CITY COUNCIL E-MAILS

ADDENDUM

Received: February 27, 2020 (after 4:00 p.m. – March 2, 2020 (4:00 p.m.)

March 2, 2020 Council Meeting

New content Begins:

Below is the result of your feedback form. It was submitted by Bill Hamilton (bill@phineasgraphics.com) on Thursday, February 27, 2020 at 10:28:33

address: 108 Penhallow St.

comments: A open letter to The Portsmouth City Council,

It is troubling to me that, in the aftermath of the recent, unprecedented City Council election, it appears that the new Council has been convinced, as was the old Council, that the most pressing concern regarding the McIntyre project is to satisfy the needs of the developer rather than the mandate of the citizens of Portsmouth. It appears that the new city manager and the old city attorney are following the same script as previous—favoring the developer at the expense of the citizenry. The notion that the developer is in charge, rather than the City Council is preposterous! This is our city, not the developer's.

The fear of litigation, the need to negotiate with one arm tied behind their backs, the private (read non-public!) meetings with the developer with a select group of chosen councilors (sound familiar?)—are all having the appearance of business-as-usual with regard to the McIntyre. Councilor Splaine's motion to delay any vote on rescinding the council's previous vote to withdraw the Form of Ground Lease agreement until March 2 should also have required that the developer suspend any action to litigate for at least 90 days. Before that time, the developer should be required to present major changes to the proposed plan, acceptable to the majority of citizens of Portsmouth, or abandon the project altogether and allow new vision, new public benefits, new uses that favor more than the few hi-end rental property owners and the developer itself. The burden of proof is on the developer, not the City Council to come up with an acceptable plan.

The fear of litigation is no incentive to compromise on a level playing field. I firmly believe that the developer's threats are just that—mere bluffs based on very little legal substance. I think all city residents deserve to see the signed Development Agreement and Form of Ground Lease, which, to my understanding, needs to be voted on and signed by the entire City Council. I don't believe the developer did their required due diligence in this legal agreement. I'm convinced that there are other legal issues still unresolved. I believe that instead of relying on the legal advice of the developer's attorney and the city attorney (whose job seems to be trying to avoid litigation, rather than providing legal remedy to promote the needs of the citizens regarding McIntyre) the City Council should immediately obtain outside, unbiased, highly-qualified legal representation to investigate this contract. It would be money well-spent. (It appears that the jury—the Council— has heard only the prosecutor's version of the truth and not the defense attorney's.) The new city manager should insist on this representation and begin the hiring process.

I see very little "good faith" in the recent actions of the developer. Minor changes to the current plan are not acceptable. And what about the vote by the Council requesting an immediate meeting with the National Park Service regarding their concerns about the project. Has the city manager scheduled that meeting, as requested? There may be insurmountable issues regarding this plan with the NPS. The current City Council needs to be more pro-active, less re-active. This whole thing smacks of the same old, same old.

I encourage everyone who has been involved in this project to contact the Council and request that they lead the path forward in this project rather than being led by the developer. The council vote to rescind the Form of Ground Lease was a courageous, positive, legally-correct action that places the burden back on the developer to create an acceptable plan. I ask that there be more such courage by this Council.

Respectfully, Bill Hamilton,

Business owner, Portsmouth

includeInRecords: on

Below is the result of your feedback form. It was submitted by Renée Scott (reneetscott@gmail.com) on Saturday, February 29, 2020 at 10:50:32

address: 63 Boston St., Somerville, MA 02143

comments: The memorandum from Weston & Sampson was shared with me by Portsmouth area residents I am acquainted with. I wanted to let you know another side of this story. There has been a big push over the past 6 years in Somerville, MA to put more artificial turf on our grass fields (we had three for many years and now have either installed or planned 8 total). Our largest city-owned park was set for a multi-million dollar redesign, which included an artificial turf field. Many in the community were unhappy with this. The city kept telling us grass wouldn't work and that was backed up by Weston & Sampson, who was the lead on the redesign. My community group, Green & Open Somerville, started looking into better grass care practices and found Jerad Minnick. After multiple conversations with him, others in the grass athletic field industry, and research on our own, we felt confident that, if well done, grass could get us both the playing hours and the ecological services we desperately needed. Green & Open Somerville tried and failed to get the city to hire Jerad or another professional to consult on how best to install and maintain the grass. The best we could do was organize a conference call with him and some of our city councilors (at the time called Aldermen). Through that call, a petition signed by over 700 community members, and advocacy, we convinced enough city councilors to vote for grass on this athletic field.

Once construction started, it became clear that something was really wrong with this field. Large spots were not growing and it wasn't draining. After some pushing from the community, it was discovered that while the correct ingredients of the soil had been put in, the particle size was wrong. So, it had to be completely redone, causing an extra year of delay of use, and a lot of anger from the community. It never looked great, but the city opened it this past fall, limited it to 500 permitted hours, and it failed. The youth soccer league stopped using it before the end of the season because they thought it was too bad. The closure of this field noted in the document happened a week before another one of our fields went up for vote over turf vs. grass. I've heard it from good authority that Lincoln Park's grass field failing was very helpful for the turf argument.

Be very careful with advice you are given about grass failing in Somerville. Jerad's assertion that grass could work included proper installation and maintenance, neither of which this field in question received. He stressed that over and over. In fact, once it was clear something was wrong with this field, instead of actively seeking answers to rectify the situation, city staff defended the redo by saying it was at the expense of the contractor, as if they were saints for redoing it on their own dime. One professional I spoke to speculated that the grass was never fully established before it was opened for play. Please take any examples of Somerville fields with a grain of salt. When other MA communities are getting 1,000 soccer hours on organically-maintained grass fields without rest, it makes our situation particularly frustrating.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Allison Davis (allie.davis@comcast.net) on Saturday, February 29, 2020 at 16:14:58

address: 11 Hidden Valley Dr

comments: We can get up to FOUR state of the art grass fields with drainage with our 1.6 million dollar budget.

Natural grass is a durable and safe sports surface when properly maintained.

Organically maintained grass fields are documented to get over 1,000 hours of use for practice, play, and informal activity annually.

The turf grass industry has been making significant progress in developing new types of grass to meet the water challenges and the increasing environmental concerns associated with fertilizer and pesticide applications.

Improved turf grasses can be extremely drought-tolerant, tough, and fast-growing, while having lower requirement for fertilizers and maintenance.

Organic practices can eliminate most of the environmental issues associated with chemical fertilizers and pesticides while being the most cost-effective.

Healthy soil sequesters carbon.

Grass means: Lower cost, no microplastics, toxics, dangerous heat, increased injury risk or plastic waste.

We simply do not understand all of the long-term environmental and public health impacts of synthetic turf, but the information to date is cause for great concern.

Organic natural grass is the cost-effective, known safe alternative.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Laura Belden (lmarshall@stanfordalumni.org) on Saturday, February 29, 2020 at 19:58:46

address: 146 Clark Rd, Rye

comments: As a future parent of Portsmouth High School students, and also as an environmental engineer, I am writing in support of grass athletic fields and not synthetic turf. Grass is the cheaper, less toxic, and more environmentally friendly option. Grass is also durable and presents less risk for injury and heat related concerns. While we are still learning about the long term environmental and public health impacts of synthetic turf, the currently available information shows cause for great concern.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Ted Jankowski/Non Toxic Portsmouth (thaddeusji@gmail.com) on Sunday, March 1, 2020 at 10:11:10

address: 27 Franklin Street

comments: Dear Portsmouth City Councilors, Former Portsmouth Deputy City Manager Ted Jankowski, and environmental scientist Mindi Messmer (unable to attend) were invited to participate in the February 18 City Council work session on the city's athletic fields.

Because the city and its consultant were allotted disproportionate amounts of time compared to Jankowski, we are submitting brief comments about the data given by the city's consultants, Weston & Sampson and city staff. As you know, Weston & Samson is an enormous national engineering firm the city has repeatedly hired for well over a decade to advise it on key issues, from the wastewater treatment plant expansion on Pierce Island to filtering out PFAS from the Pease water system. This memo was prepared by Non Toxic Portsmouth with the assistance of Non Toxic Dover and the input of several independent scientists.

Note: Despite the direct request of one Portsmouth City Councilor, no independent experts in sports turf management with experience in high use natural turf athletic fields were invited to present to the City Council. Weston & Samson gave several key pieces of misinformation, ranging from assertions about the use of pesticides involving synthetic turf fields to the true costs of both alternatives, the real recycle-able potential of synthetic fields, their potential health effects on young athletes, PFAS content and more. These

misstatements call into question the presenters' credibility, as does its role as a paid vendor producing what looked like an infomercial. Portsmouth city staff and former staff unquestioningly repeated the errors we note below, calling into question their diligence. The sole toxicologist who spoke during the work session is hired by Weston & Samson. Her opinion cannot be considered independent.

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Synthetic turf fields have been shown to contain fire retardants, heavy metals, PFAS and other toxins potentially harmful to children as they crumble, are inhaled, get on children's clothes and tracked into their homes. While PFAS are gaining international notoriety, the scientific community has been focusing more intensely on synthetic turf fields and the hazards they may pose to young athletes. The State of New Hampshire has already declared Portsmouth one of several communities with a pediatric cancer cluster. Although we understand the passion for youth sports and the need for viable fields, we urge caution before introducing any more toxics including potential carcinogens into our community and exposing our children to them when far safer alternatives are available for the same price or less in the long run. Rather than unquestioningly accept the view of a high-paid consultant, we urge the Portsmouth City Council to at least fully explore the safe organic alternative by inviting totally independent experts to address this cutting-edge issue so important to our children's futures.

Here's a link to the Feb. 18 work session, with time stamps (in minutes and seconds) for key slides from the presentation: https://www.youtube.com/watch?v=TNT62mm4UbQ

(Note that the city's vendor/consultant and city staff and former staff were given 1 hour and 9 minutes during the work session, while the director of community group Non Toxic Portsmouth, was allotted only 2 minutes and 25 seconds without a microphone to respond to the vendor's claims, which the city staff unquestioningly repeated).

SPECIFICS:

1

#1 Minute 16:06 (a single slide claiming to summarize the pros and cons of Natural Grass) Claim: "Playability is limited by weather season and use."

Response: The exact same can be said for synthetic turf. A major limiting factor for natural grass use is improper maintenance. Proper aeration is key to maintaining a high use grass field.

The city staff did an excellent job of illustrating the city's poor maintenance of the old PHS natural turf football field (now replaced with synthetic and tire crumb) with their photo and story about the old grass field that was allowed to get so compacted that they needed a road grader to break up its surface! The vast majority of problems with turf fields result from compaction, which regular, targeted aeration with the right equipment can fix. The problem is not a use issue, it's not a playing surface issue, it's mainly a lack of fields, lack of proper installation, and undermaintenance that we face here in Portsmouth.

Reference:

 $\underline{https://linkprotect.cudasvc.com/url?a=https\%3a\%2f\%2fwww.safehealthyplayingfields.org\%2fmaintenance-grass-$

 $\frac{fields\&c=E,1,XUoTJSbPpKiAdWYSw30ltQJp8E_INzxDmnb8ip7Mdj4ZgLr1slSn8sKjx3p9w86uBaVShuACoM9mgl8RAqhrZZJxOPtExZZbbNJS4Oh9p2gw0-TYM9L7rtmf\&typo=1$

#2 Minute 16:06

Claim: "Higher maintenance costs"

Response: Maintenance costs of natural grass are roughly the same to moderately higher than synthetic turf, according to a UMass Lowell cost comparison. Looking at maintenance costs alone does not take into consideration full lifecycle costs of synthetic turf, which are significantly lower for natural grass.

Reference:

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.turi.org%2fOur_Work%2fCommunity%2fArtificial_Turf&c=E,1,HEzjZOjqaO8yXwap_beb6kApNh2RP57cka8xgjhgdhTlgiO9Q17R5KfpMPYSsB1yT719luvd31yMTzrXKePj09_RUDliJ2b3Q_ws8yIVUwRmgbFw4xgf8w,,&typo=1

#3 Minute 16:49

Claim: "Native soils may contain contaminants"

Response: If soil is contaminated, it needs to be remediated. How does installing layers of concrete, plastic and tire crumb containing various contaminants remediate or protect the soil from contaminants? Synthetic turf adds more contaminants to the environment. Organic grass does not. This is poor logic.

#4 Minute 18:44

Claim: "Synthetic turf uses no pesticides - causes fewer injuries"

Response: Synthetic turf absolutely uses pesticides. Herbicide, microbicide, and other EPA registered synthetic pesticides are all a part of the recommended maintenance of a synthetic turf field.

2

Synthetic turf has been shown to cause more injuries than natural grass fields. TURF burn, and TURF toe are even named after the playing surface because these injuries are unique to it.

Synthetic fields are rougher, hotter, and harder, increasing risk of injury.

Reference: https://www.facebook.com/notes/non-toxic-portsmouth-nh/open-letter-toportsmouth-candidates-athletic-fields-information/731778840674019/

#5 Minute 19:45

Claim: "Cost/hr lower for synthetic than grass."

Response: Even if the chart shown in the slide listed accurate numbers for grass usage, no matter how many times we tried the math, these numbers just did not add up. These numbers and cost comparisons should not be relied upon. The 300 hours per year of use Weston & Sampson claimed natural turf is limited to do not reflect the figures reported in documented case studies of 17 parks in two New England communities – in Marblehead and Springfield, MA. Of those 17 parks, the case studies documented hours of use ranging from a low of 1,051 to 2,300.

Keep in mind that NONE of these fields have drainage – they are just organically maintained native soil natural turf playing fields.

#6 Minute 23:18

Claim: "Synthetic turf can be recycled into feedstock for the plastic molding industry."

Response: While this is theoretically possible, the links to synthetic turf "recyclers" lead to one company that sells used synthetic turf (AGR), one that only does removal (TRS), and the last

(TTII) offers no documented chain of custody records for how it was disposed of.

A phone call to the second company on the list (TRS), informed us that they do not recycle synthetic turf into feedstock for the plastic molding industry, and the only company they are aware of that does is located in Denmark. They advised us to check to see if the Denmark company is still accepting fields from the US. The third company (TTII) offers zero transparency about its disposal practices, zero proof of recycling, no address for any factory, and they claim to ship used fields to Malaysia, which is already coping with a serious, well-documented plastic waste problem.

There is no available information to show any working recycling facility in the US - these recycling claims are false.

#7 Minute 26:45

Claim: "Consensus: synthetic turf fields are safe for use and do not pose a health risk."

Response: The consultants are blatantly misrepresenting scientific findings and make a false claim that there is consensus on the matter. Many government funded and independent studies are now underway or being proposed to answer key questions and fill gaps in existing data

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about exposure, health risks and the environmental impact of these fields. To claim a scientific consensus on this matter is false and misleading.

References:

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.turi.org%2fOur_Work%2fCommunity%2fArtificial_Turf%2f&c=E,1,JaqBlyiAfh7OxQVVe5tpaukpgbFcZEl9hm44xtKmzgyKiuzyN66BbA-HQVgetX9p1pzTh6HZWCmuPF0CZHZigHU-KkRSScX04lMNmXH3WwpDUw,,&typo=1

Comments_on_Washington_Department_of_Health_Report

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.ehhi.org%2fturf.php%2fehhi-reports.php&c=E,1,Z90ZJ4ErgSDCxeGOePZ6kgy88lfrunAbkauAhG3wspSfgu1fDRN8stSAk5CoxAcWRC3buLrxc2unBVdRz9Vss ZnVe zX9nRBaSiviWH&typo=1

#8 Minute 31:35

Claim: "Two vendors indicated they do not use PFAS in manufacturing and provided documentation to back up those claims."

Response: Via a Right to Know Request, we requested the documentation for the claims the consultant and city staff made about the two manufacturers of the above-mentioned "PFAS free" fields.

After receiving this documentation from the city Friday afternoon, we discovered that the only "proof" provided by the first vendor, MET, is a sheet of paper containing only a statement asserting that they don't

use PFAS. Weston & Samson and the city staff and former staff apparently take this on faith and expect us to as well. The second vendor supplied reports from an independent laboratory, RTI. Their lab results indicate that both the synthetic backing and fibers contain fluorine, proving that PFAS are present, particularly in the fibers. Notably, the lab does not discuss this in its test report. These test results confirm the testing reported in the Boston Globe and the Intercept last October.

Environmental scientist Mindi Messmer, a former Democratic State Representative for New Castle and Rye, made the following comment when we shared with her the test results: "Clearly there are other non-target PFAS in these samples. Just because they are not on the list of analytes doesn't mean they don't use a regrettable substitution."

There are roughly 5,000 different types of PFAS. Testing for total fluorine content is the most reliable way to detect the presence of PFAS. The non detectable results for the 30 PFAS compounds that were tested for is not proof of being PFAS free. The total fluorine content means that one or more of the other thousands of PFAS chemicals are present in the turf fiber and backing. These test results show the exact opposite of what Weston & Sampson claims.

References:

PFAS_in_Artificial_Turf_Carpet

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Bill Hamilton (bill@phineasgraphics.com) on

Sunday, March 1, 2020 at 10:57:01

address: 108 Penhallow St.

comments: Dear City Councilors,

I'm writing to ask that you do not rescind the vote you took to withdraw the Form of Ground Lease document with Kane/Redgate. The benefit to the city in this agreement doesn't, in any way, pass the smell test, and, I firmly believe, is not a binding document between the city and the developer.

I also ask that you immediately hire outside legal counsel to review both this document and the Development Agreement. The verbal opinions obtained by some members of the council from "outside" legal sources is neither adequate nor sufficient for the council to be able to reach conclusions about the legality of these issues. I believe the council, through the City Charter, can vote to use outside, independent legal contractors without becoming "employees" hired only by the City Manager. To commit the city to this 75-year agreement with Kane/Redgate without obtaining responsible, expert counsel with written legal opinion makes little common sense and could expose the city to further litigation. Relying on legal advice from those who have been directly or indirectly involved in this current project makes little sense.

I ask that each council member reply to my email.

Thank you for your consideration in this matter.

Respectfully, Bill Hamilton includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Anne Schwartzman (akey5@nycap.rr.com) on Sunday, March 1, 2020 at 16:29:18

address: 118 Spinnaker Way

comments: I am not supporting an artificial turf athletic field option. Use natural turf please.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by James Hewitt (samjakemax@aol.com) on

Sunday, March 1, 2020 at 18:19:22

address: 726 Middle Road

comments: Dear Mayor Becksted and City Councilors:

As the City Council evaluates its next steps to better manage and allocate the people of Portsmouth's finite water resources, I thought it would be helpful to provide some background on Portsmouth / Pease Water System's largest water users. Beginning on January 1, 2006, state law required anyone using more than 20,000 gallons of water per day (averaged over 7 days) or more than 600,000 gallons per month (averaged over 30 days) to register their water use with NHDES. Portsmouth has nine businesses that meet this registration criteria. They are listed in ranked order below with their average daily use (2019) and the percent of the total water production they use. (gpd = gallons per day). This information can be obtained from the NHDES OneStop website found here.

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww4.des.state.nh.us%2fDESOnestop%2fBasicSearch.aspx&c=E,1,LGmaCX5liRzvec-DpXtsdemMl-ZAg3KO-VbzYiG7l1A8XnFsDOBjlK2OQG56z9RLClphMprD03onQmQeVUj5gXdXOtJ3p2qcw9JghKgQ&typo=1

and checking the boxes for "Registered Water User" and "Portsmouth". In 2018, the Portsmouth/Pease water system average daily demand was 4.3 million gallons per day

1) Lonza 341,000 gpd - 8 % (with a possible additional 300,000 - 400,000 gpd pending)*

2) Water Country 72,000 gpd - 1.6 %
3) Highliner Foods 65,000 gpd - 1.5 %
4) Cisco / Redhook 55,000 gpd - 1 %
5) Beechstone Apts 43,000 gpd - 1 %
6) Portsmouth Hosp. 41,000 gpd - 1 %

7) Pease Golf Club 32,000 gpd - 0.7 % (supplied "on the house")** a \$ 242,000.00 per year value

8) Liberty Mutual 22,000 gpd - 0.5 % 9) Eric Scientific 15,000 gpd - 0.3 %

https://linkprotect.cudasvc.com/url?a=http%3a%2f%2ffiles.cityofportsmouth.com%2ffiles%2fplanning%2fapps%2fCorporateDr 70 80%2fCorporateDr 70-80 PB LOD 011719 SPR.pdf&c=E,1,tzrlHhLCN6KsK-pfYxo1umkMw0kloyrKckREFJduDRRsEO3WZZV5S6BgoSuLpCyg1WHll0T-X-raSysYO9VsLfPm38SrvdOxkHC7tW LrCqxpgM-UA,,&typo=1

The Portsmouth / Pease Water System has about 7,000 service connections (customer accounts) and it serves about 33,000 people. The nine water customers listed above represent about one tenth of one percent of the customer accounts (9 / 7,000 = 0.0013) but they use about 15 % of the system's water. As you will note,

^{*}The January 17, 2019 Lonza 1 million square foot expansion site plan approval letter can be found here:

Swiss international conglomerate Lonza Biologics uses as much water as the next 8 highest Portsmouth water users combined.

**Portsmouth's seventh largest user, Pease Golf Course, has been receiving 15 million gallons a year for free since 1998. The reason why it has been getting this much free water for the last 22 years remains a mystery. While I am loath to partake in pernicious gossip, I did hear it may have something to do with the recently exiled former City Manager being the PDA Golf Committee Chair.

You may have heard City Hall speak of "new" wells at the Madbury well field and the Collins well site. Please do not confuse the term "new" with additional supply / capacity. While the wells may be recently installed / pending, they are replacing poorly functioning existing wells and do not represent any meaningful additional supply capability to the system. The current safe yield of the Portsmouth / Pease Water system is between 5.4 and 5.7 million gallons per day, and has been nearly the same for over 60 years. To my knowledge the last true "new" additional supply was added to the system was in the mid to late 1950s with the construction of the Bellamy River dam and reservoir in Madbury, the Madbury Well field, and the Harrison and Smith Wells at Pease. (the latter two wells are contaminated with PFAS, like the PFAS contaminated Haven Well at Pease that was shut down in May, 2014)

Portsmouth needs its representatives in the peoples' self-ruling body (i.e., you) to step in and take control of our community's most precious natural resource. As its record demonstrates, City Hall can't be trusted to allocate and manage the peoples' water resources in a responsible and sustainable manner. Portsmouth's Sustainable Practices Blue Ribbon Committee appears to be either indifferent or clueless to this situation.

I again urge the City Council to adopt a new ordinance that requires future requests for the people of Portsmouth's water above 10,000 gallons per day to be granted only after an affirmative vote by a majority of the City Council.

Thank you again for putting the people of Portsmouth's interests first for a change.

Regards,

Jim Hewitt

----Original Message-----

From: JAH < samjakemax@aol.com>

 $To: deaglan < \underline{deaglan@votemceachern.com} >; asstmayorjimsplaine < \underline{asstmayorjimsplaine@gmail.com} >; jtraceantiques < \underline{jtraceantiques@me.com} >; mayorbecksted < \underline{mayorbecksted@gmail.com} >; esthersmarina < \underline{mayorbecksted@gmail.com} >; esthersma$

<<u>esthersmarina@gmail.com</u>>; Shavanopah <<u>Shavanopah@yahoo.com</u>>; Pawhelan <<u>Pawhelan@comcast.net</u>>; jktabor <jktabor@gmail.com>; lazenbyforportsmouth

<<u>lazenbyforportsmouth@gmail.com</u>> Cc: andy42152 <andy42152@aol.com>

Sent: Tue, Feb 4, 2020 11:51 am

Subject: Portsmouth / Pease Water System - Supply v. Demand Dear Mayor Becksted and City Councilors:

Thank you for your interest in PDA golf course's 15 million gallon free water deal that we discussed last night. While disturbing, it is a relatively minor scam and easily remedied.

Thinking long term, the City Council should focus on the entire water system and how Portsmouth's finite water resources are allotted and to whom. As per attached 2018 Annual Water Quality Reports for the Pease and Portsmouth water systems, both reports have the combined systems producing the same amount of water for 2018, 1.576 billion gallons for the year or an average of 4.32 million gallons per day. (see page 5 on both reports)

On the supply side, that attached show the Portsmouth / Pease water system can safely supply between 5.7 million gallons per day (2013 report) and 5.4 million gallons per day (2017 City Staff Power Point

presentation). Assuming the more recent available supply value is more accurate, this means the Portsmouth / Pease water system is currently running at 4.32 / 5.4 = 80 % capacity.

Lonza's existing 1 million SF facility uses about 360,000 gallons per day. (8 % of total system demand) Assuming the approved, but un-built, 1 million SF expansion will use a similar about of water, in the near future the water system demand will be 4.32 mgd + 0.36 mgd = 4.68 mgd or at (4.68 / 5.4) = 87 % capacity. This leaves only 13 % of our water resources in reserve for Portsmouth's future growth.

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.seacoastonline.com%2fnews%2f20190917%2fc ity-did-not-protect-against-lonza-water-grab&c=E,1,y0-X7Mc924tFNcFcmk9GdXjyDFlAzucsLxKAtMY7PMD6JWIiLKNqJcjRTAgjUZ_yaEdCVuiXjitOm40sUb_qW_aY5CyW jP9XHQdLcYc3OFn7JP_rvKTU_5a3RA,,&typo=1

I hope the City Council will take action in the near future to ensure that future requests for the people of Portsmouth's water above 10,000 gallons per day are granted only after a vote by the City Council.

Thank you

Regards,

Jim Hewitt

P.S. As suggested by Assistant Mayor Splaine, I have copied Portsmouth's new PDA citizen rep, Erik Anderson, on this email.

City did not protect against Lonza water grab

Sept. 15, 2019 -- To the Editor:

About a year and a half ago, I expressed my concerns in a letter to the editor about the natural resource impacts of the recently announced 1 million square foot expansion of Lonza Biologics. Sadly, but predictably, these concerns were dismissed as the project sailed through Portsmouth's land use approval boards receiving Planning Board approval earlier this year.

Two years ago, Lonza used about 200,000 gallons per day from the Portsmouth / Pease water system. By June, 2019, Lonza's daily water use at the same facility had increased to 360,000 gallons per day, or about 8% of Portsmouth's water system use.

When Lonza doubles in size, will the Portsmouth / Pease water system be able to safely supply them with an additional 300,000 to 400,000 gallons a day? That would put Lonza's water use in the 750,000 gallon a day range, or 15% of water supplied by the Portsmouth water system.

In 2018, the Portsmouth / Pease water system average daily demand was 4.3 million gallons per day. With the Haven well shut down from PFAS contamination since May, 2014, the Portsmouth / Pease water system safe yield from all its sources is about 5 million gallons per day. That leaves only 700,000 gallons per day in reserve for the rest of us. The approved Lonza expansion could take half of that future reserve. So Portsmouth voters, if you believe your future water reserves are too precious to be handed out on a whim by some City Hall crony capitalist to his / her big business and developer friends, you know what needs to be done. Election Day is Nov. 5. Nothing changes if nothing changes.

James A. Hewitt Portsmouth

Below is the result of your feedback form. It was submitted by allen nelson (lshoals95@aol.com) on Sunday, March 1, 2020 at 21:35:19

address: 87 Richards Avenue

comments: I would like to endorse the sentiments presented by Claire Kittredge in the Seacoast Sunday 01 March 2020. The "outside expertise" she referenced is necessary and reasonable. The council would be hiring a much needed advisor not an employee of the city. If this is an issue with unelected city administrators, then we have even bigger issues to deal with. Such an obstacle should have a remedy or the votes of Portsmouth residents past, present, and future are rendered mute. The stakes are highest for the residents and businesses of Portsmouth. City management should not be intimidated by an objective opinion and the Council should engage qualified legal expertise without delay.

Regards, Allen Nelson

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Tim Peters ($\underline{ Peters3@comcast.net}) \ on \ Sunday,$

March 1, 2020 at 22:26:45

address: 104 Odiorne point rd

comments: We began advocating for the turf fields a few years back before the project stalled. A town the size of Portsmouth desperately needs turf fields for youth and adult recreation. We live in New England and grass fields simply aren't useable in our often wet spring and fall seasons. Please reconsider and build the turf fields we all need. Thanks you

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Kathleen Watson

(salisburywatson@gmail.com) on Monday, March 2, 2020 at 04:32:07

address: 200 New Castle Ave

comments: Please rescind the earlier vote regarding the land lease and work with Kane Redgate to achieve an agreement to proceed. I am not u happy with what they have put forward thus far.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Gerald Duffy (gduffy44@gmail.com) on

Monday, March 2, 2020 at 04:53:49

address: 428 Pleasant Street, Unit 3

comments: Dear Mr. Mayor and Councilors:

Since this Council took office, the McIntyre Project has been effectively happening in the dark, in one non-public session after another — largely because of the self-inflicted threat of litigation. Had this happened during the previous Council, the group of opponents who helped elect you would have had steam coming out of their ears and you'd be getting plenty of abuse. The project has even gone dark on the City's dedicated web page — the main information resource for residents. For all the talk of transparency, there is virtually none around this project.

The Mayor continues to wholly support opponents of the current project, believing he has a mandate to do so. But remember, about 2,000 voters in the last election supported most incumbents and over 13,000 registered voters (70% of the total) did not care enough about McIntyre one way or another to vote at all. The Council represents all of them, voters and nonvoters alike. Here's how the situation looks from the outside:

January 8 Council Meeting

Three McIntyre presentations, all from opponents and nothing new learned. No other perspectives entertained.

January 28 Council Meeting

Council ignores advice of City Attorney and City Manager regarding vote to reject the McIntyre ground lease ("sending a message"), depending rather on counsel from local pro bono lawyers who are all staunch opponents

February 18 Council Meeting

Creation of subcommittee. Saying that he's "listened carefully to both sides," the Mayor appoints a four-person committee with three firm opponents and one flexible opponent.

Tonight you have a chance to do the right thing and get back on a productive footing with our development parter. It's impossible to accept that this is already happening when the Council has let the 30-day clock run out, is technically in default, and is still being asked by Redgate Kane attorneys to provide personal communications with the Revisit McIntyre group and their former attorney Paul McEachern. In no way is that the basis for collaboration. I urge you to support Councilor Lazenby's motion to rescind your January vote to reject the ground lease.

COLLABORATE NOT LITIGATE

Warm regards, Gerald Duffy includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Robin Vogt (robin.w.vogt@gmail.com) on Monday, March 2, 2020 at 05:20:46

address: 10 Blue Heron Drive

comments: I stand alongside my neighbors when it pertains to Councilor Lazenby's call for all McIntyre discussions to become clear, public knowledge. It's time to collaborate, not litigate when it comes to the agreement with Redgate Kane on the future of the McIntyre property. I ask the Mayor, and Councilors in support of this "behind closed doors" approach to rethink their decisions, and please bring the people of Portsmouth into the conversation. Councilor Lazenby's motion to rescind the vote that occured on January 28, 2020 ought to pass, and I ask for there to be public discussions held concerning the next steps of the City Council when it pertains to the McIntyre Project. The people of Portsmouth, and my neighbors here in Ward 1 who have been affected by these changes deserve to know what the next steps are, and not be kept in the dark.

Below is the result of your feedback form.	It was submitted by Philip Desmond (pdesmond08@gmail.com
on Monday, March 2, 2020 at 05:54:48		

address: 579 Sagamore Ave #48

comments: Collaborate Not Litigate

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by David W. Mitchell (dave@amaruq.com) on

Monday, March 2, 2020 at 06:27:08

.....

address: 1179 Maplewood Avenue

comments: Please collaborate openly on moving the McIntyre project forward. The differences can be resolved, and should be resolved publicly. Please, no more legal brinksmanship, nor closed meetings. Thank you.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Paolo F. Maldari (pfmaldari@gmail.com) on

Monday, March 2, 2020 at 07:17:24

address: 39 Buckminster Way

comments: As a citizen of Portsmouth, NH I urge the City Council to make an immediate decision and take immediate action to move forward with artificial turf on new athletic fields.

Please note the following:

- 1) I urge the Council to authorize the City Manager to move forward with the bidding of the Athletic Field and Stormwater design as recommended by the City Manager herself, City staff and City departments.
- 2) I would like to remind the Council that yes in a perfect world we would all love to play on wonderfully designed, well-maintained, plentiful numbers of grass fields to rotate use across. But the City does not have the luxury of plentiful field space, nor a remotely adequate track record of field and grass management whether due to budget resources or otherwise
- 3) The concerns for health issues are not-backed up by empirical studies; concerns for possible PFA's are going to be addressed in the specification requirement; questions and concerns regarding potential recycling of field after 20 years are worthy considerations but not necessarily an issue to prevent installation today
- 4) And while Mr Jankowski is correct the problem with grass fields is compaction and poor drainage; the solution is not design or maintenance its controlling use and that is the root of the issue: Rather than manage use in order to manage grass, the City needs to maximize use on its limited available space and grass fields will not achieve that.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Robin Husslage (Rhusslage@hotmail.com) on Monday, March 2, 2020 at 07:22:25

address: 27 Rock Street

comments: Collaborate not Litigate, please. And, transparency on this would be greatly appreciated as this is one of the major platforms you ran on to get elected.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Kyle LaChance ($\underline{\text{Kylemariel@yahoo.com}}) \text{ on } \\$

Monday, March 2, 2020 at 08:17:45

address: 86 S School st

comments: COLLABORATE NOT LITIGATE. Pass Councilor Lazenby's motion to rescind the vote taken on January 28. Do what's right for the city not what's in your selfish interests, please.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Jason Boucher (boucher.jason@gmail.com) on

Monday, March 2, 2020 at 08:45:06

address: 65 Wibird Street

comments: Dear City Council:

Since the new city council took office in January, the McIntyre efforts have been largely happening behind closed doors, and not being as transparent at it should. Had these actions taken place during the previous council, the Revisit McIntire team would be inundating the council nonstop about the lack of transparency and professionalism.

Mayor Becksted continues to support the small, but vocal group of opponents of the current McIntire project, becasue he believes he has a mandate. Did you know almost 2,000 voters in the last election supported most incumbents? Also, more than 13,000 registered voters did not care enough about McIntyre one way or another to vote in our local election. The city's residents simply don't want a lawsuit that will hurt the city and its government, they don't want any damage done to our AAA bond rating, and they don't want the eventually increased costs (higher rents, higher taxes) due to the added costs of litigation and lawsuits passed on to taxpayers. We see it coming, no doubt. I also urge you all to listen to the advice of the city attorney and our new city manager regarding the ground lease of the McIntire. We need collaboration, not litigation. Please work with the development parter Redgate / Kane as chosen by the city. Also, please rescind your January vote to reject the!

ground lease. It doesn't make the city look good at all. We need to move forward and we need a great team effort.

Sincerely, Jason Boucher

Below is the result of your feedback form. It was submitted by Dixie Tarbell (dixiemcleantarbell@gmail.com) on Monday, March 2, 2020 at 09:27:53

address: 25 Driftwood Lane

comments: Please show good faith toward negotiating the McIntyre project by honoring Cliff Lazenby's motion, our last chance to avoid litigation from a strong case against the City. I think saving the tax payers from costs of litigation is more important than whatever design the project turns out to have. The next generations will see it as a fixture just as we see the Rockingham, etc., no matter how the project materializes. So it isn't worth expensive litigation. Thank you for level headed financial decision making.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Robin H. Schnell $(\underline{r.hary.schnell@gmail.com})$

on Monday, March 2, 2020 at 09:55:05

address: 109 Spring St

comments: Please rescind your Jan 28 rejection of the ground lease, avoid painful and expensive litigation, and re-establish fair negotiations with our longtime development partner.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by John Thompson (deweybrew@gmail.com) on

Monday, March 2, 2020 at 10:39:03

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address: 35 Woodbury Ave

comments: City Councilors,

I want to present a balanced tone in this note as the rhetoric around the entire McIntyre process is so strong.

I have to ask, why are you collectively baiting a multi-million dollar lawsuit when a simple rescinding of the January 28 vote to reject the ground lease? To the public, it looks like you've chosen to ignore a 30 Day deadline to instead slowly assemble a subcommittee with three anti-Redgate Kane councilors to review the situation. Could you please explain to me the rationale behind this? Could you also please explain why Councilor Lazenby wasn't included in this subcommittee to provide balance in the committee?

I understand that many members of this council were elected to this council on the back of switching gears on the previous council's work on the McIntyre application but I also understand that a vast majority of this council was elected on positions of lowering taxes for city residents. As a city resident, you seem to be doing the exact opposite in this case, adding to a string of other lawsuits and hirings of outside counsel. This does nothing to save money.

From the outside, it looks to me as if there is a concerted effort to cater to a small percentage of town voters who want a small measure of scorched earth and salted fields with all the work that has been done. There is NOTHING productive in this and I would implore the Council to make decisions on this complicated situation that are in the best fiscal interest of the city and its citizens.

I implore you to collaborate and converse with Redgate Kane; not bait them to sue and act seemingly non-responsive with millions of dollars on several different lines. You all represent the entire population of Portsmouth, not just a group that supposedly elected many of the councilors in this Council.

Please, please; rescind the January 28 vote! It will cost you nothing and potentially save a great deal.

Thank you for your time not only in reading this letter but for your work on the council. John Thompson

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Dixie Tarbell (dixiemcleantarbell@gmail.com)

on Monday, March 2, 2020 at 10:43:32

.....

address: 25 Driftwood Lane

comments: Collaboration is the prudent choice for taxpayers. I believe that no matter what design materizes for the final plans for the McIntyre Project, next generations will view it as a fixture, albeit evolving over time, just as we boomers have seen The Rockingham, the Book and Bar building (our childhood post office), etc. So the McIntyre project isn't worth expensive passionate litigation which will cost us taxpayers bundles. Please honor Cliff Lazenby's motion toward negotiation rather than litigation. It's called level headed financial planning.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Todd Henley (henleyta@gmail.com) on

Monday, March 2, 2020 at 10:43:34

address: 255 Buckminster Way

comments: Dear Council,

I have been a member of the Recreation Board for 10 years and since the day I started, the need of having more fields in town to use has been paramount. Now, with this amazing opportunity to build multiple fields in one area (what the Recreation Needs Study recommended), we want to be sure to put in the best option for expanded use and longevity. That opportunity is with artificial turf fields.

I urge you to authorize the City Manager to move forward with the bidding of the Athletic Field and Stormwater design as recommended by the City Manager herself, city staff, city departments and the Recreation Board.

I urge you to help accomplish what the Recreation Needs Study determined the city needed, by building multiple artificial turf fields at a single complex.

After numerous hours of research and reading studies on this topic, there is no correlation between health impacts and the artificial turf infill. Especially if the request is that certified non-PFA materials are used.

My two young boys are just starting their athletic lives and I hope that they are able to utilize artificial turf fields so they can have longer playing seasons, less injuries and more opportunities.

Please vote in favor of the turf fields.

Todd Henley

Below is the result of your feedback form. It was submitted by Louise Duprey (lwduprey4@comcast.net) on Monday, March 2, 2020 at 11:54:31

address: 300 FW Hartford Drive

comments: To whom it may concern,

I recently read in the Portsmouth Herald that our city manager is going to request immediate bidding for artificial turf fields and storm water design at tomorrows City Council meeting, 2/3/20. I understand that a number of council members are opposed to turf and and instead are opting for grass. Before Portsmouth High School had the turf field all school and recreation department activities were on grass fields. One negative was a lack of fields but more importantly, a bigger negative, was the condition of the fields. Weather dependent more days than not, after all this is New England, the fields were not playable. I distinctly remember buying bags and bags and bags of kitty litter to put in places on the fields just so we could play a game. As well, too often games were cancelled (a team loss) or rescheduled to an away game which in itself is not positive for players, parents or coaches. I ask that the City Council vote to support our City Manager, City Staff and City Departments recommendation to move forward with Turf Fields for all.

Thank you, Louise Duprey 300 FW Hartford Drive Portsmouth

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Zelita Morgan (zelita.morgan@gmail.com) on Monday, March 2, 2020 at 12:02:45

address: 39 Richard's avenue

comments: Good afternoon Mayor and City Councilors I hope my message finds you well!

The Herald piece did not give much detail on the new contract, and I wonder:

1. Will the City Counc receive a periodic review from the City Manager on projects and activities under John's responsibilities, like bi-weekly 2. What type of authority and de vision making powers have been given to John in handling each project 3. What is the scope of John' responsibilities for each assigned project 4. Communication - who directs the staff? Or is staff communicating directly with him or going to the City Manager, and vice-versa?

Back in December 2018, in reply to my inquiry in the CITY manager' succession plan, then Councilor Dwyer stated our Deputy City Manager would be able to handle the demands solo if needed. Please see below a copy/paste from my communication and Chris' reply.

In light of all this, and considering the city has hired a City Manager, I believe it is mostly appropriate for John to interact on a very high level and exclusively with our City Manager, and that the City Council receives periodic reports (bi-weekly I assume) on these activities.

Again, I have not seen the revised contract, so I apologize if any of the suggestions have already been discussed and/or addressed somehow.

John has done great work but now he is retired and we have fa fully staffed administration. Joh should be enjoying his hard earned and well deserved retirement.

Thanks for your service, Zelita Morgan

On Monday, December 3, 2018, Chris Dwyer < Cdwyer@rmcres.com> wrote:

Zelita--As I think you know, part of the idea of hiring a very experienced deputy manager was to prepare for the time when we might need an interim while we search for the next city manager. Nancy Colbert Puff has taken up the role in an admirable way, taking on more and more challenging responsibilities and serving as Acting City Manager when John was on sabbatical. I believe we should do a national search for the next city manager but we know we have a capable person to serve in the interim.

----Original Message-----From: Zelita Morgan via

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fFormMail.com&c=E,1,gvREy5LT0_NcOl35J_1wd4sLW_4aU2YIJoESqDPxb482AUvYBHA2xtM1JC9M3_A5AG8wfdFvC8gGrli6liEyIs79omiwVKTpIpQKKBPuF2H_h-O51&typo=1 <fp1_fm192@formmail.com>

Sent: Monday, December 03, 2018 3:24 AM

To: Jack Blalock < MayorBlalock@gmail.com >; CC - Cliff Lazenby < LazenbyforPortsmouth@gmail.com >; CC - Doug Roberts < doug@dougrobertscitycouncil.com >; Nancy Pearson < votenancypearson@gmail.com >; Chris Dwyer < Cdwyer@rmcres.com >; Joshua Denton < Joshuaddenton@hotmail.com >; Rebecca Perkins < rebeccaforportsmouth@gmail.com >; CC - Ned Raynolds < nedr64@gmail.com >; CC - Rick Becksted < Rickbecksted1@gmail.com >; Copy Sent to City Email Folder < ccemail@cityofportsmouth.com >; Clerk -

Council Emails < ccclerk@cityofportsmouth.com Subject: City Manager's Succession Planning status

Below is the result of your feedback form. It was submitted by Zelita Morgan (Zelita.morgan@gmail.com) on Monday, December 3, 2018 at 02:24:21

address: 39 Richards Avenue

comments: Good morning, Councilors

Could you provide an update on the City Manager's succession planning?

Thanks, Zelita

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Heather Jenkins (heathervelte@hotmail.com)

on Monday, March 2, 2020 at 14:14:18

address: 33 Kent Street

comments: I am writing to urge you to support artificial turf fields for our town. I know there has been a lot of talk around this topic but as a parent of children who routinely have practices and games cancelled due to wet grass fields, and who has seen many games where injuries have occurred due to wet grass fields, I feel that artificial turf is the best option.

If we lived in an area where weather wasn't a problem and/or where money wasn't a constraint in irrigating fields then by all means grass would be great. However, year after year we have kids running in mud or finding other options for practices while waiting for the grass fields to dry. Sometimes we hit the jackpot and are able to get the PHS turf but that is rare and usually only available during off hours. There is no doubt we need more fields, however, if they are all grass we are still in the same situation we are always in asking our selves, can we play today?

Spending money on more grass fields would be a waste of precious taxpayer money. Using the funds for artificial turf would at least provide assurance that field use would be high and that fields would be accessible for many years.

includeInRecords: on Engage: Submit

Below is the result of your feedback form. It was submitted by Lindsey G Carmichael (lindseycarmichael@comcast.net) on Monday, March 2, 2020 at 14:17:26

address: 85 PINEHURST RD

comments: Portsmouth officials will soon be deciding what type of athletic fields will be constructed at the Campus drive site near the Foundation for Seacoast Health. Those involved in the project have stated that artificial turf with a crumb rubber infill material is the preferred field type choice. Over the course of the last several years community members, including myself, have presented evidence detailing the health risks posed by crumb rubber infill along with data demonstrating both the safety and cost savings of natural grass over artificial turf fields. The purpose of this document is share current scientific research about risks posed by crumb rubber infill, provide an overview of the current state of affairs as they relate to crumb rubber, and to highlight factors impacting the field type decision.

Controversy has surrounded crumb rubber fields for several years. Public concern reached a new level when college soccer coach Amy Griffin raised an alarm in 2014 about the high numbers of soccer players, most of whom were goalies, diagnosed with two common forms of childhood cancer: lymphoma and leukemia. Griffin and others feel that exposure to crumb rubber is linked to the elevated number of childhood cancer cases. The synthetic turf industry was critical of Griffin's claims, citing they were anecdotal. However, the statistics were concerning. Her list includes 196 young soccer players who played on crumb rubber diagnosed with cancer. Of the 196 players 115, or 65%, of those were goalkeepers. The thinking is that goalkeepers spend more time than all other players close to or directly on the surface of field, inhaling the volatilized crumb rubber and crumb rubber dust particles. They also have more direct contact with the material through their skin as they dive on the playing surface throughout their time on the field.

Federal agencies took notice of the mounting evidence that crumb rubber might pose health risks. The material contains eleven known carcinogens, multiple endocrine disrupting hormones, and has been shown to leach harmful chemicals into surrounding watersheds. Crumb rubber fields also contain materials that trap heat on warm weather days resulting in dangerously high air temperatures directly above the playing surface. In February of 2017, the EPA, the CDC, and the U. S. Consumer Product Safety Commission launched a multiagency investigation to study key environmental and health questions regarding human exposure to crumb rubber. This effort is ongoing.

An important question to consider is whether it makes sense to install crumb rubber fields with the knowledge that they will adversely impact both ground and surface water quality. Studies show that harmful chemicals are leached into the watershed surrounding crumb rubber artificial turf fields, including lead, zinc and polycyclic aromatic hydrocarbons (PAHs).

Because of the myriad serious concerns around crumb rubber, we urge the city to obtain bids for organically managed natural grass fields as well as bids for artificial turf fields that have an infill material other than crumb rubber. With regard to human health and safety, a growing body of research concludes that there is no safer option than natural grass for athletes to play on (see references beginning on page 3 of this document). A cost analysis conducted comparing the lifecycle costs of natural grass with artificial turf clearly points to the fact that natural grass is, by an order of magnitude, the least expensive option. Experts on natural grass athletic fields assert that when properly installed and maintained, they are very robust and can support high levels of use, and that the notion that grass fields need 'rest' days is a misnomer.

Many of us prioritize protecting the health of our young people above all else. In that vein we urge the city to take a precautionary approach to this decision. Effectively, this means that when an activity, such as the installation of a crumb rubber artificial turf field, poses a threat to human health or the environment, precautionary measures should be taken, even if cause an effect relationships are not fully established by science. In September of 2018 the city voted to adopt a toxic free weed control resolution "in the interest of public health." It was great to see the city take this step. In the interest of public health, we ask that the city consider a natural grass field, or an infill material that is less damaging to the environment and poses fewer serious health risks than crumb rubber.

Over the course of the last two years, City Councilors and staff have asked for additional information, including peer reviewed studies, pointing to the health risks of exposing children to crumb rubber. I have compiled a list of resources and studies supporting the concern below.. This is by no means an exhaustive list. Additionally, there is increasing concern regarding the impact of crumb rubber on the environment. Some of these concerns are highlighted in the last section.

Thank you for your consideration.

Lindsey Carmichael

Health Risks Posed by Heat on Artificial Turf Fields

One of the primary health concerns with using crumb rubber infill on artificial turf fields is related to the high temperatures recorded on these fields on warm sunny days. Crumb rubber artificial turf fields have been documented to be upwards of 86 degrees Fahrenheit hotter than natural grass fields under identical conditions. For example, at one location, when the natural grass surface temperature was 93.5 degrees, the measured artificial field temperature was 180 degrees. Artificial turf becomes very hot in the sun and exposure can lead to heat stroke, blisters and burns.

1. "These artificial fields can heat up like frying pans. On some days, your shoes get so hot that it hurts just to walk out onto the field," stated PEER Executive Director Jeff Ruch. "These very real heat dangers are not widely understood and people wrongly presume that a publicly-maintained field must be safe. That is precisely why we need enforceable limits and postings to prevent needless pain and potential tragedies."

Citation

"Artificial Turf Field Heat Dangers Require Safeguards: Synthetic Turf Temps as High as 200 Degrees Pose Particular Peril to Children" 6 Sept. 2012,

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2f%2f%2fwww.peer.org%2fnews%2fnews-releases%2fartificial-turf-field-heat-dangers-require-safeguards.html.&c=E,1,c3ceXQGh1nQx7KHccCOthG5TOoBKpHKNMyftEOrCRwQQB9fhA-nhKc9cG3yEka0c kn4SC96KGTqNa5gzR3uJUOQoINTOeX9J4e7fRJHQLQ3g s,&typo=1

Online Link

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.peer.org%2fnews%2fnews-releases%2fartificial-turf-field-heat-dangers-require-safeguards.html&c=E,1,TYaMQl-8nZ4rHZOArQmRAtg_9gjO_L_2yDoecEeJI2WZz3d_K7clomy4etBTFTZ8HleGJWGSCfkb-ttlManvGLRT8MQYzvIXuTuh_n0o8KUE46db6PPb&typo=1

2. "A repeat of the 2014 National Women's Soccer League semifinal in Kansas City, when temperatures on the field at University of Missouri-Kansas City reached as high as 159 degrees, is highly unlikely. Players in that game soaked their feet and boots in ice water in an attempt to stave off the heat underfoot, and some even took intravenous fluids at halftime.:

Citation

Wahl, Grant. "Artificial turf takes toll on recovery time, bodies."

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fSl.com&c=E,1,Re09dhDQd0of53T6eUXgaP4xMz4pW

gkLonCH29Yhx21WSgU8TWzvkiutm_mZ025TnPukHsWAYPC5PM_s-

qSjwBfXGflxXOxvaL doURJQy473jmYlC57tLC AHQB&typo=1, 3 June 2015,

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2f%2f%2fwww.si.com%2fplanet-

futbol%2f2015%2f06%2f03%2fwomens-world-cup-artificial-turf-

canada.&c=E,1,OLs0oXfehuOTLzLCQRoZCeKoV2ThM1G9ltmEVEhX2TGwSZpXTaEWC7U74moHYxs_aqW5TyBF

P7YZhY5XIvRHur3hMw6TTXkWk8p8msKQUWsTkWDRpIANCwFWqg,,&typo=1

Online Link

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.si.com%2fplanet-

futbol%2f2015%2f06%2f03%2fwomens-world-cup-artificial-turf-

canada&c=E,1,yz4aV55eRQ8EJIv36iCKRzOIPYktUQ9o-

k91OB0ZsPrx6yjmVMl8oANMbPXqltQpoJsAIEyT693JrA7vnxlen4bDPKPMSkzMz3a1ecOi1A,,&typo=1

3. "Artificial turf is made of several heat-retaining materials which can significantly increase field surface temperatures, substantially increase air temperatures near fields, and potentially contribute to the urban heat island effect in surrounding neighbourhoods. This contributes to increased health risk during hot weather events." P 2 & "Young children and athletes are especially susceptible to heat-related illness such as dehydration, heat exhaustion and heat stroke while exercising in hot conditions." P. 3.

Citation

Health Impact Assessment of the Use of Artificial Turf in Toronto. 2015, Health Impact Assessment of the Use of Artificial Turf in Toronto.

Online Link

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww1.toronto.ca%2fCity%20Of%20Toronto%2fToronto%20Public%20Health%2fHealthy%20Public%20Policy%2fBuilt%20Environment%2fFiles%2fpdf%2fH%2fHIAOn Artificial Turf Summary Report Final 2015-04-

<u>01.pdf&c=E,1,aqUScqMtmbFtP7dU0ZAKTZRXnvyT8dlpDOagQHwZioWs8jKkb0x5lbX5HkRl_zDkeDrFuXkfMrcScOmW3VJoA3jwQ-DlORoV_fwctGzxN2gBQl-ggBLikZQVUvk,&typo=1</u>

4. "Artificial turf acts and behaves like any other paved surface," explained Ronald Macfarlane, a public health manager for Toronto and lead author of an assessment of fake grass published by the city in April. "It gets very hot in the sun. People can get blisters and burns."

Citation

Peeples, Lynne. "Artificial Grass May Save Water, But Does It Endanger People?" Huffington Post, 6 Sept. 2015, www.huffingtonpost.com/2015/06/09/artificial-turf-drought-california n 7523132.html.

Online Link

https://www.huffingtonpost.com/2015/06/09/artificial-turf-drought-california n 7523132.html

5. Video of Dr. Philip Landrigan, Director of the Children's Environmental Health Center at Mount Sinai Hospital in New York City on the Health Hazards of Artificial Turf Playing Fields. https://www.youtube.com/watch?v= sjjvzkc73w

Citation

Landrigan, Philip, director. The Health Hazards of Artificial Turf Crumb Rubber Playing Fields. Children's Environmental Health Center at Mount Sinai Hospital, 31 Oct. 2014, www.youtube.com/watch?v= sjjvzkc73w.

Online Link

https://www.youtube.com/watch?v= sjjvzkc73w

Health Risks Posed by Exposure to Harmful Chemicals that Volatilize When the Field Becomes hot, or That Are Ingested, Inhaled or Absorbed.

6. "Most of all, evaporation at high temperatures may expose users of sports grounds, who are often children between 5 and 13 years of age, in a very sensitive phase of growth, to many of these toxic compounds. The results of the present study demonstrate that PAHs are continuously released from rubber crumb through evaporation. Athletes frequenting grounds with synthetic turf are therefore exposed to chronic toxicity from PAHs."

Citation

Marsili, Letizia, et al. "Release of Polycyclic Aromatic Hydrocarbons and Heavy Metals from Rubber Crumb in Synthetic Turf Fields: Preliminary Hazard Assessment for Athletes." Journal of Environmental & Analytical Toxicology, vol. 05, no. 02, 2014, doi:10.4172/2161-0525.1000265.

Online link

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fwww.omicsonline.org%2fopen-access%2frelease-of-polycyclic-aromatic-hydrocarbons-and-heavy-metals-from-rubber-crumb-in-synthetic-turf-fields-2161-0525.1000265.pdf&c=E,1,Rds940sova85yRoPDpOyFCF0oorDYBHpF_2NY6y-Vazudyn7klyIQUpEGMbtyrXqsX7h20rk4UWsleZFPao-yMeL28yllrpg-SgLdYzYWgtQ8bKtzVU74JMg&typo=1

7. "The analysis confirmed the presence of a large number of hazardous substances including PAHs, phthalates, antioxidants (e.g. BHT, phenols), benzothiazole and derivatives, among other chemicals. The study evidences the high content of toxic chemicals in these recycled materials. The concentration of PAHs in the commercial pavers was extremely high, reaching values up to 1%. In addition, SPME studies of the vapour phase above the samples confirm the volatilization of many of those organic compounds. Uses of recycled rubber tires, especially those targeting play areas and other facilities for children, should be a matter of regulatory concern."

Citation

Llompart, Maria, et al. "Hazardous Organic Chemicals in Rubber Recycled Tire Playgrounds and Pavers." Chemosphere, vol. 90, no. 2, 2013, pp. 423–431., doi:10.1016/j.chemosphere.2012.07.053.

Online Link

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fpdfs.semanticscholar.org%2f16c5%2f7761606a4162f31b3779e48e5cbc9bb299e3.pdf&c=E,1,Ey60eMsXKXz3cttBw_aZkkeBeqxomrdu19MBp02XndC9NMKF_q2Axl2PUWgfC_mlzIMSqzFVK2a8Knkv0-NAlbnzbCIFEcxRmJCjbETe0-6sEPYer6yLEAw,&typo=1

8. "A literature review of studies of the release of chemicals from recycled tires in laboratory settings and field studies found 49 chemicals, seven of which were carcinogens."

"Findings from two studies reported on the internet are important. The first is a report by William Crain and Junfeng Zhang (2007) that found carcinogenic PAHs released from tire crumb in-fill at levels that exceeded New York State Contaminated Soil limits."

Citation

Brown, David R. "Artificial Turf: Exposures To Ground-Up Rubber Tires." Environment & Human Health, Inc. EHHI, 2007, https://linkprotect.cudasvc.com/url?a=https%3a%2f%2f%2f%2fwww.ehhi.org%2fartificial-turf.&c=E,1,nENgtB0_kiP3BWVvuFTeermn80ELKLR6I-

<u>S7pdvNPMax12AWPDiLtZAYvLTSiDxC2vRGNDxCrkNgPlj8C81jnkmw5SQr4T5EoitzXw5webGClA,,&typo=1</u> P. 11 & 19

Online Link

https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.ehhi.org%2fturf_report07.pdf&c=E,1,Tvk-ZvDhZNSpVCekeIdbd585tfHowIWEz6McNqTK03Jl4A7jjCn6cUvpVXVRqAkfwD44V0mcg3CwoJEKz0M3eyMdIHCJakGsAi77Ui2QX9Ig8IfOEaycFd0_dwq&typo=1

9. "Rubber tires contain several compounds that are known or suspected carcinogens. Many carcinogens are mutagens (Griffiths et al. 2000), and fluctuation assays based on the Ames test can be used as an initial screen for mutagenic potential. Granulated crumb rubber from recycled tires is commonly used in the creation of artificial athletic fields, and the surface temperature of these fields can reach levels far above the ambient temperature. In this study, crumb rubber samples taken directly from four separate artificial athletic field surfaces were used to make leachates using water at different temperatures......" "These results suggest that at the higher temperatures such as those on artificial athletic field surfaces, the crumb rubber infill on these artificial athletic fields can become the source of a water-soluble agent with mutagenic potential in bacteria."

Citation

Dorsey, Michael J., et al. "Mutagenic Potential of Artificial Athletic Field Crumb Rubber at Increased Temperatures." The Ohio Journal of Science, vol. 115, no. 2, Apr. 2015, p. 32., doi:10.18061/ojs.v115i2.4857.

Online link

https://library.osu.edu/ojs/index.php/OJS/article/view/4857/3961

10. "The total concentration of volatile organic compounds in Manglerudhallen could, without ventilation, reach very high levels. Even with ventilation over a long period of time, the concentration of TVOC could be characterized as higher than normal. The component spectrum has a clear signature from the rubber granulate and contains a considerable number of components which are associated with adverse effects on health."

Norwegian Pollution Control Authority/ Norwegian Institute for Air Research: Measurement of air pollution in indoor artificial turf halls

https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.isss-sportsurfacescience.org%2fdownloads%2fdocuments%2fSI1HPZNZPS_NILUEngelsk.pdf&c=E,1,AnAMMJ2WS9 Mqg8I7MxoJkkt2jZ2NhuH9ySSAgFK-_HE6sGxmM68TY997jQseGE5bejbfxWueecXL0HCmCGtlqPly6mhVmGSD220PGiGjfrwZLKdbg,,&typo=1

11. Mount Sinai Children's Environmental Health Center, Newsletter, 2009, p. 4: Artificial Turf Fields. "The chemicals in turf fields have potential to pose hazards to children's health. Recycled tires are known to contain a mix of chemicals including styrene (a neurotoxin), 1,3-butadiene (a probable human carcinogen), polycyclic aromatic hydrocarbons (PAHs, known human carcinogens) and heavy metals including lead, zinc, and cadmium."

https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.mountsinai.org%2fstatic_files%2fMSMC%2fFiles%2fPatient&c=E,1,r6t-wWOjsEZhBSN8I5mCow4DjPxRuOAhlcbCWf5Bs92FkaMMxuM81qE-OlvU_CQmeRBgnfSKo1YfUADZDbkpzZMJK5895HSg4ag_rbomdaqogQ,,&typo=1_Care/Children/ChildrensEnvironmental Health Center/Fall2010_newsletter.pdf

12. Grassroots Environmental Education: Artificial Turf

"While advocates claim the fields are safe, the potential health effects of exposure to these chemicals - endocrine disruption, neurological impairment and cancer - can take years to manifest themselves. Without long-term field testing, no one is in a position to say the exposure is harmless, particularly for children.

And there are other problems: cleaning synthetic turf can require harsh chemicals, and body fluid spills are particularly difficult to handle. Additional concerns about the eventual disposal of artificial fields, potential legal liability and the loss of environmentally beneficial natural turf, which sequesters carbon dioxide and reduces global warming, has convinced many decision makers to reconsider plans for synthetic turf fields."

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fgrassrootsinfo.org%2fsyntheticturf.php&c=E,1,KM1lgwQi3SQXPwf2rJIjG5j9X9loBXh-MPR50Ce6-doDP4sLgt5fEvUsRRnFV-Hf51QZ16C4lZeN8ZKTrrMCHe6d5VfHwwHC5L7vr0dZWh&typo=1

- 13. Grassroots Environmental Education: Synthetic Turf Fields Fact Sheet "Examples of chemicals of concern in the above categories and their potential health effects:
- 1,3 Butadiene human carcinogen

4-(t-octyl) phenol – corrosive to mucous membranes Arsenic – human carcinogen Benzene – human carcinogen, developmental and reproductive toxicant Benzothiazole – acutely toxic, respiratory and eye irritant, dermal sensitizer Butylated Hydroxyanisole – human carcinogen, suspected endocrine and immune system toxicant Cadmium – human carcinogen Carbon Black – possible human carcinogen (makes up to 40% of rubber tires) - may be present as nanoparticles which are known to damage lungs and the vascular system Carbon nanotubes (engineered nanoparticles) – may have asbestos-like toxicity Flouranthene – human carcinogen Latex – allergic reactions in susceptible individuals Lead – neurotoxin Manganese – neurotoxin Mercury – neurotoxin N-hexadecane – eye, skin and respiratory system irritant Octylphenol – endocrine disruptor Phthalates – endocrine disruptors, developmental and reproductive toxicants Polycyclic Aromatic Hydrocarbons (PAHs) – reproductive and respiratory toxicants, liver toxicants, suspected blood or cardiovascular toxicants Styrene – reasonably anticipated to be a human carcinogen, mutagen Toluidine – human carcinogen Trichloroethylene – human carcinogen"

https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fgrassrootsinfo.org%2fpdf%2fsyntheticturf.pdf&c=E,1,BvFgNqjxNHQdul_IN6GfBEOFFVlcm0v_AcUT-N5gOsfrl9nWuS7GAc9nHN62556bWe4aaRBT020gcTb4Mq-1b-o0gw1N1m-5JfCWFJEhzh4a&typo=1

- 14. Office of Environmental Health Hazard Assessment California Environmental Protection Agency July, 2009: Chemicals and particulates in the air above the new generation of artificial turf playing fields, and artificial turf as a risk factor for infection by methicillin-resistant Staphylococcus aureus (MRSA) Literature review and data gap identification
- p. 42: "Five studies were located that measured chemicals and particulates in the air above the new generation of artificial turf containing crumb rubber infill from recycled tires. The chemicals and particulates in the air over artificial turf were similar to those emitted by tire-derived rubber flooring, during rubber manufacturing, and in laboratory studies of rubber crumb heated in vessels. The most complete dataset, covering indoor artificial soccer fields in Norway (Dye et al., 2006), was used to estimate the risk of cancer or developmental toxicity. This screen only addressed the inhalation route of exposure in 42 athletes using artificial turf fields for a lifetime of organized soccer play. Exposure estimates were used to calculate the increased lifetime cancer risk or risk of developmental toxicity for those chemicals appearing on the California Proposition 65 list. From among eight chemicals listed as carcinogens on the Proposition 65 list, exposure to five of these (benzene, formaldehyde, naphthalene, nitromethane and styrene) during a lifetime of organized soccer play exceeded the 10-6 negligible risk level. Since these risks exceeded the 10-6 benchmark, it is important for future studies to measure the concentrations of these chemicals above outdoor artificial turf fields. In addition, their concentrations should be measured in the ambient air in the vicinities of the fields. Comparing the concentrations in the air over and off of the fields will establish which carcinogenic chemicals are emitted by artificial turf, and whether mitigation measures are required."

https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.fieldturf.com%2fmedia%2fBAhbBlsHOgZmSSJe MjAxMi8wOC8wMS8yMi8yNy8xNC83MTIvQ0FfT0VISEFfbGl0cmV2aWV3X3JIX2Fpcl9xdWFsaXR5X2FuZF9zdGF waF9GVUxMX1JQVF8xMF8xOV8wOS5wZGYGOgZFVA%2fCA_0EHHA_litreview_re_air_quality_and_staph_FU_LL_RPT_10-19-09.pdf&c=E,1,fbFQ9eQkNZxe_PzXy2jmBu_vebXCbWxzRXPd0_dWo-8hiEIK_XwHq-_k_eC-LG3hL_WqWBuo8gqi1LczMCsEyoDNGuW56ZYcr8EigVJWtQ,,&typo=1 Health Risk # 1: Runoff from crumb rubber turf field adversely impacts groundwater quality <a href="https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.synturf.org%2fimages%2fCrumb_Rubber_Final.pdf&c=E,1,duj5wipRgFPDUEBSkoYrtga6MrcUfhB9MNJPmTTEPt6D4R5MdH3bqz0wqOJMkfKN4I3wXDTs7nKH8LAzapkfz2QFJxtXrOXlvjhbqQgjjZyfrH3SItAKF0RS2HI,&typo=1

"Additionally, tires contain a number of other metals and chemicals including polycyclic aromatic hydrocarbons (PAHs) that are thought to be hazardous to the environment. While limited, there exists related studies on the potential for PAHs to contaminate the local water supply. Valle et al. add, "PAHs elicit concern for several reasons: they are directly toxic to marine animals; they are harmful to humans; and PAH metabolites are potent animal and human carcinogens."

Connecticut department of environmental protection "Based on these results, DEP concludes that there is a potential risk to surface waters and aquatic organisms associated with whole effluent and zinc toxicity of stormwater runoff from artificial turf fields. Zinc concentrations in the stormwater may cause exceedences of the acute aquatic toxicity criteria for receiving surface waters, especially smaller watercourses." <a href="https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.ct.gov%2fdeep%2flib%2fdeep%2fartificialturf%2fdeepsummary.pdf&c=E,1,HRaEcRPTGjOT4hg1sJx4wUtdnwgXw5rqPlf36UzTvT7xqAAr9kAj62XctFydS02OwKDmoJk8BKfPyg0A3Al2NRGLYgRMTUadxABO8Dn2JLw,&typo=1

Marie Rudimen, toxicologist

https://linkprotect.cudasvc.com/url?a=http%3a%2f%2fwww.safehealthyplayingfields.org%2fenvironmental-hazards%2f&c=E,1,Memxu-7N_3BPRkMqkxUPo2kF_WSsY-LvPNpF5FhQtyD_ByyA4nlyhLlwpPOpjkD8GOKeKsHilVJK2lfyjvRF-H0Tw4WtOQbHX-2H1_Qesz0,&typo=1

"...approximately 4,800 lbs (2.4 tons) will be lost from a single field, migrating into the local environment, waterways and municipal systems, every year, indefinitely."