

CASE SUMMARY: 22-MSUB-0004

Floyds Fork is the premier wildlife corridor in Metro Louisville. In 1993, the land surrounding the waterway was set apart to protect this environmentally-sensitive area and the Floyds Fork Special District Development Review Overlay was created and added to the Land Development Code. The Planning Commission was set up as the Oversight Committee. The language of the DRO was meant to ensure that the approval process along Floyds Fork was not ministerial but that the Planning Commission would use discretion. Developments like this one are exactly why the DRO was created: in order to ensure that intense development, filling in floodplains, terracing steep slopes, and encroaching on the wildlife corridor was **not** allowed. This proposed development will have negative impacts on personal property, public property, and the water quality. (Supporting documents and photos attached.)

OPPOSITION FOR MAJOR PRELIMINARY SUBDIVISION AND WAIVER

A. Harmful to Livability – Summation of Hydrologist’s Report

The proposed development will most certainly have a significant impact:

- on the floodplain,
- on water flows (velocity),
- on upstream properties,
- on immediately-adjacent property,
- on downstream properties, and
- on water quality.

The proposed floodplain compensation does not adequately address these problems. Infilling of the floodplain will displace floodwaters and increase flood levels locally, at other properties.

Level for level compensation is necessary to mitigate this risk.

The proposal appears to substitute the existing natural, wide floodplain with a deeper and narrower one. This cut-and-fill channel is not compensatory storage; *the plan will increase flood risk because it does not mimic existing natural flow characteristics.*

This deeper, narrower channel will result in increase flow velocities through what will in effect be a steep-sided gorge instead of a floodplain. This project will have a significant negative impact on upstream and downstream properties from flooding and cause an increase in water pollution. As a note: MSD has never completed a full hydrologic study and model for Floyds Fork.

B. Harmful to Livability – Floodplains

1) Siltation and unusual erosion

As designed, this development will contribute to siltation and unusual erosion. Over the last 3 years property owners along Floyds Fork have lost up to 10 ft of bank! Entire islands are disappearing. People who have lived along this river 50 years have never seen these levels of erosion or flooding heights. This is occurring with simple 3”-4” rain events, but the damage is more severe. The impervious surfaces are making the water flow faster, higher, and stronger. Floyds Fork is being used as urban drainage. As early as 5 years ago the siltation would clear out 2 days after a rain event, but now it is taking well over 5 days, if at all.

2) Flood Storage Basins are pre-filled with water runoff

This proposal uses failing basin concepts. Flood Storage Basins are “designed” to combine runoff and flood storage. However, during rain events, the basins are almost completely full of runoff water long before Floyds Fork crests its bank—making it unusable during and following a rain event.

3) Surrounding properties are not taken into account

This proposed plan will cause flooding and polluting to properties upstream and downstream of the proposed site. It is abutted by a 45' cliff which is not in the purview of the plan. The existing floodplain of this property is used by Floyds Fork constantly and actually becomes the river during major rain events. With that abutting cliff, the floodwaters will have nowhere else to go if this plan is approved.

C. Harmful to Economic Development

Valhalla believes that future development upstream on Floyds Fork and Brush Run will exacerbate the high-water problems and elevate the risk of major damage to the course and loss of future major golf events coming to Louisville. They bring significant positive impact to the community through hosting some of golf's major championships. These championships put a spotlight on Louisville and bring a significant economic impact of over \$100,000,000 into the community. Valhalla will host its fourth PGA Championship in May of 2024.

D. Harmful to Mobility – Johnson Rd Zero Capacity by 2031 Regardless of Build

Present inadequacies make approving additional load on Johnson Rd inappropriate without improvements including acceleration and deceleration lanes at the site and intersection widening at the off-site location of Johnson Rd and Shelbyville Rd. The Aiken Road and Johnson Road Vicinity (11/21/22) traffic study reports that the PM southbound Johnson Rd to Shelbyville Rd delay has a capacity of 0 (zero) in 2031. The reason given is "The capacity of the movement is 0 because the analysis procedure says there will not be enough gaps in the traffic on Shelbyville Rd for any vehicles southbound on Johnson Rd to enter Shelbyville Rd". In effect, state road 1531 (Johnson Rd.) will be a dead end street.

Plan 2040 Mobility Goal 3.9 states that when funds are not available, "the developer may be asked to make improvements, roughly proportional to the projected impact of the proposed development, **to eliminate present inadequacies** if such improvements would be the only means by which the development would be considered appropriate at the proposed location." Mobility Goal 3.11 states the need to "provide street improvements to mitigate the impacts of development." Mobility Goal 11.3 states, "addition of acceleration and deceleration lanes," and 11.5, "intersection widening completely off-site." Both KRS and Plan 2040 give the Planning Commission full authority to require acceleration and deceleration lanes as well as put in a right turn lane for the Johnson Rd Southbound to Shelbyville Rd.

E. Science Based Informational Government Organizations

1) US Army Corps of Engineers (USACOE)

*The Parklands does not protect Floyds Fork; neither are they protected. The USACOE published that "even the best buffer strips along larger rivers and streams **cannot significantly improve water that has been degraded by improper buffer practices higher in the watershed.**" Over 6,000 precious acres have been used to highlight and protect the premier wildlife corridor of Louisville. Due to this amazing park system, most people incorrectly assume that the waterway and its wildlife are protected. The Planning Commission is the designated oversight committee for all 31 river-miles flowing through Jefferson County, particularly the 6 miles flowing prior to its entry into The Parklands.*

2) MSD – Critical Facilities (Mechanical Sewage Pump)

Floodplain Management Ordinance

“No new construction of critical facilities shall occur in the local regulatory floodplain and *no elevation shall be permitted for new construction* of critical facilities to raise them to at least freeboard elevation.” MSD defines a sewage pump station as a critical facility and the Floodplain Management Ordinance clearly states no elevation shall be permitted for new construction. The ordinance does not state the method of elevation, just that critical facilities cannot be elevated out of land that was floodplain. This proposal is in violation of the Floodplain Mgmt Ordinance due to its placement of a mechanical sewage pump station in land that is currently floodplain with a plan to elevate to freeboard elevation or higher.

F. Local Government Involvement

1) Metro Council Resolution – DRO review

On 6/9/22 Metro Council unanimously approved a review of the DRO in order to eliminate redundancies and strengthen its protections.

2) PDS has written an initial first draft of the Floyds Fork DRO protections

On 8/28/23 the Planning Committee reviewed the PDS draft which had stronger protections for the buffers and the floodplains.

3) MSD – Creating a Conveyance Zone

In order to further protect Floyds Fork, MSD is currently working on establishing a conveyance zone for the northern six miles of Floyds Fork, and had an intended implementation date of mid-June. The Planning Commission should utilize their discretion to use MSD’s conveyance zone draft on this proposal or wait until MSD implements the conveyance zone – ensuring that all pending proposals comply with the conveyance zone.

G. Land Development Code Intent and Authority

LDC 3.1.A.1.b states “The purpose of the district is to protect the quality of the natural environment. The district achieves these purposes by promoting compatible development of land and structures. The Development Review District is to protect the public and property owners in the district”. This proposal will involve seven of the 11 potentially detrimental regulated activities listed in the DRO. LDC 3.1.B.8 states “The plan will be reviewed to determine if negative impacts on the environment can be overcome, mitigated to a substantial degree or proven not to exist...The Planning Commission *may disapprove a proposed district development plan* if negative environmental impacts are not adequately mitigated.

The science, the community, the LDC, and the current administration all agree that Floyds Fork is an environmentally-sensitive area requiring less intensity. This plan does not achieve the proper mitigation required. While development is allowed, it should be far less intense within the DRO and done without the altering of the floodplains, utilizing the conveyance zone created by MSD.



117 State Route 34, Box 7013
Hurricane, WV 25526
E-mail: dscott@ashby-tucker.com
Cellular Phone: 304.552.7488

March 9, 2023

Randy Strobo
Strobo Barkley PLLC

Subject: Proposed 1614 Johnson Road Development, Floyds Fork Watershed

Dear Mr. Strobo:

I have been asked to review and opine on the proposed development at 1614 Johnson Road, in the Floyds Fork watershed. The proposed development is a single-family home subdivision and "Mixed Residential Development Incentive" ("MRDI") community of 130 proposed residential building lots and 126 multi-family units in 4 buildings in the Floyds Fork Development Review Overlay District (DRO). Specifically, I have been asked to determine if the proposed subdivision will have substantial negative impacts on upstream and downstream properties from flooding and and/or increase water pollution, and if the development as proposed will meet the DRO guidelines

I am a Registered Professional Engineer (WV 013637, MS 29794, KY 35795, VA 63019) with over 30 years of professional experience in State regulatory agencies, private consulting and academia.

In forming this initial opinion, I have reviewed the information available for the proposed project. Most of this information is of a preliminary and/or conceptual nature. I have not seen a mapped conveyance zone on Floyds Fork, and it is my understanding that a model of the watershed is currently being developed. Additionally, I have not seen hydrologic modelling of the proposed floodplain changes by the developer. To accurately understand the impacts this development will have on hydrology in the watershed, these models must be developed. As this has not been done, it is impossible for anyone to fully determine the impact of this development on environmental characteristics, including impacts on water quality, the floodplain, wetlands, natural drainage ways, steep slopes, soils, etc.

Based on the conceptual and preliminary information that has been provided, it would appear that the proposed development will most certainly have a significant impact on the floodplain and flows, as well as water quality, and that the proposed floodplain compensation does not adequately address these problems.

The proposal appears to be that the developer will, in effect, substitute the existing natural, wide floodplain with a deeper and narrower one. The proposal claims that this cut-and-fill channel will actually increase the flood plain by 1.5X. However, floodways and stream flow is very complex, and a simple swap in where the floodplain volume is does not mimic or replace what is being lost.

Floodplain compensatory storage requires more than volume-for-volume swapping, even if showing an increase. This compensation must be equivalent storage, not just in volume but also in flow characteristics. Therefore, equivalent storage must match incrementally with what is being lost – that is not the case with this proposed development. The developer appears to be substituting proper incremental design with a gross volume increase, and that is not acceptable compensatory storage design. Compensatory storage must provide an equal volume of flood storage at equal elevations to replace what is lost, and based on this proposal that is not what will happen with this development.

Development infilling of the floodplain will displace floodwaters and increase flood levels locally, at other properties. Level for level compensation is necessary to mitigate this risk. This ensures that the same volume of flood storage is available at all levels of flooding, not just at the highest levels as appears in this proposal.

In this case, the developer is simply adding together the volume difference of the compensation and trying and show that the overall compensation being provided is greater than the overall volume being lost. This is incorrect and will increase flood risk, and most certainly does not mimic existing natural flow characteristics.

This deeper, narrower channel will result in increase flow velocities through what will in effect be a steep-sided gorge instead of a floodplain. This increase in velocity will certainly increase erosion through that section of the stream, thereby increasing sediment loads in the water column and impacting stream bed sediment loads downstream. This scouring and bank-loss will be greater on the outside of the stream curve, property owned by someone other than this developer. Those scoured sediments will deposit somewhere downstream, changing aquatic habitat – without modeling, that somewhere is unknown. Additionally, these deposited sediments will raise streambeds downstream, changing the flood profile and possibly increasing flood heights through those downstream sections.

This likely significant increase in flow velocities at some or all flood stages must have an impact in flows above and below this project. This increase in velocity will likely depress water surface height immediately upstream of the site, but will increase water surface height downstream of the site. Simply put, as designed this project will change flow characteristics not just in the stream section adjacent to the project, but also upstream

and downstream of the project. Level for level compensation would minimize these impacts, but that is not what is proposed.

As designed, this project will have a significant negative impact on upstream and downstream properties from flooding and cause an increase in water pollution. The proposal fails to meet the DRO guidelines especially as they relate to erosion, floodplain construction, filling and excavating of floodplains, and water quality. I am unaware of a plan to mitigate these negative environmental impacts.

I look forward to further review of information related to these issues as it becomes available. I hold these initial opinions to a high degree of scientific and engineering certainty, and reserve the right to modify these opinions as further information becomes available.

Please contact me should you have any questions.

Sincerely,



D. Scott Simonton, PE, PhD

Case Manager: Dante St. Germain

Louisville Planning Commission

I am writing on behalf of Valhalla Golf Club and its owners, Jimmy Kirchdorfer, Junior Bridgeman, David Novak, and Ches Musselman, to express concern regarding the proposed development at 1614 Johnson Road. This and further development along the Floyds Fork Watershed are sure to negatively impact properties along Floyds Fork and its tributaries such as Brush Run Creek.

My 33-year tenure at Valhalla Golf Club has allowed me to witness numerous high-water events associated with Floyds Fork and adjoining tributaries. Through my observations over the past five to ten years, the number of flooding events and the volume of water traversing through the Valhalla property has increased substantially.

Ours is not the view from a homeowner's perspective, but from the perspective of a golf club that has and will continue to bring significant positive impact to the community through hosting some of golf's major championships. These championships put a spotlight on this wonderful community and bring a significant economic impact of over \$100,000,000 into the community. Valhalla will host its fourth PGA Championship in May of 2024. Our concern is the following:

- Increased high water events and flooding along Floyds Fork and its tributary, Brush Run Creek, will continue to become more frequent and invasive to the point where portions of the golf course could be severely damaged or destroyed. If this were to happen in the months or weeks leading up to a major Championship, rendering all or portions of golf holes unplayable, it would likely force the event to be moved to another venue erasing the economic impact on the community. We believe that future development upstream on Floyds Fork and Brush Run will exacerbate the high-water problems and elevate the risk of major damage to the course and loss of future major golf events coming to Louisville.

Please keep in mind this is not about a course closure interrupting regular play for a few days per year due to high water and flooding but a concern that intensified high-water events increasing the likelihood of significant course damage could render Valhalla no longer a viable site for golf's major events. While the 2024 PGA Championship is a little over one year away, the Valhalla ownership group is working to secure future major golf events, continue the championship history, and positively impact the community.

Sincerely,

Keith Reese, PGA
General Manager



Keith Reese, PGA

General Manager

Kreese@valhallagolfclub.com

502-245-1238

Valhalla Golf Club

15503 Shelbyville Rd

Louisville, KY 40245

**Johnson Rd present inadequacies:
Southbound Johnson Rd to Shelbyville Rd delay has a capacity of 0 (zero)**

Aiken Road and Johnson Road
Vicinity Traffic Impact Study

To evaluate the impact of the proposed development, the vehicle delays at the intersections were determined using procedures detailed in the Highway Capacity Manual, 7th edition. Future delays and Level of Service were determined for the intersections using the HCS Streets and Two-Way Stop Controlled (version 2022) software. The delays and Level of Service are summarized in **Tables 4 and 5**. The 2031 No Build includes left turn lanes on Aiken Road at Arnold Palmer, and dual left turn lanes on Bush Farm Road at Old Henry Road. The 2031 No Build includes the improvements shown on the Aiken North plan for the intersection of Aiken Road with Johnson Road by the Aiken North subdivision.

Table 4. Peak Hour Level of Service Johnson Road

Approach	A.M.				P.M.			
	2022 Existing	2031 No Build	2031 Build	2031 Improved	2022 Existing	2031 No Build	2031 Build	2031 Improved
Aiken Road at Johnson Road		B 16.0	B 17.6			B 13.9	B 15.1	
Aiken Road Eastbound		A 8.7	B 10.3			A 9.5	B 11.2	
Johnson Road Westbound	A 7.8	B 11.5	B 13.7		A 9.2	A 8.8	B 10.6	
Johnson Road Northbound	C 16.1	C 31.0	C 31.4		C 17.8	C 32.3	C 30.9	
Subdivision Road Southbound		C 26.5	C 24.0			C 30.2	C 27.9	
Shelbyville Road at Johnson Road				B 17.3				C 25.6
Shelbyville Road Eastbound	B 11.3	B 12.3	B 12.5	B 10.6	B 10.3	B 13.3	B 14.3	C 30.0
Shelbyville Road Westbound	A 9.4	A 9.6	A 9.6	B 14.1	B 11.7	B 12.2	B 12.2	B 12.6
Eastwood Fishersville Road Northbound	F 51.5	F ~	F ~	D 37.8	F 94.5	F 1241.6	F 1722.5	D 38.5
Johnson Road Southbound	D 26.8	F 375.7	F 548.3	D 43.6	F 151.8	F ~	F ~	D 43.1

Key: Level of Service, Delay in seconds per vehicle

Proposal plans to fill in floodplain with dirt in order to elevate a critical facility.

(d) Containers described in subsection (C)(4)(c), above, shall be securely anchored where necessary to prevent flotation due to possible high flood waters around aboveground or mounded containers, or due to high water table for those containers underground or partially underground. Underground, partially underground, and aboveground tanks shall conform to the most recent editions of the NFPA Flammable and Combustible Liquids Code and the NFPA Installation of LP-Gas Systems Code.

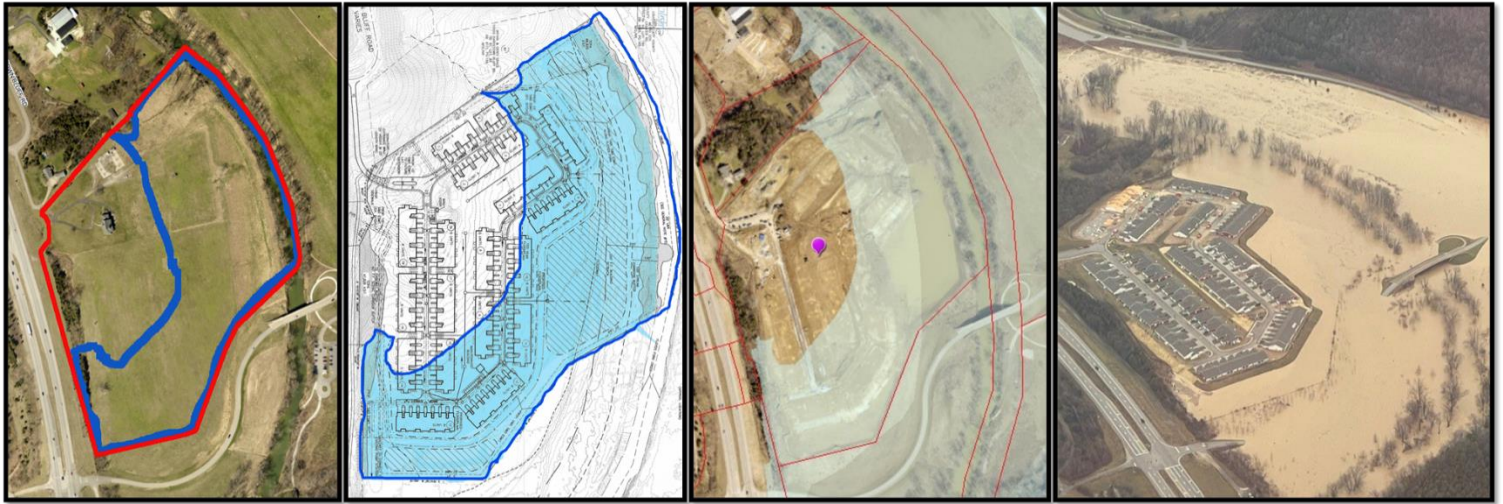
(e) No new construction of critical facilities shall occur in the local regulatory floodplain and no elevation shall be permitted for new construction of critical facilities to raise them to at least freeboard elevation.

(5) *Elevation / Floodproofing Certificate.*

(a) No person shall allow or permit construction to proceed beyond the lowest floor, including a basement, if any, and installation of mechanical and utility equipment and ductwork until a licensed land surveyor or licensed professional engineer has submitted to the administering agency an Elevation Certificate on a form approved by FEMA stating the elevation of the lowest floor and that it conforms to the requirements of the floodplain permit regarding the elevation of the lowest floor.

Proposal utilizes the same basic filling and trenching of floodplain as another development located on Floyds Fork

EVOLUTION OF FILLING IN THE FLOODPLAIN

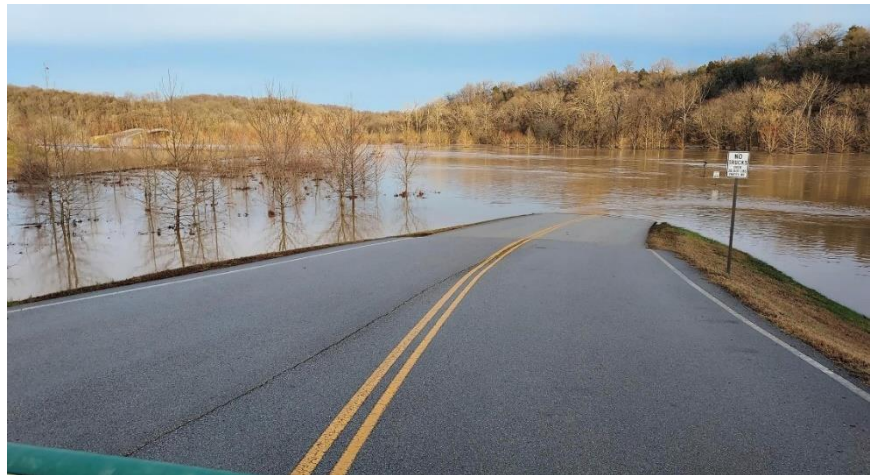


Floodplain prior to development

Floodplain with development overlay

Floodplain during development

New floodplain after 4" rain



Same location as above, just from ground level.

Siltation coming directly into Floyds Fork out of a development



Negative impacts on safety: people, homes, infrastructure



Proposal has similar basin plans to the one pictured below that combine Flood Storage and Runoff Retention.

Flood Storage Basins filled with runoff



Floyds Fork on left; already-FULL Flood Storage basin on right

Disturbing the Floodplains with filling and trenching

Blue is the floodplain

Dark area is the floodplain being disturbed

