

AGENDA MATERIAL

DATE 5/19/20 ITEM NO. RA 23

Aileen Padilla

From: William Wilkening [REDACTED]
Sent: Thursday, May 14, 2020 4:42 PM
To: COB_mail
Subject: Written Protest concerning P19RZ0012 Rezoning Request
Attachments: PC Final WFW.pdf

This message and sender come from outside Pima County. If you did not expect this message, proceed with caution. Verify the sender's identity before performing any action, such as clicking on a link or opening an attachment.

Please find our attached written protest concerning P19RZ00012 Harbour Trust 1/3. ET AL. - N La Cholla Boulevard Rezoning, which is on the agenda for the Board of Supervisors on May 19, 2020.

Respectfully submitted,

William Wilkening
2470 W. La Cresta Rd

MAY 15 2020 09:03 PC CLK OF PD *W*

5/14/2020

William F. Wilkening
Elizabeth B. Wilkening
2470 W. La Cresta Rd.
Tucson, Arizona 85742

Pima County Board of Supervisors
Reference: P19RZ00012 Harbour Trust 1/3, ET AL. – N. La Cholla Boulevard Rezoning

Dear Board Members;

In reference to the rezoning hearing for the above property, scheduled for May 19th, 2020, as area homeowners, engineers and certified rainwater harvesting technicians, we would like the Pima County Board of Supervisors to deny the rezoning request for this property. The **Flooding** risk will lead to property and monetary losses for homeowners for which Pima County will be held responsible. **Traffic** problems in the area will be exacerbated leading to potential loss of life on Overton Road.

We will providing 1) A Summary of the Flooding and Traffic issues, 2) In-depth analysis previously provided to the Planning Commission 3) Notes and responses from the 3/19/20 Planning Commission Meeting, and 4) New information relating to this proposal obtained from Pima County's Floodplain Management Plan and the FEMA Review Process.

1) Summary

Flooding

The project plan and the staff report states concerns about flooding with high sediment loads through this property. Because of this concern about high sediment loads, the staff report has placed as a requirement for the conditional approval of this project that the future Home Owners Association have a maintenance plan for the drainage ditches and retentions basins in place. Per the Staff report "The maintenance plan shall require inspection and maintenance of drainage infrastructure after both the winter and summer storm seasons and after significant storm events."

We outlined in our previous letter to the Planning and Zoning commission the evidence of the problems with the sediment flows because of the Sandy Loam soils and the topography of the land to the west of the development. We provided information on the frequency of the significant, local storm events, sometimes coming within days of each other during the past three years. (1.93 inches/30 mins on 7/9/18, 1.53 inches/30 mins on 7/11/18 and 1.73 inches/30 mins on 10/14/18) Our data does not even include the storm events due to a possible tropical system from the Pacific that can hit the Tucson area. We will also refer you to the list of ten major metro Tucson flooding events on page 55 of Pima County's Floodplain Management Plan.

We raised the concern with having the Home Owners Association (HOA) be responsible for maintenance of these flood control systems. Will they have the financial resources to undertake such a responsibility? Will they be able to implement corrective action in a timely manner, given the potential frequency of

significant storm events? Having the HOA responsible for the maintenance of the flood control system will put the residences within this project at an unacceptable risk of flooding.

The Planning Commission did pass this proposal by an 8 to 1 vote on March 25, 2020. It should be noted that the one dissenting vote was cast by the only commissioner that had actually inspected the property. Several members commented that this project has unanswered questions and that they were voting in favor of the project “to allow the process to continue.” The developer remarked that they (the developer) were “assuming all the risk at this point” and that ultimately it was felt that FEMA should have the final say during their review process.

The developer pointed out that his group has put in much more effort than a “regular” zoning request for this particular property because of the unusual hydrological nature of the property.

We agree that this property has an unusual hydrological nature. But, this also means that placing the type of development that is being proposed on this property is inherently and physically flawed. We would like to present more data to show this, so the rezoning can be denied without the need to move further.

Since the Planning Commission meeting, we reviewed our information through the perspective of the FEMA review process. We have read through two additional documents that support our points.

- The ***Floodplain Management Plan*** approved by the Pima County Board of Supervisors last month. (Items from this document are discussed in Section 4.)
- ***Subdivision Design and Flood Hazard Areas Pas 584*** from the American Planning Association, 2016. FEMA recommends this document as a “tool to community planners to help drive local decisions and future development”

In the latter document, the American Planning Association makes several points that apply to this rezoning request:

- Avoid new development in the floodplain, whenever feasible.
- Consider future conditions of the floodplain, including development impacts and climate change.
- Individuals damaged by flooding or erosion are increasingly filing lawsuits against governments claiming that the government has caused the damages, knowingly allowed actions that contributed to the damages, or failed to provide adequate warnings.
- Courts and legislative bodies have expanded the basic rules of liability to make governments responsible for actions which result in, or increase, damages to others. While still commonly held by some local officials as valid, the “act of God” (sovereign immunity) defense has dramatically reduced over time. To successfully establish an act of God defense, a governmental unit must prove that a hazard event was both large and unpredictable. This is becoming increasingly difficult because technology has allowed us not only to foresee future events but also to identify their impacts.

- After several years, those flood control systems may fall into disrepair if the OA (Owner Association) has insufficient financial resources and no expertise in or understanding of the maintenance needs of such infrastructure.
- Most OA board members, association management companies, and on-site staff have no expertise in flood risk management.

These guidelines reinforce our original concerns with the project; Storm Frequency, Increased Storm Intensity, Soil Erosion Problems and the ability of the Home Owners Association to handle the maintenance plan. But the American Planning Association document raises a new concern. **If Pima County approves this rezoning plan with the condition of the HOA maintenance plan for the flood control systems, it is acknowledging a known problem, and is now assuming a portion of the risks associated with this project.**

Traffic

Overton Road is a 2-lane east-west thoroughfare zoned at 40 miles per hour. La Cresta Road is a residential street that intersects with Overton a mere 320 yards west of La Cholla Road the 4-lane divided north-south route. The proposed development will open up another ingress-egress to Overton Road for the 143 new homes between La Cholla and La Cresta. This will add to an overall burden on Overton Road.

Currently there are problems on Overton Road during rush hours. Between the hours of 7:00 and 9:00 AM it is nearly impossible to make a left-hand turn onto Overton Road from La Cresta Road to reach the major thoroughfare of La Cholla Road. Overton Road also has 4 bus stop locations between La Cholla and Shannon roads for Amphi School District (elementary, middle and high school buses) which brings traffic in both directions to a complete stop at least 6 times during the morning rush hour. In the evening hours of 4:30 – 6:30 PM tailgating along Overton Road westbound from La Cholla Road is an issue. Many times as we travel west on Overton and try to turn right onto La Cresta Road, other drivers illegally zip around us into oncoming traffic on Overton Road despite the double yellow line. Additionally, drivers traveling east on Overton that want to turn left onto La Cresta Rd or into the new subdivision will be at a great risk. Traffic moving west on Overton is coming quickly down a hill and the drivers do not know if traffic is backed up because of people making left-hand turns. They won't have enough stopping distance in this case, and there are no shoulders to pull off of on that section of road.

With the current changes occurring on La Cholla Road to handle more traffic, it is reasonable to expect that there will be additional traffic along Overton Road as people try to get towards the interstate, making the existing problems worst.

By changing the zoning from SR to CR-5 in order to build 143 new homes in this area the traffic problems will become exponentially more dangerous.

2) In-Depth Analysis provided to Pima County Planning and Zoning Commission, March, 2020

Flooding

The project plan and the staff report states concerns about flooding with high sediment loads through this property. Because of this concern about high sediment loads, the staff report has placed as a requirement for the conditional approval of this project that a maintenance plan for the drainage ditches and retentions basins be in place. “The maintenance plan shall require inspection and maintenance of drainage infrastructure after both the winter and summer storm seasons and after significant storm events.”

While much of the attention within the project plan has been focused on the potential for break-out flows from La Cholla Wash, we are concerned with the problems posed by the water and sediment flows from properties along the western boundary of the project that we have experienced in our 30 years of living in the area. The topography of the land to the west of the development rises steeply and consists of a sandy/loam soil. Storm water and sediment from this area will be directed towards the western edge of the development.

Despite the developer’s efforts to redesign the system to address the flooding and sediment concerns with additional drainage ditches and retention ponds, this will not be sufficient to prevent flooding of the 27 homes along the drainage ditch on the west end of the development. This is demonstrated through three major points discussed in detail; 1) Frequency of extreme storm events, 2) Urgency of maintenance, and 3) History of the area.

Frequency of extreme storm events

Rainfall events are variable throughout Pima County and in order to understand the localized flooding that will occur in this area, local data is relevant. Three years of rainfall data was obtained for a rain gauge located uphill from the proposed development from [CoCoRaHS.org](https://www.co.pima.az.us/CoCoRaHS.org). Figures 1-3 document monthly precipitation data with 30-year average data plotted as a green line for the 2017, 2018 and 2019 Water Years (October – September). In each of the years, the monthly averages were exceeded at least three times. More importantly, they were not consistent as to the exact month where these extremes were experienced. In 2017, monthly rainfalls were exceeded in **December, January** and **July**. In 2018, **February, June** and **July** exceeded the historic monthly rainfall data. In 2019 the four occurrences where monthly data exceeded the historic average were: **October, December, January** and **February**. There is the potential to exceed average monthly rainfall data six months out of every year. This is important to remember when looking at the maintenance plans for the drainage ditches and retention ponds in the proposed development.

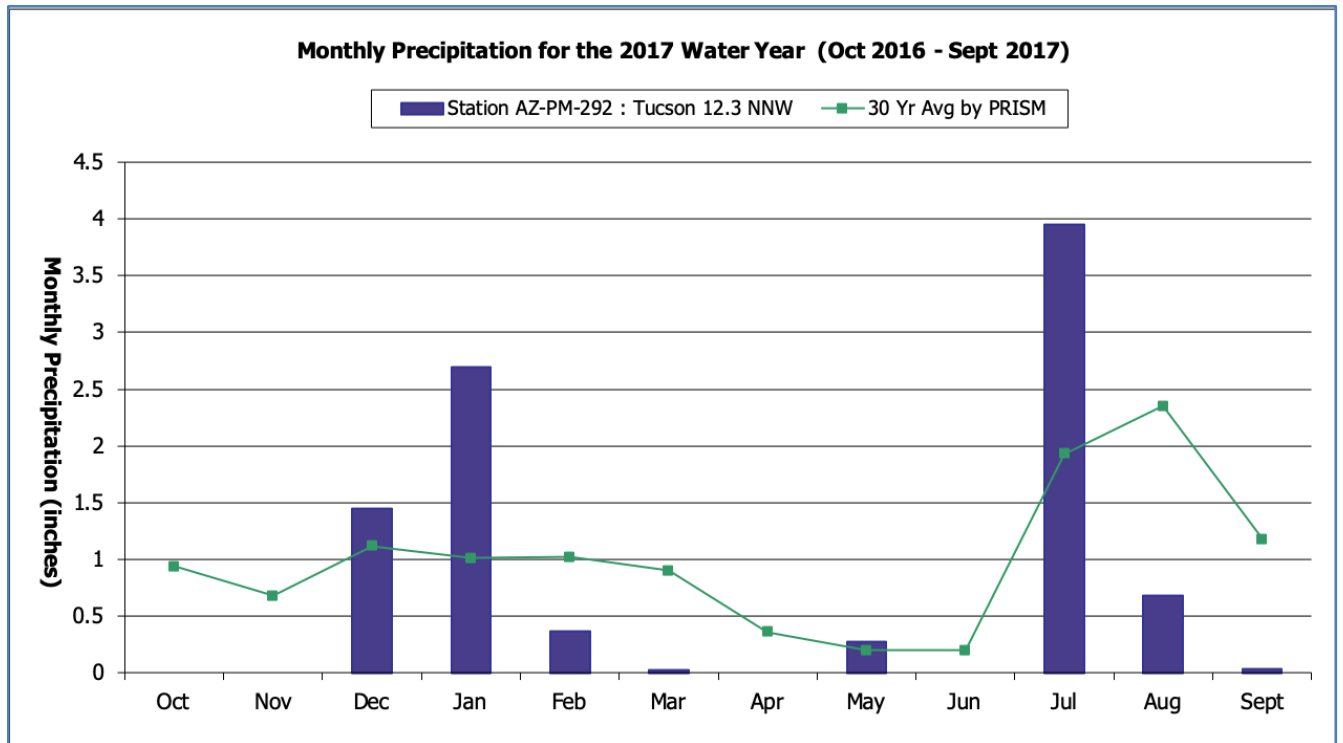


Figure 1 - 2017 Water Year Data

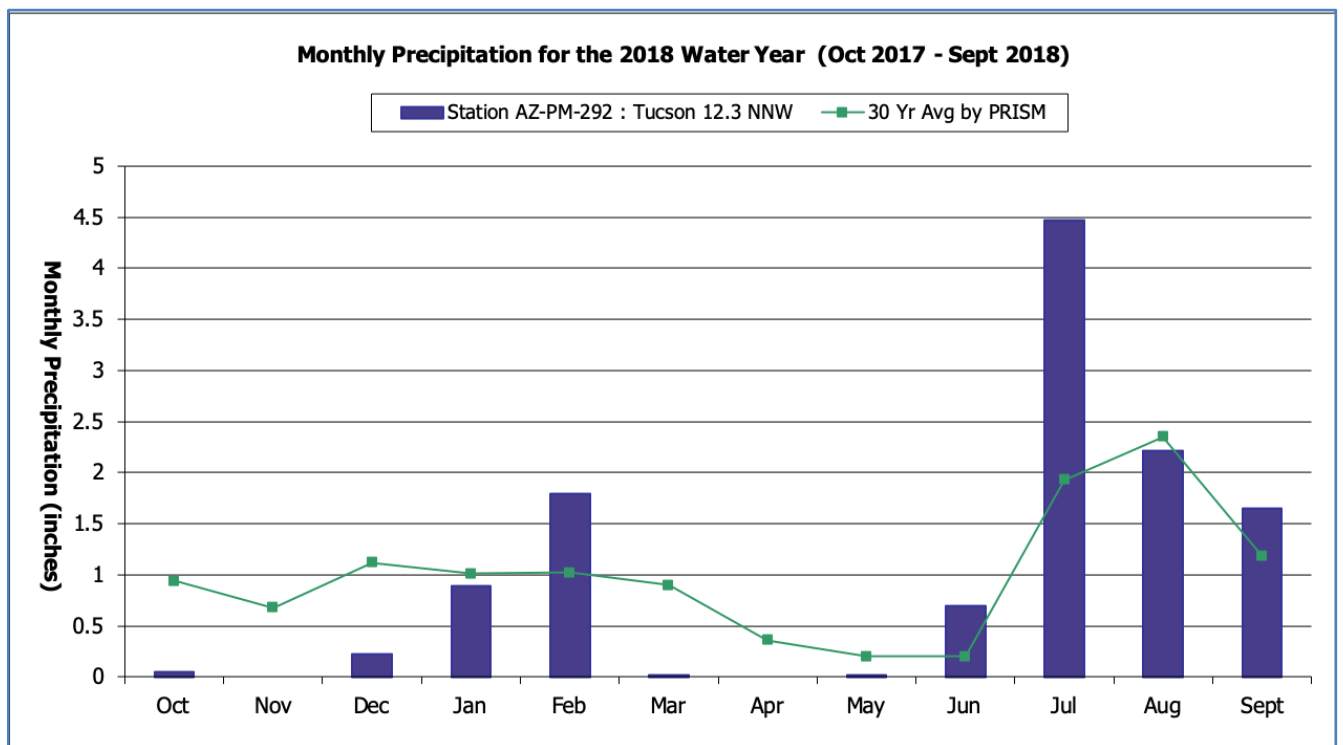


Figure 2 - 2018 Water Year Data

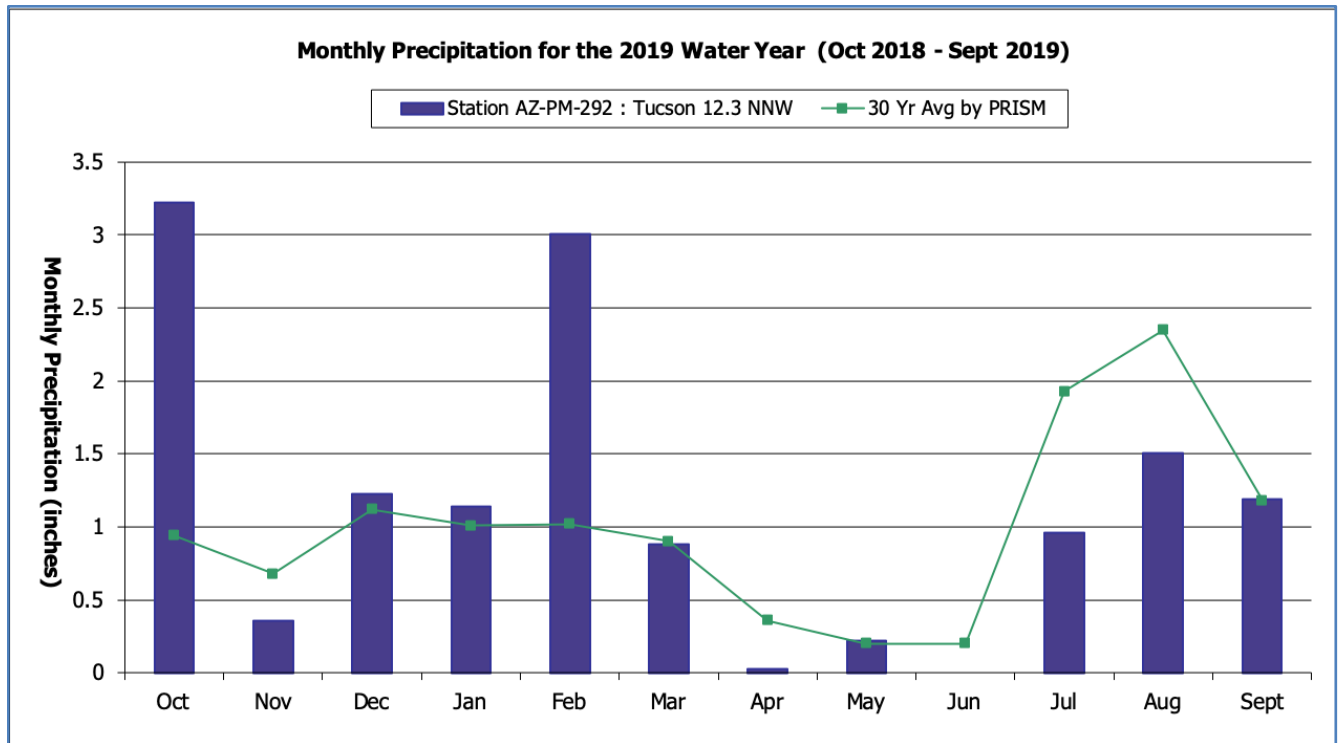


Figure 3 - 2019 Water Year Data

Individual rainfall events demonstrate another concern when evaluating potential flooding events. During the 3-year time period there were 17 events with rainfall equal to or exceeding 0.70 inches. (See Figure 4) **On 7/9/18, 1.93 inches of rain fell in a 30-minute time period followed by a similar event on 7/11/18 with 1.54 inches. This amounts to two, 100-year storm events in 3 days in this area according to the NOAA Atlas 14 Point Precipitation Frequency Estimates: Az that were used in the design of the new drainage areas.** Of the 17 events, 8 of them occurred during the monsoon season where intense storms provide the greatest potential for delivering major sediment flows in a short period of time. Additionally one event, 10/14/18, delivered a **record breaking 1.73 inches of rain**. These extreme events are quickly becoming the new normal within our community.

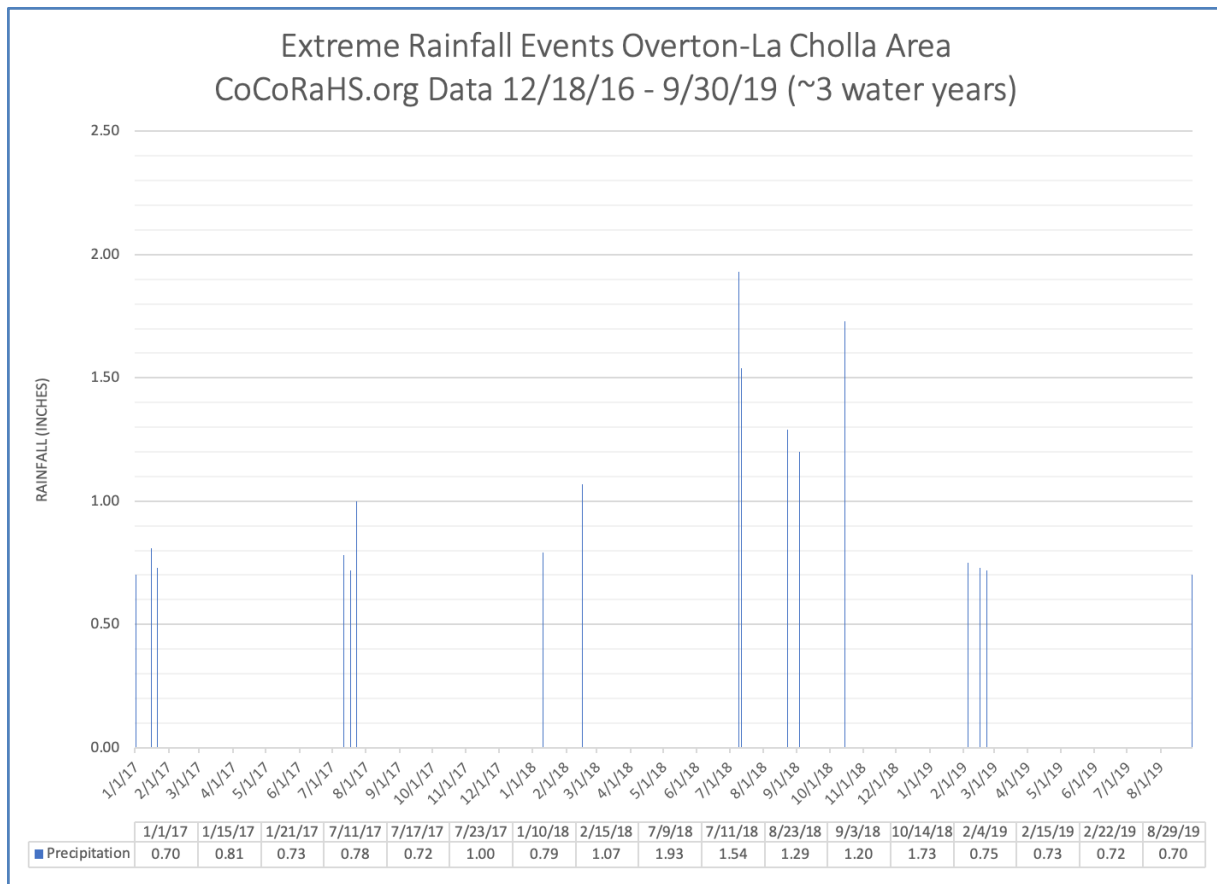


Figure 4 - Extreme Rainfall Events

Urgency of maintenance

The drainage ditches and retention basins designed to reduce the flooding potential in this development are contingent upon continuous maintenance to reduce the sediment build up. Again, the staff report has placed a requirement for the conditional approval of this project that a maintenance plan for the drainage ditches and retentions basins be in place. "The maintenance plan shall require inspection and maintenance of drainage infrastructure after both the winter and summer storm seasons and after significant storm events."

The recent rainfall and extreme storm data shows that relying on a maintenance plan to ensure the performance of the ditches and retention ponds is a dangerous assumption. There is the potential that this maintenance will be needed on a monthly basis for six out of the 12 months of the year.

The two, 100-year storm events in a 3-day period are of particular concern. If there is not the ability to correct system failures immediately after a major event, flooding events such as [Tucson High School](#) experienced in 2017 are not only possible, but probable. Unfortunately, this type of situation will lead to the loss of 27 family homes rather than an athletic field.

A major concern is that the implementation of this plan is going to be the responsibility of the homeowners association. Will they follow the plan? And even if they do try to follow the plan, will they have the resources to maintain the systems on the frequency required or be able to implement them quickly enough?

History of the area

It is often said that, "A photo is worth a thousand words." The following photos of the area show evidence of the sediment flows coming from the property to the west of the project discussed earlier.

Photo 1 Shows the topography of the land to the west comprised of sandy loam soil and the steep rise in elevation.



Photo 1 - Topography of Land



Photo 2 - Sediment flow from west of property

Photo 2 documents the sediment flows from west of the property. The image shows the piles of sand that were deposited on La Cresta Road. This material flowed down from the land to the west and was not from flow coming from La Cholla Wash. Additional dump trucks of material are routinely removed by Pima County in this location. *Photo 3* shows more of that sandy loam soil that has built up at the bottom of La Cresta Road after the roadway cleanup by Pima County.



Photo 3 - More sandy loam build-up at bottom of La Cresta Rd

Photo 4 demonstrates how quickly stormwater infrastructure in the area is compromised by the sediment flows coming from a small portion of the land to the west of the proposed development. This culvert under La Cresta Road at Overton Road had been cleaned out by the County in 2019, and months later it is more than half inundated with sediment, rendering it ineffective in transporting water efficiently. This is the exact area where houses will be located in the new development.



Photo 4 - Sediment compromised culvert at La Cresta & Overton roads

Photo 5 is the view of the same culvert looking towards the East while standing on La Cresta Road with Overton Road to the right of the image. Note the pile of sandy loam sediment left over from the cleanout of the culvert. Most material was hauled away.



Photo 5 - Compromised culvert at La Cresta & Overton roads looking East

These photos document that just having a “maintenance plan” in place is not sufficient, and that the homeowners within this development would be at undue risk of financial loss.

Traffic

Again, as noted in the staff report, there is a potential issue with traffic along Overton Road. The issue is not one of overall capacity, but with problems of high use during rush hours. Between the hours of 7:00 and 9:00 AM it is nearly impossible to make a left-hand turn onto Overton Road from La Cresta Road to reach the major thoroughfare of La Cholla Road. In the evening hours of 5:00 – 7:00 PM tailgating along Overton Road westbound from La Cholla Road is an issue. Many times as we try to turn right onto La Cresta Road, other drivers illegally zip around us into oncoming traffic on Overton Road despite the double yellow line.

With the current changes occurring on La Cholla Road to handle more traffic, it is reasonable to expect that there will be additional traffic along Overton Road as people try to get towards the interstate, making the existing problems worst.

By changing the zoning from SR to CR-5 in order to build 143 new homes in this area the traffic problems will become exponentially more dangerous.



Photo 6- Overton Road looking east from La Cresta towards La Cholla Road

3) Notes and responses from the 3/19/20 Planning Commission Meeting

Because of the Covid-19 restrictions, this meeting was held via a teleconference in which we were allowed three minutes to provide our oral comments. In that brief time, we were able to provide a summary of our letter.

However, we were not allowed the opportunity to answer any of the comments about the information contained in our letter, nor were we allowed to make any comments about the other presentations made during the meeting.

There was a comment by the developer during the Planning Commission meeting about the about the rainfall data we presented as being anecdotal. We would like to submit the following for the record:

This data is from the CoCoRaHS system, which is recognized by the National Weather Service as providing useful data to many groups, including the National Weather Service.

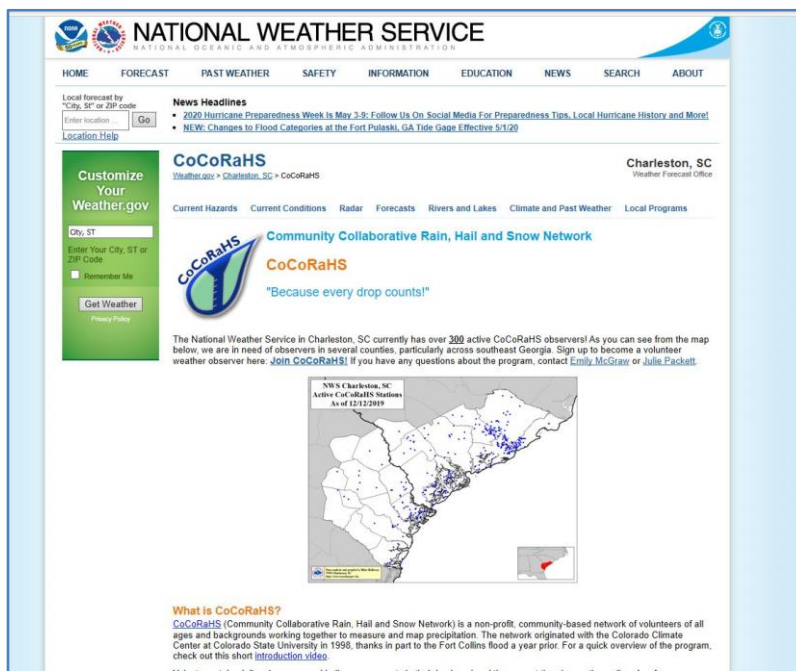


Figure 5- CoCoRaHS website

"Who Uses CoCoRaHS Data?"

CoCoRaHS data is used by a wide variety of organizations and individuals. The National Weather Service, other meteorologists, hydrologists, emergency managers, city utilities (water supply, water conservation, storm water), insurance adjusters, USDA, engineers, mosquito control, ranchers and farmers, outdoor & recreation interests, teachers, students, and neighbors in the community are just some examples."

Retrieved from National Weather Service Webpage <https://www.weather.gov/chs/cocorahs>

4) New Information

Record of High Precipitation Events

In addition to our original rain fall data, we would like to include some of the rainfall data from the **Floodplain Management Plan** approved by the Board of Supervisors in March, 2020.

On pages 54 through 58 of the Plan, ten major flooding events in the Tucson Area are listed, including two tropical storms over a period from 1983 to the present.

These are large scale, area wide events. The local data that we provided indicates that in addition to the above list from the **Floodplain Management Plan** there can be intense localized events that are occurring at a more frequent rate. The net effect is that you need to consider both.

Additionally, the **Floodplain Management Plan** notes on page 92 that *Climate change including extreme events and extended dry periods* are one of the problems we are facing.

This statement agrees with our data that shows a higher frequency of 100 year storms. If a 100 year storm only has a 1 % chance of occurring in a year, **then three, 100 year storms within three months** is an indication of change occurring.

Effect of Soil Types

As we documented in our letter to the Planning Commission, the soil to the west of the property is a sandy loam type that is easily eroded and has been causing problems.

Per the **Floodplain Management Plan** on page 52, it indicates the unpredictable nature of these types of soils:

Unconsolidated soil conditions also put structural improvements at increased risk of erosion related damage. The combination of severe, directed flow at uncertain locations, unconsolidated soils and the likelihood of flash floods in this environment results in potentially extreme and unpredictable flood and erosion hazards.

As we have shown in our photos, the soil to the west of the property and on the property is a Sandy/Loam that easily erodes. We have seen the unpredictable nature of the water flows through this area as the transportation department has attempted and generally failed to prevent the flooding of the intersection of La Cholla and Overton roads. The **Floodplain Management Plan** warns that structures built on this type of soil are susceptible to damage from water flow.

Potential Hazard of Sheet Flooding

As noted in the developer's report, the area to the west of the project experiences what is called sheet flow flooding. The issues with this type of flooding are outlined in two locations of the **Floodplain Management Plan**.

On page 51,

Sheet flow flooding is a phenomenon unique to watersheds with low topographic relief and a severe lack of adequate channel flow conveyance. The lack of defined drainage channels often deceives the public into thinking that there are no flood hazards in the area.

On page 149,

Sheet Flooding Areas: Pima County has large areas characterized by broad, relatively flat terrain with minimal channel capacity. The small channels that are present in these areas don't have the capacity to convey the 1% chance flow that would result in considerable out-of-channel flows, called sheet flow flooding. Sheet flow flooding is generally shallow, but can affect large areas and cause significant problems. These areas also include Zone A, AH, and AO Special Hazard Areas as well as Zone Shaded-X Other Flood Areas floodplains.

When looking at the property, one can imagine that this should be a nice place to build. However, based on our thirty years of living in the area, we believe that the warnings of a false sense of security given in these sections apply. This project is currently located in a Zone A and Zone Shaded –X area hazard area.

FEMA Review Process

In our research on the FEMA review process this document in the FEMA Media Library is helpful in understanding that you have the tools necessary to deny the rezoning request for this proposal.

Subdivision Design And Flood Hazard Areas Pas 584, published by the American Planning Association, 2016

This a 112 page document can be accessed at: https://www.fema.gov/media-library-data/1477942538916-25aa685572bdd20758da7bccb3de8905/5-PAS584_SubdivisionDesignAndFloodHazardAreas1.pdf

In the foreword of the document, Roy E. Wright, Deputy Associate Administrator for Insurance and Mitigation, Federal Emergency Management Agency writes:

“This report, Subdivision Design and Flood Hazard Areas, provides an additional tool to community planners to help drive local decisions and future development and to be more resilient in the face of changing flood conditions.”

In the **Executive Summary of the Report** on page 5_

General Principles

These five general principles lay the foundation for mitigating flood hazards within subdivision design:

- 1. Maintain natural and beneficial functions of the floodplain.*
- 2. Adopt a No Adverse Impact approach to floodplain management.*
- 3. Avoid new development in the floodplain whenever feasible.*
- 4. Focus on data-driven decision making, using only the best available data to assess risk and inform decisions.*
- 5. Consider future conditions of the floodplain, including development impacts and climate change.*

When considering the P19RZ00012 Harbour Trust 1/3, ET AL. – N. La Cholla Boulevard Rezoning project all of the General Principles should apply. However, this project goes against Principle 3 because it is **NOT** an essential development and it is in a FEMA Zone A and Shaded –X floodplain.

To address Principles 4 and 5, we should use the CoCoRaHS data and the information from the **Floodplain Management Plan** as the best available data to assess the current situation on the property because they give a better understanding of the frequency and magnitude of potential storms that the flood control systems of this project will need to deal with.

In *Chapter 1, Making the Case to Better Manage Flood Risk*, the report goes on to explain how legal issues for Subdivisions and Floodplain Management Regulations are changing.

On page 20, they write:

“The courts give careful consideration to the prevention of harm. Even our system of law and government, going back thousands of years, revolves around the fact that people do not have the right to use their property in a way that harms other people. A maxim of Roman law was sic utere tuo ut alienum non laedas—use your property so that you do not harm others.

Individuals damaged by flooding or erosion are increasingly filing lawsuits against governments claiming that the government has caused the damages, knowingly allowed actions that contributed to the damages, or failed to provide adequate warnings. Courts and legislative bodies have expanded the basic rules of liability to make governments responsible for actions which result in, or increase, damages to others. While still commonly held by some local officials as valid, the “act of God” (sovereign immunity) defense has dramatically reduced over time. To successfully establish an act of God defense, a governmental unit must prove that a hazard event was both large and unpredictable. This is becoming increasingly difficult because technology has allowed us not only to foresee future events but also to identify their impacts.”

The last two lines of this section are interesting and you should examine these questions carefully.

- **Does the fact that the rezoning of this property is dependent on a maintenance plan for the flood control systems, both seasonally and after an extreme events, mean that a known problem pre-exists?**
- **Would this prior knowledge then make the county liable for damages?**

In **Chapter 4, Subdivisions: Role and Process**, the report talks about the role of Home Owner Associations or OAs.

On page 55, they write;

Allowing the creation of OAs is almost universal in community subdivision regulations. The reasons for this vary, but a primary reason is that the community may not have the interest or resources to maintain the infrastructure in the subdivision. Depending on the infrastructure for which it is responsible and the degree of flood risk in the subdivision, the OA may have significant responsibilities related to ensuring

*that residents are safe and protected from flooding. **Yet, most OA board members, association management companies, and on-site staff have no expertise in flood risk management.***

On Page 60, they further write;

As noted earlier, it is not uncommon for OAs to be formed as part of creating a new subdivision. In dealing with flood risk, it is important to understand the financial risk to the OA for stormwater infrastructure that could be damaged or that is not properly and routinely maintained and the ability of the OA to successfully pay for and maintain that infrastructure. For example, an OA of a newly developed subdivision may be responsible for maintaining stormwater ponds or even a seawall or levee. After several years, those facilities may fall into disrepair if the OA has insufficient financial resources and no expertise in or understanding of the maintenance needs of such infrastructure.

In both these sections the report is warning that the OA can be a weak link in the system. Unless they have and can maintain the knowledge of the system needs, plus have the immediate financial means, there is a significant probability that the OA may fail to properly maintain the system. Nowhere in this section is it mentioned of the difficulty of maintaining a OA with the movement of people into and out of a development. To illustrate these problems with failed maintenance, we would refer you to the letter provided to the Board by Mr. Casagrande.

These flood control systems are not like a road, and the problems they can have are more significant than a pothole. They will be out of sight and out of mind to most people, until it is too late.

One final comment; It has sometimes been portrayed that we are against any development of this property. We are not. We think that the property should be developed at the current low-density zoning that will provide a safe neighborhood for property owners and commuters.

As a family with more than 40 years of experience working on engineering projects that impacted people's safety and welfare, we were required by law to consider the possibility and impact of system failures. We would like Pima County to do the same when evaluating this project. By evaluating the 1) Frequency of extreme storm events, 2) Urgency of maintenance, and 3) History of the area there is an unacceptable probability of failure for the flood controls of this project. It is an unacceptable risk to the 27 homeowners on the west end of this subdivision. Additionally, existing residents on both sides of Overton Road combined with the new residents from the additional 143 homes will be subjected to dangerous traffic conditions in the area.

It is imperative that this zoning change be denied now and in the future.

Respectfully submitted,

William F. Wilkening

Elizabeth B. Wilkening