

## AGENDA

FLAGSTAFF FLOODPLAIN BOARD  
TUESDAY  
AUGUST 25, 2015

COUNCIL CHAMBERS  
211 WEST ASPEN AVENUE  
6:00 P.M.

1. **CALL TO ORDER**

**NOTICE OF OPTION TO RECESS INTO EXECUTIVE SESSION**

*Pursuant to A.R.S. §38-431.02, notice is hereby given to the members of the Floodplain Board and to the general public that, at this regular meeting, the Floodplain Board may vote to go into executive session, which will not be open to the public, for legal advice and discussion with the City's attorneys for legal advice on any item listed on the following agenda, pursuant to A.R.S. §38-431.03(A)(3).*

2. **ROLL CALL**

*NOTE: One or more members may be in attendance telephonically or by other technological means.*

CHAIRMAN NABOURS  
VICE CHAIRMAN BAROTZ  
BOARD MEMBER BREWSTER  
BOARD MEMBER EVANS

BOARD MEMBER ORAVITS  
BOARD MEMBER OVERTON  
BOARD MEMBER PUTZOVA

3. **APPROVAL OF MINUTES FROM PREVIOUS MEETINGS**

- A. **Consideration and Approval of Minutes:** Flagstaff Floodplain Board Meeting of February 19, 2013.

4. **REGULAR AGENDA**

- A. **Public Hearing and Consideration of Variance:** Request for a Variance from the Floodplain Regulations for the Proposed Home Reconstruction in the Floodway of a Fire Destroyed Home at 504 S O'Leary St.

**RECOMMENDED ACTION:**

- 1) Open the Public Hearing.
  - 2) Receive staff input if needed.
  - 3) Receive citizen and applicant input, and receive additional staff input if needed.
  - 4) Make Findings.
  - 5) Close the Public Hearing.
  - 6) Approve the variance, approve the variance with conditions, or deny the variance.
- Both the Water Commission and City staff recommend approval of the variance.

5. **ADJOURNMENT**

CERTIFICATE OF POSTING OF NOTICE

The undersigned hereby certifies that a copy of the foregoing notice was duly posted at Flagstaff City Hall on \_\_\_\_\_ ,  
at \_\_\_\_\_ a.m./p.m. in accordance with the statement filed by the Floodplain Board with the City Clerk.

Dated this \_\_\_\_\_ day of \_\_\_\_\_, 2015.

\_\_\_\_\_  
Elizabeth A. Burke, MMC, Board Clerk

**CITY OF FLAGSTAFF  
STAFF SUMMARY REPORT**

**To:** The Honorable Mayor and Council  
**From:** Elizabeth A. Burke, City Clerk  
**Date:** 08/05/2015  
**Meeting Date:** 08/25/2015



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**TITLE**

**Consideration and Approval of Minutes:** Flagstaff Floodplain Board Meeting of February 19, 2013.

**RECOMMENDED ACTION:**

Amend/approve the minutes of the Flagstaff Floodplain Board Meeting of February 19, 2013.

**EXECUTIVE SUMMARY:**

Minutes of Floodplain Board meetings are a requirement of Arizona Revised Statutes and, additionally, provide a method of informing the public of discussions and actions being taken by the Floodplain Board.

**INFORMATION:**

***COUNCIL GOAL***

8. Improve effectiveness of notification, communication, and engagement with residents, neighborhoods and businesses and about City services, programs, policies, projects and development

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**Attachments:** [02.19.2013.FB.Minutes](#)

## MINUTES

FLOODPLAIN BOARD MEETING  
TUESDAY, FEBRUARY 19, 2013  
COUNCIL CHAMBERS  
211 WEST ASPEN AVENUE  
6:00 P.M.

### 1. Call to Order.

Mayor Nabours called the Flagstaff Floodplain Board Meeting of February 19, 2013, to order at 6:02 p.m.

### 2. Roll Call

#### Boardmembers present:

CHAIRMAN NABOURS  
VICE CHAIRMAN EVANS  
BOARDMEMBER BAROTZ  
BOARDMEMBER BREWSTER  
BOARDMEMBER ORAVITS  
BOARDMEMBER OVERTON  
BOARDMEMBER WOODSON

#### Councilmembers absent:

None

Others present: City Manager Kevin Burke; City Attorney Rosemary Rosales

### 3. **Public Hearing and Consideration by Floodplain Board:** Variance from the Floodplain Regulations to Construct an Accessory Structure in the Regulatory Floodway at 5600 E. Old Walnut Canyon Road.

**Moved by** Board Member Overton and **seconded by** Vice Chairman Evans to open the Public Hearing; passed unanimously.

Project Manager Tom Heib reviewed the application for variance to construct an accessory structure at 5600 E. Old Walnut Canyon Road. He said that both the Water Commission and City staff recommended approval provided the proposed accessory structure meets the following specific conditions:

1. It is 200 square feet or less in size;
2. It is used only for storing and renting golf equipment;
3. It is constructed of flood-resistant materials per City and FEMA standards;
4. It is wet flood-proofed to allow automatic entry and exit of flood waters and the protection of electric and water systems;
5. It is not connected to the sewer system, and
6. It is properly anchored to prevent collapse or movement of the structure during flooding.

**Moved by** Board Member Overton and **seconded by** Board Member Woodson to close the Public Hearing; passed unanimously.

**Moved by** Board Member Woodson and **seconded by** Board Member Overton to approve the recommended action with the conditions as outlined above; passed unanimously.

4. **ADJOURNMENT**

The meeting of the Flagstaff Floodplain Board of February 19, 2013, adjourned at 6:13 p.m.

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CHAIRMAN

ATTEST:

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BOARD CLERK

## CITY OF FLAGSTAFF

### STAFF SUMMARY REPORT

**To:** The Honorable Mayor and Council  
**From:** Stacy Saltzburg, Deputy City Clerk  
**Co-Submitter:** James Janecek, Project Manager  
**Date:** 08/05/2015  
**Meeting Date:** 08/25/2015



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#### TITLE:

**Public Hearing and Consideration of Variance:** Request for a Variance from the Floodplain Regulations for the Proposed Home Reconstruction in the Floodway of a Fire Destroyed Home at 504 S O'Leary St.

#### RECOMMENDED ACTION:

- 1) Open the Public Hearing.
- 2) Receive staff input if needed.
- 3) Receive citizen and applicant input, and receive additional staff input if needed.
- 4) Make Findings.
- 5) Close the Public Hearing.
- 6) Approve the variance, approve the variance with conditions, or deny the variance. Both the Water Commission and City staff recommend approval of the variance.

#### Executive Summary:

The residence at 504 S. O'Leary Street was substantially damaged by fire in June of 2014 and is proposed to be reconstructed. The pre-fire building footprint lies within the regulatory floodplain and floodway of the Rio de Flag Wash (see attached flood map). While this project consists of reconstruction of a fire destroyed building, the reconstruction still technically qualifies as "new construction". The City of Flagstaff floodplain regulations prohibit new construction within a regulatory floodway (Section 12-01-001-0006.7) and therefore the owner is requesting a variance. A variance to the Floodplain Regulation can only be granted by the City Council acting as the Floodplain Board (Section 12-01-001-0007.1A). The Regulatory Floodway is the channel of a watercourse, and the adjacent land areas, that must be reserved in order to discharge the 100-year flood without cumulatively increasing the water surface elevation by more than one foot. It is typically the part of the 100-year floodplain with the greatest floodwater depths and velocities, and thus the greatest hazards. Establishing Regulatory Floodways provides an area where further obstructions to the flow of flood waters are not allowed. Ideally, a floodway will remain unobstructed, which is the intent of the city's prohibition on new construction in these areas. However, the flood study that determined the location of the floodway in this area was completed after the pre-fire home was constructed, and therefore the pre-fire home was included as an existing obstruction in the floodway. This is why the proposed reconstruction will not increase flood depths or velocities because the proposed building footprint in the floodway is actually smaller than the pre-fire building footprint. The development will be required to adhere to all other local laws, ordinances and City of Flagstaff development requirements that include the City of Flagstaff Floodplain Regulations which exceed the minimum National Flood Insurance Program requirements. The owners have submitted a site plan and report that shows to the satisfaction of City staff that the reconstruction of this home does not victimize the public with fraud, extraordinary public expense,

increased flood heights or additional threats to public safety. Council has requested that the Water Commission review all variance requests and make a recommendation. The Water Commission heard and discussed this variance request on July 16, 2015. The Commission voted to approve the variance with one dissenting vote. A draft copy of the Water Commission minutes from July 16, 2015 and is attached.

Therefore, staff recommends that the City Council, acting as the Floodplain Board make the following findings:

- a) Good and sufficient cause exists for the variance;
- b) Failure to grant the variance would result in exceptional hardship for the applicant;
- c) The use cannot perform its intended purpose unless it is located or carried out in close proximity to the water;
- d) The variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of, the public, or conflict with existing local laws or ordinances.

#### **Financial Impact:**

There is no cost to the City associated with this variance.

#### **Connection to Council Goal and/or Regional Plan:**

##### **COUNCIL GOALS:**

- 7) Address key issues and processes related to the implementation of the Regional Plan
- 11) Ensure that we are as prepared as possible for extreme weather events

##### **REGIONAL PLAN:**

Goal LU.1. Invest in existing neighborhoods and activity centers for the purpose of developing complete, and connected places. Policy LU.1.1. Plan for and support reinvestment within the existing city centers and neighborhoods for increased employment and quality of life.

Goal NH.1. Foster and maintain healthy and diverse urban, suburban, and rural neighborhoods in the Flagstaff region. Policy NH.1.1. Preserve and enhance existing neighborhoods.

#### **Previous Council Decision on This:**

No

#### **Options and Alternatives:**

1. Approve the variance. Approval of the variance automatically requires the development to adhere to all other local laws, ordinances and City of Flagstaff development requirements that include the City of Flagstaff Floodplain Regulations which exceed the minimum National Flood Insurance Program requirements. The owners have submitted a site plan and report that shows that the reconstruction of this home does not victimize the public with fraud, extraordinary public expense, increased flood heights or additional threats to public safety. ***Recommended motion to approve: The appropriate findings made, move to approve the variance.***

2. Deny the variance.

3. Approve the variance but with additional or lesser conditions attached. Staff does not recommend lesser conditions because this could result in a development that does not meet the minimum National Flood Insurance Program requirements for construction in a floodway which would not protect the public and adjacent property owners and could lead to a formal violation of the NFIP.

**Community Involvement:**

Inform  
Involve

**Attachments:**

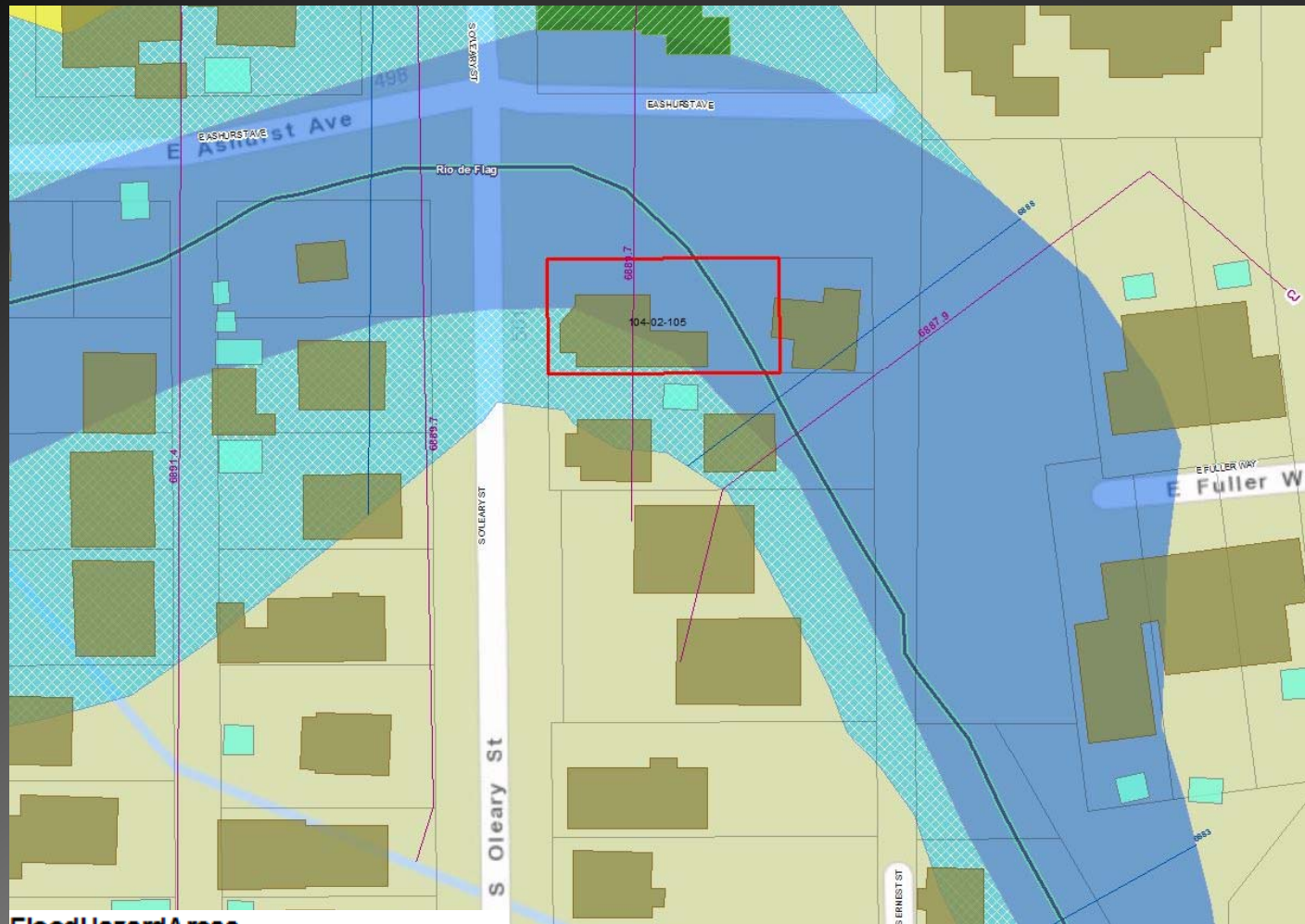
## Flood Map

## Water Commission Minutes

PowerPoint



# Flood Map – 504 S. O'Leary Variance



## FloodHazardAreas

### FLD\_ZONE, FLOODWAY

- 0.2 PCT ANNUAL CHANCE FLOOD HAZARD,
- AE
- AE, FLOODWAY

Note:

Zone AE = 100-yr floodplain

0.2 PCT = 0.2 percent chance, or 500-yr floodplain

Home burned down in June 2014, and owner wants to rebuild in the same location but with less building footprint in floodway. Property boundary is outlined in red and building footprint shown is pre-fire. The Rio de Flag is just east of home.

New construction in floodway is prohibited unless a variance from the Floodplain Board (City Council) is granted.



**WATER COMMISSION**  
**July 16, 2015**  
**SUMMARIZED MINUTES**

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**MEMBERS PRESENT**

Brian Ketter  
John Malin  
John Nowakowski  
Hanna Cortner  
Charlie Odegaard  
Karin Wadsack  
Paul Turner

**MEMBERS ABSENT**

Brad Garner

**STAFF PRESENT**

Brad Hill  
Marion Lee  
Ryan Roberts  
Rick Tadder  
Eileen Hamlin  
Jim Janesek  
Malcolm Alter  
Chris Kirkendall  
Mark Richardson

**OTHERS RESENT**

Ward Davis  
George Kladnik  
J.R. Murry  
Mike Kearly

**I. CALL TO ORDER**

Chair, Brian Ketter called the meeting to order at 4:00 p.m.

**II. APPROVAL OF MINUTES – June 18, 2015**

Moved by Brian Ketter and seconded by John Nowakowski that the minutes of June 18, 2015 be approved. All approved.

**III. PUBLIC PARTICIPATION - None**

**IV. NEW BUSINESS**

**A. Request for a Variance from the Floodplain Regulations – Jim Janecsek**

Jim Janecsek, Stormwater Project Manager introduced the request for a variance from the Floodplain Regulations. The existing residence at 504 S. O'Leary Street was damaged by fire in June of 2014 and is to be reconstructed. The existing building lies within the regulatory floodplain and floodway of the Rio de Flag Wash. While this project consists of reconstruction of a fire destroyed building, the reconstruction still technically qualifies as "new construction." The City of Flagstaff floodplain regulations prohibit new construction within a regulatory floodway (Section 12-01-001-0006.7) and therefore the owner is requesting a variance. A variance to the Floodplain Regulation can only be granted by the City Council acting as the Floodplain Board (Section 12-01-001-0007.1A). Council has requested that the Water Commission review all variance requests and make a recommendation.

The regulatory floodway is the channel of a watercourse, and the adjacent land areas, that must be reserved in order to discharge the 100-year flood without cumulatively increasing the water surface elevation by more than one foot. It is typically the part of the 100-year floodplain with the greatest floodwater depths and velocities, thus the greatest hazards. Establishing regulatory floodways provides an area where further obstructions to the flow of flood waters are not allowed. Ideally, the floodway would remain unobstructed, which is the intent of the city's prohibition on new construction in these areas.

The Rio de Flag floodway in the vicinity of 504 S O'Leary St. was, however, almost entirely developed before the City of Flagstaff first adopted floodplain maps or regulations in the early 1980's. Thus, the

floodway extends far beyond the existing, relatively small channel that is the Rio de Flag in this area, and it is obstructed by dense commercial and residential development. Converting the Rio de Flag floodway to open space in this area is therefore not a realistic floodplain management goal.

Realistic floodplain management goals for any improvements, new development or redevelopment in this area is 1) protect the development from flooding and erosion by elevating the finished floor, using flood resistant materials, and stabilizing channel banks and/or constructing the building with adequate top of bank setbacks, and 2) prevent adverse impacts to adjacent properties by controlling on-site stormwater runoff and preventing redirected floodwaters, increased flood elevations or increased flood velocities. These criteria are required by the City's Stormwater Design Manual and floodplain regulations during the development process, and comply with minimum floodplain management standards established by the Federal Emergency Management Agency under the National Flood Insurance Program.

The owner has submitted a proposed reconstruction plan showing that the old fire destroyed building will be reconstructed with a smaller building footprint in the floodway, and elevated above the flood with structural piers. While the proposed reconstruction is "new construction" in a floodway and therefore does not comply with the City's floodplain regulations, it does not make flood conditions worse nor pose other safety concerns on adjacent and nearby properties, and it meets all other city standards for flood protection and stormwater management. Staff therefore proposes that the Water Commission support the variance and make this recommendation to the Floodplain Board.

Moved by Brian Ketter and seconded by Charlie Odegaard to recommend to City Council to approve the variance from the floodplain regulations to allow for new construction within the floodway for the proposed reconstruction of the residence at 504 S O'Leary St. provided the development meets all other city flood protection and stormwater management requirements. Motion passed 5-1 with John Nowakowski casting the dissenting vote.

John Nowakowski indicated he objects putting structures in floodways knowing 100% probability of structure flooding at some point in time.

## **V. OLD BUSINESS**

### **A. Rate Study Analysis-Presentation by Consultant; Final Rate Study Report**

Ryan Roberts indicated the City's Rate Consultant, Willdan Financial Services has completed their Draft Final Report for the Water Commission's review and consideration. Ryan indicated that Jonathan Varnes, Kevin Barnett and Pat Walker with Willdan joined the meeting via phone. There will be multiple Rate Options for the Water Commission to consider and recommend to City Council regarding adjustments in rates to water, sewer, reclaimed water and stormwater.

The Flagstaff Rate Study report from Willdan Financial Services which was emailed summarizes the data and assumptions for water, wastewater, reclaimed water and stormwater Rates and Capacity Fees. This memorandum reflects the requests made by the Water Commission during their meeting on June 18, 2015.

These requested rate study options include:

Description of Water Rate Study Options			
Option	Financial Plan Option	Description of Financial Plan Option	Description - Rate Structure Option
<b>Option 1</b>			
<b>Option 1a</b>	3% Annual Increase in Rate Revenue	Meets all funding / financial policies EXCEPT 20% Debt Service Threshold	No Change in Existing Rate Structure - Increase all Existing Rates by 3% per Year
<b>Option 1b</b>	3% Annual Increase in Rate Revenue	Meets all funding / financial policies EXCEPT 20% Debt Service Threshold	Change Existing Rate Structure - Expand Residential Tiers to Nearest Upper 1,000
<b>Option 1c</b>	3% Annual Increase in Rate Revenue	Meets all funding / financial policies EXCEPT 20% Debt Service Threshold	Keep Existing Rate Tiers for Residential - Include Non-Residential In Tiered Structure
<b>Option 2</b>	7% Annual Increase in Rate Revenue	Meets all funding / financial policies INCLUDING 20% Debt Service Threshold	No Change in Existing Rate Structure - Increase all Existing Rates by 3% per Year

Description of Sewer Rate Study Options		
Option	Financial Plan Option	Description
<b>Option 1</b>	5.5% Annual Increase in Rate Revenue	Meets all funding / financial policies EXCEPT 20% Debt Service Threshold
<b>Option 2</b>	7.0% Annual Increase in Rate Revenue	Meets all funding / financial policies INCLUDING 20% Debt Service Threshold

Description of Reclaimed Water Rate Study Options		
Option	Financial Plan Option	Description
<b>Option 1</b>	3.0% Annual Increase in Rate Revenue	Meets all funding / financial policies EXCEPT 20% Debt Service Threshold
<b>Option 2</b>	7.0% Annual Increase in Rate Revenue	Meets all funding / financial policies INCLUDING 20% Debt Service Threshold

Description of Stormwater Rate Study Options		
Option	Financial Plan Option	Description
<b>Option 1</b>	3.0% Annual Increase in Rate Revenue	Funds Baseline \$400,000 per year of Capital Projects - with Cash
<b>Option 2</b>	6.0% Annual Increase in Rate Revenue	Funds \$600,000 per year of Capital Projects - with Cash
<b>Option 3</b>	6.0% Annual Increase in Rate Revenue	Funds \$1,000,000 per year of Capital Projects - with Cash/Debt
<b>Option 4</b>	15.0% Annual Increase in Rate Revenue	Funds Rio De Flag Capital Projects (~\$15M) - with Cash/Debt

City staff requested for the Commission to recommend via voting for specific options for rate adjustments to then forward onto City Council for their consideration

### **Water Rate Study Option**

Ward Davis, public participant made a few comments on the following:

- Ward asked if the off-set from single family residential tier was included or calculated in commercial tiers. Revenue neutral.
- He indicated the rate study does not completely define conservation as a goal which is a mechanism to push off Red Gap Ranch.

Brad Hill commented in 2010, the rate structure was changed to define conservation, since then significant conservation was recorded that shows record low water use over the years.

The Water Commission reviewed and discussed Option 1 and Option 2 of the Water Rate Study. The comments were as follows:

- Karin Wadsack and John Malin requested to list options a, b and c for Option 2 (similar to Option 1)
- John Nowakowski requested the fixed fee up to 25%
- Charlie Odegaard requested for maybe adding a 5<sup>th</sup> tier (between 0-3700 gal)
- Paul Tuner wants Tier 4 to stop at 10,000 gal., not 11,701

Moved by Brian Ketter and seconded by Charlie Odegaard to recommend to Council to approve Option 1a. Motion failed.

No consensus on the motion so there was further discussion. Another motion was presented with the explanatory of the different perspectives of the Water Commission.

Commissioner, Hanna Cortner moved to recommend to Council “no recommendation” but for staff to break down Option 2 with a, b and c. Charlie Odegaard amended the motion to add that the Water Commission is ok with a minimum of 3% up to 7% of annual increase in rate revenue; seconded by Brian Ketter; passed by 4-2 with Hanna Cortner and John Nowakowski casting the dissenting vote.

### **Sewer Rate Study Options**

Option 1	5.5% Annual Increase in Rate Revenue	Meets all funding/financial policies EXCEPT 20%
Option 2	7.0% Annual Increase in Rate Revenue	Meets all funding/financial policies including 20% debt

Moved by John Nowakowski and seconded by Karin Wadsack to recommend to City Council Option 2. Motion passed unanimously.

### **Reclaimed Rate Study**

Moved by John Nowakowski and seconded by Karin Wadsack to recommend to City Council Option 2. Motion tied with a 3-3 vote with John Malin, Charlie Odegaard and Hanna Cortner casting the dissenting votes.

Another motion was presented.

Moved by Brian Ketter and seconded by Charlie Odegaard to recommend to City Council Option 1. Motion passed with 4-2 with John Nowakowski and Karin Wadsack casting the dissenting votes.



## **Stormwater Rate Study**

Moved by Brian Ketter and seconded by John Nowakowski to recommend to Council Option 3. Motion failed to a 3-3 vote with Charlie Odegaard, Karin Wadsack and Hanna Cortner casting the dissenting votes.

Another motion was presented.

Moved by Charlie Odegaard and seconded by Karin Wadsack to recommend to City Council Option 2. Motion passed with 4-2 with John Malin and Hanna Cortner casting the dissenting votes.

## **Capacity Fees**

### **Water Capacity Fee-Options**

The tables presented below represents the Buy-in capacity fees needed to meet projected growth in the City of Flagstaff water system over the next ten years. Willdan has presented two options for consideration. The Base option includes \$12,700,000 in growth related (Red Gap) water resource projects while Option 2 includes \$23,150,000 in RGR water resource projects over the next ten years. The costs included in the tables do not include any construction costs, and only represent design or soft costs for the Red Gap Ranch water resource project.

Base				
Meter Size	Total	Current	Difference	
			\$	%
3/4"	\$5,728	\$5,891	(\$163)	-3%
1"	9,566	9,819	(253)	-3%
1 1/2"	19,074	19,638	(564)	-3%
2"	30,530	31,420	(890)	-3%
3"	57,279	58,913	(1,634)	-3%
4"	95,484	98,188	(2,704)	-3%
6"	190,910	196,376	(5,466)	-3%
8"	305,468	314,201	(8,733)	-3%
10"	439,157	451,664	(12,507)	-3%

Option 2: Red Gap Pipeline Design				
Meter Size	Total	Current	Difference	
			\$	%
3/4"	\$6,007	\$5,891	\$116	2%
1"	10,032	9,819	213	2%
1 1/2"	20,004	19,638	366	2%
2"	32,019	31,420	599	2%
3"	60,073	58,913	1,160	2%
4"	100,141	98,188	1,953	2%
6"	200,222	196,376	3,846	2%
8"	320,367	314,201	6,166	2%
10"	460,576	451,664	8,912	2%

Moved by Hanna Cortner and seconded by John Nowakowski to recommend to City Council Water Capacity Fee Option 2 which includes \$12,150,000 in Red Gap Ranch water resources projects over the next ten years. Motion passed with 5-1 with Charlie Odegaard casting the dissenting vote.

#### **Wastewater Capacity Fee-Proposed**

The table presented below represents the Buy-in capacity fees needed to meet projected growth in the City of Flagstaff sewer system over the next ten years.

<b>Meter Size</b>	<b>Proposed</b>	<b>Current</b>	<b>Difference</b>	
			<b>\$</b>	<b>%</b>
3/4"	\$3,723	\$3,126	\$597	19%
1"	6,218	5,210	1,008	19%
1 1/2"	12,399	10,419	1,980	19%
2"	19,845	16,671	3,174	19%
3"	37,233	31,257	5,976	19%
4"	62,068	52,095	9,973	19%
6"	124,099	104,191	19,908	19%
8"	198,566	166,705	31,861	19%
10"	285,468	239,639	45,829	19%

Moved by Brain Ketter and seconded by John Nowakowski to recommend to City Council the Buy-in wastewater capacity fee recommended by Staff. Motion passed 5-1 with Charlie Odegaard casting the dissenting vote.

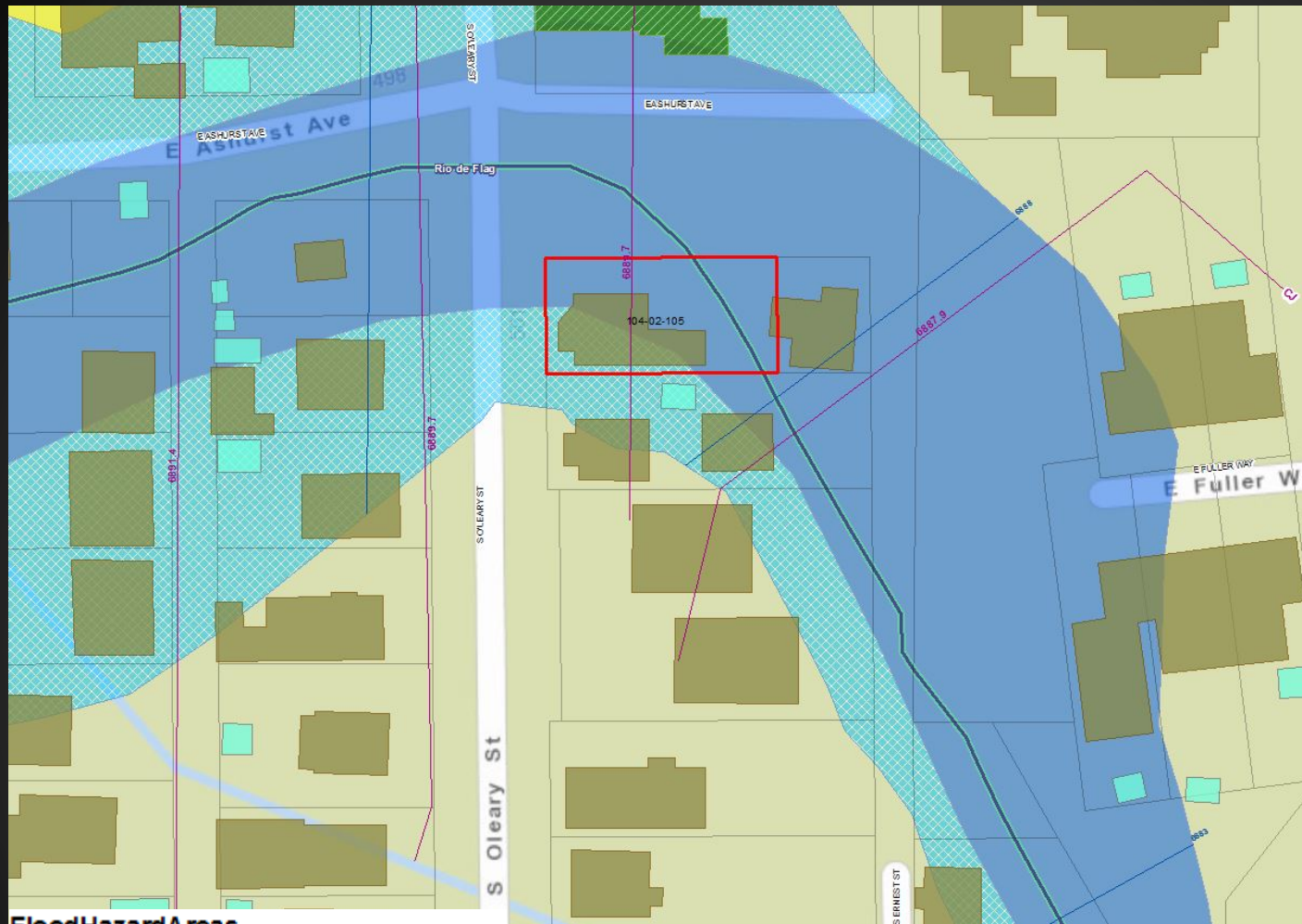
#### **VI. INFORMATIONAL ITEMS TO/FROM THE CHAIR, COMMISSION OR STAFF**

John Nowakowski indicated he requested the rate study to include the overhead charges and hopes Council look at that to determine if it is legitimate. Ryan indicated there was 2 million in overhead charges and Jonathan Varnes indicated it was noted in the appendix page of the report.

#### **VII. ADJOURNMENT**

Brian Ketter moved to adjourned and seconded by John Malin. All approved. The meeting adjourned at 6:35 p.m.

# Flood Map – 504 S. O’Leary Variance



Home burned down in June 2014, and owner wants to rebuild in the same location but with less building footprint in floodway. Property boundary is outlined in red and building footprint shown is pre-fire. The Rio de Flag is just east of home. The pre-fire building was an existing obstruction when floodway was determined.

Reconstruction is technically “new construction” that is prohibited unless a variance from the Floodplain Board (City Council) is granted.

**Note:**  
Zone AE = 100-yr floodplain  
0.2 PCT = 0.2 percent chance, or 500-yr floodplain



## **Engineering Analysis and Plans Prepared by the Civil Engineer and Architect Indicates:**

The four threshold findings necessary to grant this variance are demonstrated in an engineering analysis report and plans submitted to staff from the civil engineer and architect.

## **As a result staff recommends that the Floodplain Board can and should make these findings that:**

- a) Good and sufficient cause exists for the variance;
- b) Failure to grant the variance would result in exceptional hardship;
- c) The use cannot perform its intended purpose unless it is located or carried out in close proximity to the water;
- d) The variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, create nuisances, cause fraud on or victimization of, the public, or conflict with existing local laws or ordinances.

**"Regulatory Floodway"** means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height.

**"Flood Fringe"** means that area located between the regulatory floodway and the boundary of the 100-year floodplain as shown on the Flood Boundary and Floodway Map.

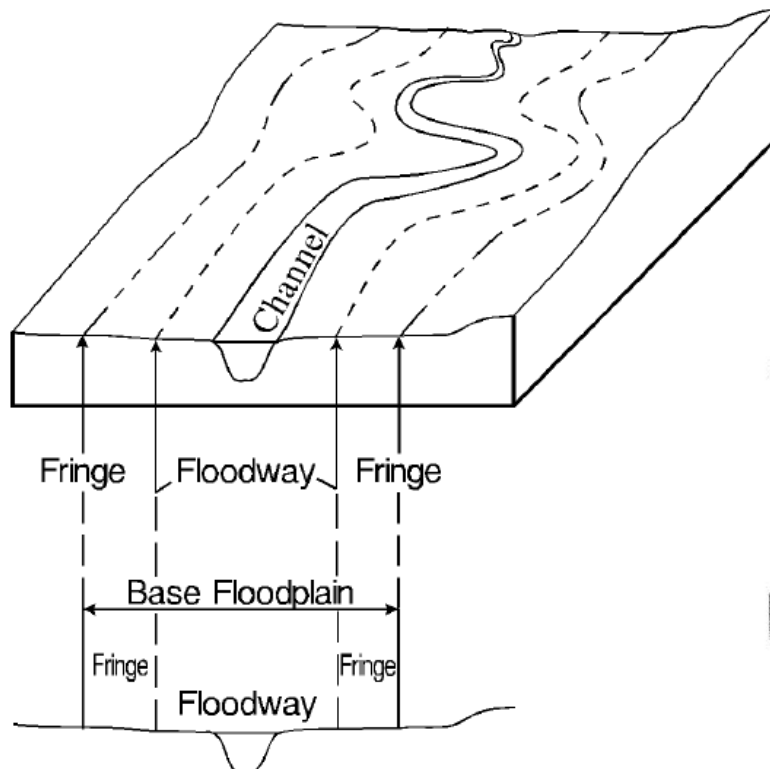


Figure 3-6: Floodway cross section and map

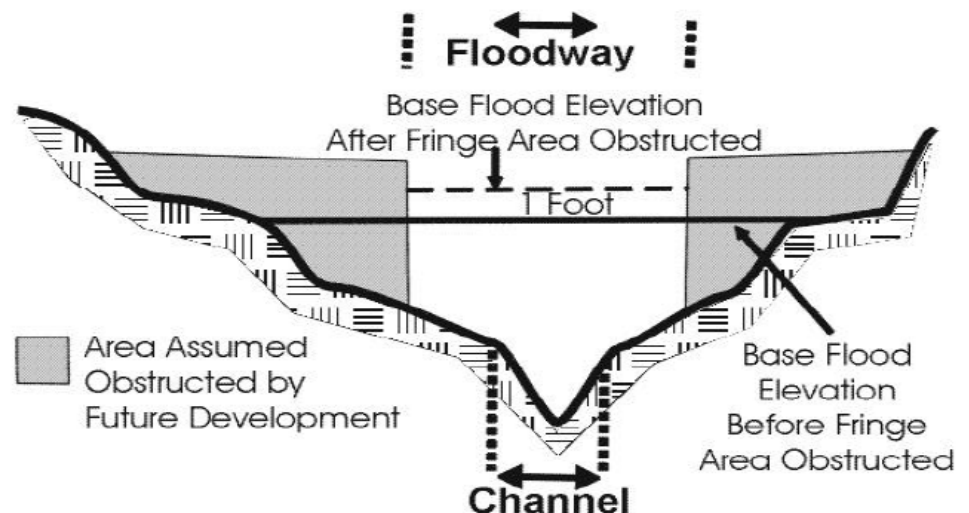


Figure 3-7: Computer floodway analysis

# City Floodplain Regulations Variance Considerations

## CONCLUSIONS AND FLOODPLAIN VARIANCE RESPONSE

The current City of Flagstaff Floodplain Regulations requires that a specific list of technical evaluations be considered and answered as part of the floodplain variance process (per section 12-01-001-007.1 – Appeal and Variance Board). These technical considerations include the following:

1. *The danger that materials may be swept onto other lands to the injury of others:*

Response: The reconstruction of the building will include configuration of new structure such that the lowest structural member resides at an elevation at least 1.0 foot above the highest regulatory floodplain elevation across the site. Additionally the reconstruction will include the removal of one outbuilding and clearing of miscellaneous debris from within the yard. No large materials will be stored outside of the new building except for trash containers. Cars however, will continue to be parked off-street per the snow removal ordinance and could be subject to flooding.

2. *The danger of life and property due to flooding or erosion damage.*

Response: Reconstruction of the residence will result in no insurable structure or appurtenances to the structure residing at an elevation that is less than 1 foot above the regulatory floodplain. The living area of the new structure will be located above the regulatory floodplain. The existing retaining wall at the site will be left as-is. No changes to the existing channel or its conveyance capacity will occur as a result of the new construction. Parked vehicles may be subject to damage or movement during flooding.

3. *The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner.*

Response: The reconstruction of the residence will include setting the new finished floor a minimum of one foot above the regulatory floodplain elevation.

4. *The importance of the services provided by the proposed facility to the community.*

Response: No specific community services will be provided by the project beyond providing residential housing. However, the reconstruction of the residential structure will restore the assessed value of the property and the tax benefit to the community that it represents.

5. *The necessity to the facility of a waterfront location where applicable.*

The subject parcel is small (5,000 s.f.) and does not afford any significant buildable area beyond the existing building footprint.

6. *The availability of alternative locations for the proposed use, which are not subject to flooding or erosion damage.*

Response: This will be addressed by the owner or the architect under a separate letter.

7. *The compatibility of the proposed use with existing and anticipated development.*

Response: The pre-existing use was residential. The use after reconstruction will continue to be residential. Surrounding use is residential, other than a small neighborhood market located immediately north of the property and across the Rio de Flag.

8. *The relationship of the proposed use to the comprehensive plans and floodplain management program for the area.*

Response: New development in the floodway is not part of the floodplain management program for the area. However, this project represents reconstruction of a pre-existing residence within the floodway that will correct the following issues:

- The existing residence resided below the 100-year base flood elevation. Reconstruction will elevate the finished floor such that no insurable part of the structure will reside below the floodplain elevation.
- The existing footprint encroaches into the floodway. The new building footprint represents a net decrease of gross encroachment into the floodway by approximately 183 square feet. Additionally, a post and beam foundation system is proposed to support the new structure which will further reduce the influence of the structure in the floodway.
- The existing structure is situated completely within the floodplain/floodway. The new residence will still be located within the floodplain/floodway, but will represent a net reduction of 307 square feet of the footprint. Additionally, with a post and beam support system elevating the structure above the floodplain elevation, the net influence to the floodplain/floodway will be greatly reduced.

The relationship of the proposed use to the comprehensive plan for the area will be addressed by the owner or architect under separate cover letter.

9. *The safety of access to the property in time of flooding for ordinary and emergency vehicles.*

Response: Emergency access directly to the building will be difficult during the 100-year flood as the entire property, other than the new structure, will be inundated. The city-owned bridge at O'Leary Street will be overtopped by the flooding and access from the north will be blocked. Access along O'Leary Street from the south may be available, as the roadway immediately south of the site is not flooded within the regulatory event. However, access to the local neighborhood may be cut off during the 100-year flood from the Sinclair Wash and other crossings of the Rio de Flag.

10. *The expected heights, velocity, duration, rate of rise, and sediment transport of the flood waters expected at the site.*

Given that the reconstruction of the residence will not extend beyond the original building footprint within the floodway and will even slightly reduce that , there should be no increase in the heights, velocity, duration, rate of rise or sediment transport of the floodwaters due to the reconstruction of the project as proposed.

11. *The costs of providing governmental services during and after flood conditions, including maintenance and repair of public utilities and facilities such as sewer, gas, electrical, water system, and streets and bridges.*

Response: No changes to the public infrastructure are necessary or included to accommodate the proposed reconstruction of the residence.

June 17, 2015

Anne M. Soper, Architect  
304 South Elden St. Ste 3  
Flagstaff, AZ 86001

Jim Janacek, PE, CFM  
City of Flagstaff  
Stormwater Department  
211 W. Aspen Avenue  
Flagstaff, AZ 8600

RE: Request for Floodplain Variance for Private Residence at 504 S. O'Leary Street

Dear Mr. Janacek,

This letter is intended to serve as a supplement to the application materials prepared by Michael Kearly, PE of Natural Channel Design for the request of a Floodplain Variance per Section 12-01-001-0007, Variance Procedure of the City of Flagstaff floodplain regulation.

This letter addresses items 6 & 8 from Natural Channel Design's Floodplain Variance Conclusions Report.

*6. The availability of alternative locations for the proposed use, which are not subject to flooding or erosion damage.*

The majority of this parcel is within the floodway. There is not a better alternative area on the site for the construction of a new house. The proposed location of the new home is situated in the area of the parcel that is predominantly outside of the floodway. The only portion of the new home that encroaches in the Floodway is where the original building stood.

*8. The relationship of the proposed use to the comprehensive plans and floodplain management program for the area.*

NCD has addressed the relationship of the proposed use to the floodplain management program.

The relationship of the proposed use to the Comprehensive Plan is that it will revitalize a vacant homesite, adding new vigor to the neighborhood. The redevelopment will provide a new, sustainable, energy efficient home in the place of an outdated and substandard house. The architecture of the proposed house has been designed to preserve and conserve the landscape and heritage of the neighborhood. Using these attributes, it is our opinion that the proposed development is in-line with the Comprehensive Plan for the neighborhood and its vision for the fulfilling the high-demand for quality housing within City limits.

Sincerely,



Anne M. Soper, AZ RA 54419

# City Floodplain Regulations Variance Considerations