow the manufacturer's instructions for proper use.

6. How long will my PIP surface last ?

This varies depending on the manufacturer and the system that you purchase. Ask your supplier for details.

7. Can PIP be repaired?

Yes, but since the PIP system is proprietary to the manufacturer/supplier, it may not be within the ability of the owner/operator to conduct an adequate repair. Ask your supplier before attempting. Remember, failure to repair the surface in a timely manner may cause the damaged area to get larger and increase the cost of the repair.



Questions most frequently asked about rubber tile systems

1. What are rubber tiles made from?

Typically, rubber tiles are manufactured from recycled tires. The tires are ground and contaminants such as cords and metal are removed.

2. What is the typical subsurface for rubber tiles?

Rubber tiles are typically installed over sub-surfaces such as concrete, asphalt or compacted granular. Your manufacturer can recommend what works best for your particular play area.

3. Are rubber tiles accessible?

Yes. Provided they are installed properly and the play area itself is relatively level (i.e. within ADA guidelines of 6% running slope / 2% cross slope). Always inspect tiles for gaps larger than 1/2" and changes in level of over 1/2" deep. Repair or correct as needed.

4. How should a rubber tile surface be maintained?

Routine maintenance should include sweeping or blowing the surface off using a leaf blower to ensure that abrasive materials, such as sand, are removed from the tile surface. Vacuum the surface periodically in areas where abrasive materials such as sand may be tracked on to the surface.

Cleaning with moderate use of household or commercial cleaners that contain odor suppressants and disinfectants is appropriate for most tiles. Dilute the cleaning agent as recommended by the manufacturer.

4. How should a rubber tile surface be maintained? (continued)

Apply to the surface using a mop or scrubbing device. This should remove most stains. Use only PH neutral based cleaning agents that do not contain bleach or citrus. Check with the manufacturer of the tile for recommendations.

Advanced maintenance can include steam vacuuming with or without cleaning agents to remove built up dirt and stains. Follow instructions. Power washing is normally acceptable too but keep the wand tip at a minimum of 8 inches from the surface to prevent damage.

Can my tile surface be repaired if damage or vandalism occurs?

Yes. Most tile systems include methods to remove worn or damaged tiles so that the entire surface does not have to be replaced. A professional installer is recommended to perform this task. Ask your manufacturer for certified installers in your area.



Questions most frequently asked about Engineered Wood Fiber

1. What exactly is Engineered Wood Fiber?

Processed wood, ground to a fibrous consistency, randomly sized not typically over 2" in length, free of hazardous substances and meets ASTM F2075 standard for EWF.

2. Why not just install wood chips?

The U.S. Department of Interior (DOI) has determined that wood chips are not considered an accessible playground surface.

3. Why spend more for Engineered Wood Fiber?

Engineered Wood Fiber is manufactured specifically for use in playgrounds using raw materials that are typically free of twig and leaf material.

4. How long does Engineered Wood Fiber last?

Engineered wood fiber will maintain its cushioning properties for the life of the playground, provided the depth is maintained by occasional top-offs. EWF does not decompose as mulch does.

5. How do I know that Engineered Wood Fiber meets safety standards?

Engineered Wood Fiber has been tested in accordance with ASTM F1292 impact tests, ASTM F2075 for purity and quality, and ASTM F1951 for accessibility. EWF meets or exceeds ASTM Standards and CPSC guidelines. Ask your manufacturer for test results.

6. Is Engineered Wood Fiber accessible?

Engineered Wood Fiber meets the specifications of the ASTM F1951 Standard for Accessibility according to the Americans with Disabilities Act (ADA), provided there is proper drainage, are installed correctly and appropriately maintained. See # 12.

7. Has burning been a problem?

No, burning has not been a problem. Flammability test results are available from your supplier upon request.

8. What if broken glass falls on the wood fiber surface?

Broken glass and debris typically stay on top of Engineered Wood Fiber and are easily removed by raking.

9. Is Engineered Wood Fiber treated?

Engineered Wood Fiber is not chemically treated and is totally natural.

10. What contains the Engineered Wood Fiber?

You can border EWF with playground borders or landscape timbers for an aboveground installation or excavate to have the play area flush with the surrounding land.

11. Aren't insects a problem with wood?

No. Typically, insects such as termites prefer larger pieces of wood to bore into. After thousands of installations nationwide, Engineered Wood Fiber neither attracts or repels insects.

12. How is Engineered Wood Fiber maintained?

Occasional raking and tamping, as usage dictates is necessary to keep the play area in good condition. According to usage, climate and the condition of the drainage system below, the surface will need to be topped off with fresh EWF periodically. Accessories like wear mats are available for high use areas to help maintain accessibility and limit maintenance. See IPEMA's positional statement for installation recommendations—click here: www.ipema.org-installation-recommendations-for-EWF.

13. What about splinters?

Splinters normally occur when contact is made with fixed or rigid wood surfaces. Engineered wood fiber tends to give or move upon contact so splinters are not a problem.

14. What if children eat it?

Engineered Wood Fiber is an all-natural wood product and not chemically treated in any way.



Questions most frequently asked about Engineered Wood Fiber

15. What is the dark brown water that sometimes appears from underneath the EWF after the first rain shower?

The dark water is actually nature's preservative in the wood called tannins and is harmless to humans. The tannins will eventually dissipate after rain washes them off the wood.

16. Can Engineered Wood Fiber become a litter box for animals?

No. Once the Engineered Wood Fiber has been installed and settled, it will knit together forming a uniform surface.

17. Why is drainage necessary for my Engineered Wood Fiber surface?

A proper drainage system will not only help slow the decay rate of the EWF surface but will also help keep the surface more resilient during colder weather.

18. What about fungus or mold that can occur on the EWF surface?

Nuisance molds are a natural occurrence as wood decomposes and may develop on the surface of EWF in wet weather and temperatures are $>35^{\circ}$. Once the EWF dries out, the molds go away. A good way to keep your EWF dry is to install a working drainage system below the surface. Direct sunlight will also help. To get rid of the mold, carefully remove present mold and apply a mixture of HD laundry detergent and water (1:3) to the surface. Several applications may be necessary.

19. Should I rototill my Engineered Wood Fiber surface periodically?

No. Engineered Wood Fiber is impact tested in a compacted state which is not only resilient but accessible for those with disabilities. To keep your EWF surface safe and accessible, top off as needed and do not rototill your EWF surfacing.



Questions most frequently asked about loose fill rubber

1. What is Rubber Mulch?

Rubber Mulch is a loose fill playground safety surface offering head impact protection to protect children when they fall. 3rd party certification can be obtained at www.IPEMA.org.

2. What is Rubber Mulch made from?

Rubber Mulch is typically manufactured from recycled rubber.

3. How big are the pieces of rubber?

The pieces of rubber range in size from 1/4" to 1".

4. Is there metal in Rubber Mulch?

Rubber mulch is 99.99% metal free. This means that while it isn't 100% metal free, there is a minimal risk of getting pricked by a piece of metal. Manufacturers utilize specialized magnets and metal detection technology to ensure as much metal as possible is removed and that the children have a safe surface to play on.

5. Is Rubber Mulch wheel chair accessible?

Rubber Mulch has been determined to be wheel chair accessible per the current ADAAG Guidelines for determining wheel chair accessibility of playground safety surfaces. The current guideline requires the playground safety surface to pass the ASTM F1951-99 test.

6. How do I Install Rubber Mulch?

In playground applications, the user should refer to the manufacturers installation guidelines. In general, installation requires preparation of the site so that the ground is level and drains well. The area either needs to be excavated to a depth equal to the required installation depth (refer to manufacturer's recommendation) or a perimeter barrier needs to be installed to reduce product migration into surrounding areas. Installation is usually achieved by spreading and compaction of the material to the desired install depth (again, refer to manufacturer's recommendation).

7. How do I Maintain Rubber Mulch?

In a playground application, the surface should be maintained on an as-needed basis by raking high spots down and filling in voids to maintain as level a surface as possible. This assures that the impact attenuating properties of the surface is maintained. Leaves and other organic material on top of the rubber mulch can usually be cleaned up with a leaf blower with minimal displacement of the rubber mulch.

8. What colors of Rubber Mulch are available?

Rubber Mulch comes in a variety of colors depending on the manufacturer. Most manufacturers offer a warranty ensuring the color will last for years.



Questions most frequently asked about synthetic turf

1. What is synthetic turf made of?

Depending on the manufacturer, artificial turf can be made from PE (Polyethylene), PP (Polypropylene) or nylon fibers or a combination of these materials.

2. Is synthetic turf flammable?

No. Ask your manufacturer for flammability test results.

3. What makes up a synthetic turf system?

Most synthetic turf systems installed today include a drainage layer, a multi-layered backing system, and resilient "grass" blades that are often infilled with recycled crumb rubber or special sand infills. In some applications, the turf is installed over a resilient pad to give the turf surface more impact resiliency.

4. Is Lead used to make synthetic turf ?

No. Today's synthetic turf is made without lead as a pigment ingredient. This change in the pigment formulations was made in response to the CPSC's request of all industries that lead be removed from all children's products, if possible.

5. Is heat a factor on synthetic turf?

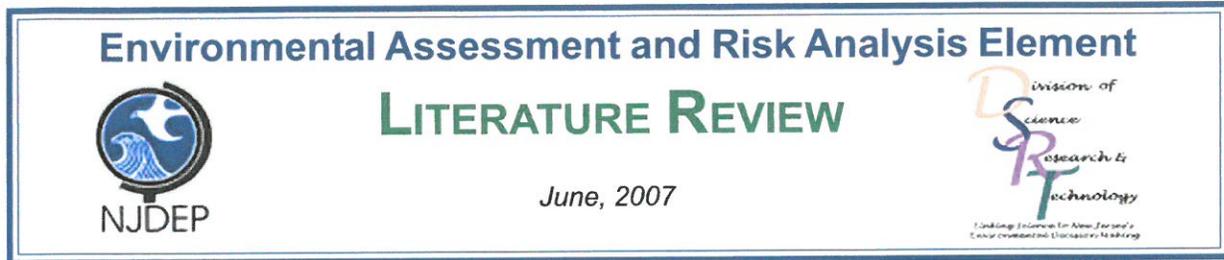
During the summer months, on hot sunny days, synthetic turf will be hotter than natural grass. Having water play during these times or utilizing shade structures is a good idea.

6. How should synthetic turf be maintained?

Keep debris off by sweeping, blowing, or hosing the surface off. Broom regularly (at least weekly) with a stiff shop broom to revitalize the fiber and (if infill is used) keep infill level. Clean spills as they occur. Blot up spills with a towel. Clean with water and a mild detergent and flush with clean water. Blot with dry towel to remove moisture. If infill is present, remove the infill with a shop vacuum, clean the turf as described above, and replace with new infill. Paint vandalism can usually be removed using ammonia, rinse thoroughly. If using cleaning agents other than mild detergent, check with manufacturer prior to use. Most cleaning agents will not harm fibers, but solvents can damage the backing. If infill is used as part of the impact resiliency of the system; check the depth frequently in high use areas such as under swings and slide exits. Add infill as necessary.

7. Can I install synthetic turf myself?

Some manufacturers will require that their turf be installed by a professional installation crew due to warranty and liability issues. It's best to check with your supplier before attempting to install it yourself.



Preliminary Assessment of the Toxicity from Exposure to Crumb Rubber: its use in Playgrounds and Artificial Turf Playing Fields

Thomas Ledoux, Ph.D., Research Scientist

Abstract

Crumb rubber consists of recycled, destructively chipped/pulverized, used automobile tires. This material is produced by a variety of methods such as grinding, chipping, softening with various agents, freezing, then shredding, chipping, etc. As a result of these processes and various post-production processes, various amounts of the "additives/components" used in the original production of the tire, besides rubber, occur in the crumb rubber.

Crumb rubber has been used in playgrounds because of its ability to minimize impact falls better than wood mulches of various kinds. As may be imagined, there are significant differences in quality and sizes varying from producer to producer depending on the method of production. Various producers make claims that their product is 95% steel free, non-toxic, fade resistant, stable, will not blow away, etc. Many of the claims made for various products containing crumb rubber lack independent substantiation. In addition, some commercial mulch and potting soil products that contain crumb rubber do not mention this ingredient on the label and reportedly there are no requirements for them to do so.

Fractured rubber from tires is high in leachable zinc, a known phytotoxic element that can kill ornamental plants and prevent crops such as peanuts from growing. Rufus Chaney (2005) of the U.S. Department of Agriculture following the research for 20 years says that the majority of research leads to the conclusion that for the zinc factor alone, ground or chipped rubber should never be used in gardens or composts. While phytotoxicity to ornamental plants and crops from high zinc content is known (Chaney, 1993), some producers advertise this fact as an advantage for their product, in that it inhibits weed growth.

Toxicology

There is very limited information available on independent toxicity safety assessment studies (with peer review, not designed or funded by either the rubber or recycled rubber industry) concerning environmental and human safety aspects of crumb rubber products.

A study in the Netherlands examined artificial turf football pitches for the potential effects of components in rubber infill and its distribution in the environment (Verschoor, 2007). It reported the risks of zinc to public health are of no concern: the human toxicity of zinc is low and the World Health Organization drinking water criterion is not exceeded. However, environmental quality standards for zinc in surface and groundwater were exceeded. Zinc from rubber infill is either emitted mainly to the surface water, when a drainage system has been constructed on clay or peat soils, or mainly to groundwater in naturally well-drained sandy soils. Aging of the rubber crumbs appeared to be of major importance for estimating zinc releases.

A field trial was conducted to evaluate the water quality effects of tire shreds placed above the water table (Humphrey and Katz, 2001b). Samples were collected in three 3-meter square geomembrane-lined basins located beneath the shoulder of a road. Two of the basins were overlain by 0.61 meter of tire shreds with a 75-mm maximum size topped by 0.72 to 1.37 meters of granular soil. The basin serving as a control was overlain with 0.72 meter granular soil. Quarterly samples for inorganic constituents were taken from January 1994 through June 1999. Samples were taken for volatile and semivolatile organic

compounds on three dates. Filtered and unfiltered samples were analyzed for the following substances that have a primary drinking water standard: barium, cadmium, chromium, lead, and selenium. There was no evidence that the presence of tire shreds altered the concentrations of the substances from the naturally occurring background levels. There was no evidence that tire shreds increased the levels of aluminum, zinc, chloride or sulfate, which have secondary (aesthetic) drinking water standards. In a few samples, iron levels exceeded the secondary standard. Manganese levels consistently exceeded the secondary standards. Three sets of samples were tested for organics. Negligible levels of organics were found.

In 2005, Sullivan reported that the most significant health effect resulting from direct exposure to tire rubber appears to be either allergic or toxic dermatitis. It is estimated that 6% to 12% of the population is allergic to rubber in some form. The basis of these concerns are from studies that show rubber workers and workers in tire production have greater incidence of chronic cough, chronic phlegm, chronic bronchitis, shortness of breath, and tightness in the chest than unexposed workers.

While this is probably true given the information available at this time on crumb rubber, data gaps do remain in the information available for this product.

Potential exposure pathways

Inhalation exposure

Crumb rubber includes some level of dusts and small particles in the material. As this material is used as intended, due

to impacts and weathering phenomena, additional crumb material, both large and small, will break down producing smaller particles. Particles less than 10 microns mean aerodynamic diameter (PM-10) are able to penetrate to deep lung tissue where they can potentially cause impaired lung function. Thus, inhalation of small particles and dusts of crumb rubber is a realistic pathway for adverse exposure to crumb rubber.

Asthma is a condition marked by recurrent attacks of paroxysmal dyspnea (shortness of breath), with wheezing due to spasmodic contraction of the bronchi. Some cases of asthma are allergic manifestations in sensitized persons (bronchial allergy); others are provoked by a variety of factors including vigorous exercise, irritant particles, psychologic stress, etc. In the case of crumb rubber usage, asthma attacks may be triggered by the physical nature of the particles and dusts themselves, or by an allergic reaction to latex or other chemical components in the product.

Dermal exposure

By the very nature of their intended uses, these facilities provide for rough and tumble activities. There is, therefore, a potential for dermal exposure to unprotected skin surfaces such as hands, arms, legs, and head to crumb rubber.

Individuals vary in their allergic sensitivity to various substances. Individuals very sensitive/allergic to various products are referred to as being a member of a sensitive sub-population. Some members of this sensitive sub-population manifest allergic contact dermatitis due to exposure to a variety of agents, one being latex, as in latex gloves and other products. Such people may have an increased likelihood of exhibiting allergic reactions to components in crumb rubber. While to date no evidence has emerged on this, the appropriate studies have not necessarily been conducted.

Oral exposure

Anyone familiar with young children knows that they frequently place non-food items in their mouths. Thus, there is potential for some limited exposure via the oral route to these children. Older children and adults using facilities treated with crumb rubber can reasonably be expected to get some inadvertent/unintentional oral exposure to crumb rubber from dusts generated in routine use of these facilities. Soil ingestion scenarios linked to criteria for cleanup of contaminated soil can be applied to estimate ingestion exposure on sites using crumb rubber.

Pica is the compulsive eating of nonnutritive substances including dirt (geophagia). Pica also occurs in some patients with iron or zinc deficiencies. Those components of tires that are not affected by the strong acids in the stomach are likely to pass through the digestive tract. A data gap exists for potential effects of other product ingredients that might be digested to some unknown degree. Additionally, any steel shards remaining in the material could possibly cause health problems if they became imbedded in or caused perforation of the digestive tract.

Exposure assessment

Inhalation

Based on the minimal concentrations of chemicals detected

by Humphrey and Katz (2001a) after sampling wells 0.6 to 3 meters from where tire shreds were placed below the water table over a four year period, it is considered very unlikely that any significantly adverse vapor (inhalation) exposures would occur to humans in close proximity to where crumb rubber is used in outdoor applications.

Any low molecular weight volatile organic substances originally present in new tires would probably dissipate during the useful lifetime of the tire prior to being recycled into crumb rubber. This product is made from recycled tires which were used on some sort of motor vehicle at highway speeds for one to two years which would heat the tires to well above ambient temperatures facilitating out-gassing of volatile components. Further, once removed from the vehicle, the tires likely spend an additional one or more years in a scrap pile outdoors, likely in the sun, where further weathering would occur which facilitates further volatilization of low molecular weight compounds. For these reasons when shredded, the tires likely contain only minuscule amounts of volatile organic substances, if any.

Dermal

As crumb rubber contains approximately 14% natural rubber, and 27% synthetic rubber, exposure to these products has a high potential to cause allergic contact dermatitis in the 6% to 12% of the population that is allergic to rubber in some form. This risk is probably highest in children, rather than adults, as they participate in activities more than adults do where dermal exposure is likely to occur.

Oral

While not advocating the deliberate ingestion of crumb rubber there are no indications from the data available at this time that the accidental ingestion of up to 50 to 200 mg/day (the mass of dirt assumed to be ingested in the standard exposure scenario for contaminated sites) of crumb rubber would be the cause of adverse health effects.

Conclusion

Insufficient information was found to perform a complete formal exposure assessment/risk characterization on crumb rubber for the stated outdoor use at this time due to existing data gaps in the available information. After reviewing the information available, with the possible exception of allergic reactions among individuals sensitized to latex, rubber and related products, there was no obvious toxicological concern raised that crumb rubber in its intended outdoor use on playgrounds and playing fields would cause adverse health effects in the normal population. However, due to the natural and synthetic rubber components in the crumb rubber product, there may be some members of a sensitive sub-population who are allergic to latex and/or other components of rubber tires who could exhibit varying degrees of allergic contact dermatitis through dermal contact. Individuals with a known sensitivity to such materials should be advised about the potential for exposures and allergic responses.

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Children and Athletes at play on toxic turf and playgrounds

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Is your child playing on rubber instead of grass at the playground? The use of human-made surfaces on playgrounds has increased dramatically over the years. Developed during the 1960s primarily for athletic fields, these artificial surfaces were also part of a strategy to provide children with more opportunities for outdoor physical activity, particularly in the inner city where outdoor playgrounds were scarce.¹ The first artificial turf (marketed as “Chemgrass”) was made of plastic, yet looked a lot like natural grass.

As its use for various sports activities increased significantly over the years, so did the concerns. Athletes began to complain that the surface was much harder than natural grass, as some studies also began to show that the use of artificial turf could increase the risk for football and other sports-related injuries. This prompted a ban on the use of artificial turf by the English Football Association in 1988, while many ballparks and professional sports stadiums in the United States began converting back to using natural grass during the 1990s. Over time, material such as rubber was added to keep the blades of “grass” in place and provide more cushioning.¹ Artificial turf containing rubber and other cushioning materials is also believed to reduce sports-related injuries, but study results have been mixed.² However, even with modern fields, many professional athletes dislike playing on artificial turf. It increases the severity of abrasions due to sliding, puts additional stress on joints, and heats up much more than grass does in the sun.³ Following their failure to force soccer’s international governing body (FIFA) to use sod instead of artificial turf for the 2015 Women’s World Cup, an international group of women players are suing the FIFA.⁴

Some of the benefits of artificial turf are that it’s a long-lasting “all-weather” material that does not require a lot of maintenance or potentially dangerous pesticides. Artificial turf is currently used on more than 12,000 athletic fields in the U.S.⁵

From the tire swings to play surfaces made from tires

Do you remember when children used to play on tire swings in the backyard or at the park? Those same tires are now being put to a new and possibly hazardous use! Recycled rubber tires have become one of the top choice materials for surfacing children's playgrounds. ⁶ In 2013, approximately 233 million scrap tires were generated, of which 8% (approximately 17.5 million tires) was processed for playground surface cover and 4% (almost 10 million tires) for sports surfaces. ⁷ Logically, tire scraps seemed like a surface that would be less likely to harm children if they fell. Recycling tires for use in playgrounds also keeps them out of landfills where they take up space, harbor rodents and other animals, and trap standing water that serve as breeding grounds for mosquitos and other disease-bearing insects. In addition, tires that have been thrown away can catch fire and that releases many different harmful chemicals into the air and ground water. ⁸

The tire material used on playgrounds can include the following:

- Loose tire shred (rubber mulch) or "crumb" on a surface that can be raked.
- Tire shreds that are combined with a binder and then poured onto a permanent surface
- Tiles made from tire shreds and binder that have been factory-molded, then glued to a playground surface.⁶

Are playground surfaces made with recycled tires safe?

There has been increasing evidence that raises concerns about the safety of recycled tire material used on playground surfaces. While tire rubber includes natural rubber from rubber trees, it also contains phthalates (chemicals that affect hormones, see Phthalates and Children's Products), polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs) and other chemicals known or suspected to cause adverse health effects.⁹ PAHs, for example, are natural or human-made chemicals that are made when oil, gas, coal or garbage is burned. ¹⁰ According to the EPA, breathing air contaminated with PAHs may increase a person's chance of developing cancer, and the Agency for Toxic Substances and Disease Registry (ATSDR) states that PAHs may increase the risk for cancer and also increase the chances of birth defects.^{10, 11}

What the scientific studies say

The California Office of Environmental Health Hazard Assessment (OEHHA) conducted three laboratory studies in 2007 to investigate the potential health risks to children from playground surfaces made from recycled tires. One study evaluated the level of chemicals released that could cause harm to children after they have had contact with loose tire shreds, either by eating them or by touching them and then touching their mouth. The other two studies looked at the risk of injury from falls on playground surfaces made from recycled tires compared to wood chips, and whether recycled tire shreds could contaminate air or water.⁶

It would not be ethical to ask children to eat tire shreds, so the researchers created chemical solution that mimicked the conditions of a child's stomach and placed 10 grams of tire shreds in it for 21 hours at a temperature of 37°C. Researchers then measured the level of released chemicals in the solution and compared them to levels EPA considered risky. The study also mimicked a child touching the tire shreds and then touching her mouth by wiping recycled tire playground surfaces and measuring chemical levels on the wipes. To evaluate skin contact alone, the researchers tested guinea pigs to see if rubber tire playground samples caused any health problems. This study assumed that children would be using the playground from the ages of 1 through 12. Results of the OEHHA studies showed that a single incident of eating or touching tire shreds would probably not harm a child's health, but repeated or long-term exposure might. Five chemicals, including four PAHs, were found on wipe samples. One of the PAHs, "chrysene," was higher than the risk level

established by the OEHHA, and therefore, could possibly increase the chances of a child developing cancer.⁶

Out of the 32 playgrounds surfaced in recycled tires that the researchers in California looked at, only 10 met that state's 2007 standard for "head impact safety" to reduce brain injury and other serious harm in children who fall while playing. In contrast, all five surfaces made of wood chips met the safety standard.⁶

A 2012 study analyzing rubber mulch taken from children's playgrounds in Spain found harmful chemicals in all, often at high levels.⁹ Twenty-one samples were collected from 9 playgrounds in urban locations. The results showed that all samples contained at least one hazardous chemical, and most contained high concentrations of several PAHs. Several of the identified PAHs can be released into the air by heat, and when that happens children are likely to inhale them. While the heat needed to do this was very high in some cases (140 degrees Fahrenheit/ 60 °C), many of the chemicals also became airborne at a much lower temperature of 77 °F (25 °C). The authors concluded that the use of rubber recycled tires on playgrounds "should be restricted or even prohibited in some cases."⁹

A 2015 report analyzed the chemicals found in 5 samples of tire crumbs from 5 different companies that install school athletic fields, and 9 different samples taken from 9 different unopened bags of playground tire mulch. The researchers found 96 chemicals in the samples. A little under a half have never been studied for their health effects, therefore it is not known whether they are harmful. The other chemicals have been tested for health effects, but those tests were not thorough. Based on the studies that were done, 20% of the chemicals that had been tested probably can cause cancer, and a large proportion were irritants – substances cause a body's reaction. 24% are respiratory irritants that can cause asthma symptoms; 37% can irritate skin; and 27% can irritate eyes.¹²

What the EPA has done

The EPA created a working group that collected and analyzed data from playgrounds and artificial turf fields that used recycled tire material. Samples were collected at six turf fields and two playgrounds in four study sites (Maryland, North Carolina, Georgia and Ohio). In a report released in 2009, the agency concluded that the level of chemicals monitored in the study and detected in the samples were "below levels of concern." There were limitations to this study, however. The study did not measure the concentration of organic chemicals that are known to vaporize during summer heat (called SVOCs). SVOCs include PAH.

Due to the small number of samples and sampling sites used, the EPA stated that it is not possible to know if these findings are typical of other playgrounds or fields until additional studies are conducted.¹³ When announcing the results of the study, EPA joined other organizations in recommending that as a precaution, young children wash their hands frequently after playing outside.¹³

A meeting was then convened by the EPA in 2010, bringing together various state and federal agencies to discuss safe levels of chemical exposure on playgrounds made from recycled tire rubber, and opportunities for additional research.¹³ In the case of PAHs, the EPA has concluded that while there are currently no human studies available to determine their effects at various levels, based on laboratory findings, "breathing PAHs and skin contact seem to be associated with cancer in humans."¹⁰

In February 2016, the U.S. government announced a new action plan to better understand the likely health risks of recycled tire crumb. This initiative involves 4 U.S. government agencies: the EPA,

Centers for Disease Control and Prevention (CDC), Agency for Toxic Substances and Disease Registry (ATSDR) and Consumer Product and Safety Commission (CPSC). By late 2016, they will release a draft report, even if studies are not yet completed ¹⁴

How to protect your children

So how can you protect your child at the playground? Remember that children are much more likely to be harmed by exposure to chemicals in their environment than adults because they are smaller (so the exposure is greater) and because their bodies are still developing. This is why it's important to significantly reduce (or try to eliminate) any contact your child may have with substances that are known or suspected to be harmful. If you have more than one playground in your area, choose the one that doesn't have a recycled rubber play surface.

Parents can actively persuade local officials that playgrounds should use wood chips rather than recycled rubber or other substances that are less safe when children fall, and more dangerous in terms of chemicals that they breathe or get on their hands.

The CDC, Consumer Product Safety Commission (CPSC) and EPA all recommend that you teach your child the importance of frequent hand washing, especially after playing outside and before eating. ¹⁵ Also, if you notice any loose tire shreds or other debris on your child after being at the playground, remove his/her shoes and clothing before entering the home. ¹⁶

To learn more about artificial turf and concerns about cancer risks for kids and young adults, watch this ESPN news video [here](#).

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All articles on our website have been approved by Dr. Diana Zuckerman and other senior staff.

This article was updated in 2016.

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City of Los Alamitos

Parks, Recreation & Cultural Arts Commission

Agenda Report Staff Report

November 2, 2016
Item No: 6D

To: Chair Josh Wilson & Members of the Parks, Recreation and Cultural Arts Commission

From: Corey Lakin, Recreation and Community Services Director

Subject: 2016 Winter Wonderland at the Plaza Preview

Summary: This report provides the Parks, Recreation and Cultural Arts Commission with a preview of the 5th Annual Winter Wonderland at the Plaza event.

Recommendation: Commission receive and file.

Background

The City of Los Alamitos and the Los Alamitos Area Chamber of Commerce Young Professionals created Winter Wonderland at the Plaza in 2012. Collaboratively, the agencies discussed hosting an event in the Los Alamitos to celebrate the holidays and bring families and businesses together for the holidays. The inaugural event had an estimated 1,200 attendees with a few main stage performances, a snow area with two sled runs and a small snow play area, photos with Santa, and a tree lighting ceremony. Due to the overwhelming positive response to the event, the City and Chamber Young Professionals agreed to continue the partnership, having hosted the event annually since 2012. The event has continued to grow in attractions and attendance every year with the 2016 event expecting a larger crowd than last year, filling the streets and St. Isidore Historical Plaza for the three and a half hour event.

Discussion

The 5th Annual Winter Wonderland at the Plaza event is scheduled for Saturday, December 3, 2016 from 4:00 p.m. – 7:30 p.m. While the event will remain very similar to previous years, there are a few enhancements that will help allow us to better accommodate the growing event.

The first and most significant change is that the event will now take place on Pine Street instead of Reagan Street (Attachment 1). The focus will still remain at St. Isidore Historical Plaza with the snow, the snowman, Santa and Mrs. Claus, and arts and crafts, however, by moving the remainder of the event onto Pine Street, it allows for more space due to the wider street and use of the adjacent parking lots for parking and activities. Additional

improvements include the movement of the “snow” machines to allow for more widespread “snow” throughout the street. If the budget permits, additional signage will be purchased in order to demonstrate the various activities and their locations throughout the event. The canned food drive is being reinvigorated through the partnership of Summer Harvest and other local non-profits including Casa Youth Shelter, Grateful Hearts, and Precious Life. Lastly, the main stage is already completely booked for this year. Nearly two months before the event, staff was able to secure enough performances to fill the stage with live entertainment throughout the evening.

A large sledding area with four sled runs will continue to be available for all ages to experience the snow, along with a snow play area and the chance to take a photo with a snowman under the “snowy” sky. Los Alamitos-based Elite Special Events will be providing the 25 tons of snow for the event, spreading it out to the three different areas, allowing more participants to enjoy the snow simultaneously. All of these activities are free to the public throughout the entire event.

Santa will be joined by Mrs. Claus, thanks to the generosity of Alamitos Eye Care, and hopefully will make their grand entrance aboard an OCFA Fire Truck and will be available throughout the evening for photos. The Youth Center is donating a 10’ Christmas tree that will be decorated and lit up during a tree lighting ceremony at 5:30 p.m. Once the event concludes, the tree will remain in front of St. Isidore Plaza and lit nightly throughout the holiday season. We are teaming up with Summer Harvest and three other local non-profits this year to give a boost to the canned food drive.

Food vendors, sales vendors, sponsors, churches, and non-profits will line Pine Street providing visitors opportunities to shop, receive information or donate to their favorite causes. All the proceeds collected from the trucks, vendors and sponsors help pay for the event, help to keep Winter Wonderland at the Plaza a revenue-direct expenditure neutral event for both the City and the Chamber for the fifth consecutive year.

Winter Wonderland at the Plaza is an event for residents, businesses and neighbors of all ages to enjoy. It is anticipated that more than 4,500 participants will attend this year, providing the very generous sponsors, vendors and entertainers a great opportunity to showcase to the community what they have to offer. The City and the Chamber also have the chance to provide another excellent event for the community we serve.

The Parks, Recreation and Cultural Arts Commissioners are invited to attend the Winter Wonderland at the Plaza event. There are several volunteer opportunities available that could provide the Commissioners an insider’s perspective on the event and allow Commissioners to participate. If Commissioners are interested in volunteering, please let City staff know by Thursday, December 1, so staff can plan accordingly.

Fiscal Impact

Currently, there are 7 sponsors, 9 vendors and 3 food vendors which is down significantly from last year, however, it is still early November. To date, \$14,450 in revenue has been raised by these 19 businesses/organizations for Winter Wonderland at the Plaza. The

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estimated event expenditures are around \$20,000, so several members of the committee are working diligently on increasing the vendors and sponsors for the event. The largest donation is from Arrowhead Products, who donated \$10,000 for the second consecutive year, to become the "Presenting Sponsor."

Submitted & Approved By:



Corey Lakin
Recreation & Community Services Director