

# Rio de Flag

## Frequently Asked Questions (FAQ's)

1. What is a 100-year flood?

*A 100-year flood is an event or flood that statistically has a 1 percent chance of occurring in any given year.*

2. Will the Rio de Flag (RDF) improvements aggravate flooding in adjacent areas?

*The RDF project will accommodate flooding up to a 100-year event. Runoff from an event in excess of a 100-year event will flood adjacent areas. There is also a possibility that localized heavy rains (micro-bursts) could still cause localized flooding despite not carrying a 100-year event.*

3. What happens during a 200-year or 500-year flood event?

*The RDF project will accommodate flooding up to a 100-year event. An event in excess of a 100-year will flood adjacent areas.*

4. Will you condemn my property?

*The City will offer to purchase your property and pay you just compensation per an appraisal. Condemnation (a lawsuit to obtain the property for a public use) will only occur if the parties are not able to reach an agreement for purchase.*

5. What is a temporary construction easement?

*A temporary construction easement is an agreement between the property owner and the City of Flagstaff for right of entry to an area for purposes of construction, for a defined timeline. When the construction project is completed the temporary easement expires. No permanent features will be constructed, and the area will be returned to pre-construction conditions.*

6. Why can't the channel be improved into a "river walk" amenity?

*The RDF channel does not flow year around, any flows come with from spring snow melt and summer monsoon rains. Included with the project will be informal social trails and landscaping features. In the future, if funded, FUTS trails and other amenities can be incorporated.*

7. What flows will continue through the existing southside channel?

*The RDF project will divert flows out of the Southside area. Flows that continue through the Southside will come from the neighborhood area during localized rain events.*

8. Where will the surface composite channel flows end?  
*The composite channel is proposed from Bonito Drive to Route 66. The flows will end at the ADOT Route 66 bridge.*
9. How will the flows enter the composite channel?  
*An inlet is proposed at Frances Short Pond that will convey 10 CFS via an 18" pipe into the channel to transfer low flows into the composite channel, primarily during snowmelt periods. Additionally, flows will enter the channel at street crossings and from adjacent private properties downstream of Frances Short Pond.*
10. What will happen to Frances Short Pond? Will the level of the pond change?  
*Frances Short Pond will not be altered in size, location or pond level. Frances Short Pond will be maintained (dredged) at periodic times to ensure the required volume is available for deposition of silt.*
11. Will there be a FUTS trail along the corridor?  
*FUTS trails will be re-established along the corridor as needed. Maintenance roads along open channel portions of the project may be used for non-vehicular use.*
12. What City commissions have you visited with?  
*Water Commission, Beautification and Public Arts, Parks and Recreation.*
13. What will the channel look like when the Corps is done and how will it be re-vegetated?  
*The RDF project corridor will be re-vegetated as shown on the improvement plans (i.e grasses, trees and shrubs) in accordance with the US Army Corps of Engineer standards and specifications. Additional details are provided in the separate Composite Channel Concept Plan. The opportunity exists to install beautification elements such as landscaping, benches and public art after the project is complete, funded 100% locally. These improvements cannot impact the function of the RDF project.*
14. How high is the flood wall?  
*From Beal Rd. to an area south of Thorpe Rd., along the east side of the Rio de Flag channel, the visible section of the flood wall will range from 2 to 8 feet high.*
15. What happens between my fence and the flood wall?  
*The area between the flood wall and property fences is on City property and will be used for construction purposes. After construction, the area will be revegetated to pre-construction conditions. Trees will not be reestablished on City property.*

16. Why won't the Army Corps release the plans to the public? Will the plans be available to the public?

*Conceptual plans have been discussed with the public. The final plans have not yet been submitted. All RDF plans are property of the US Army Corps of Engineers. The City is anticipating that following the next submittal of the plans, plans will be posted to the RDF web page for the public to view.*

17. What does composite channel mean?

*Composite channel includes components for a green belt, riparian corridor, native vegetation and a FUTS trail within an open channel system located in the upper reach, from Bonito Dr. to Rt. 66.*

18. This needs to be beautiful for the community when you are done.

*The Community has conveyed the need to construct the "right" project for the City. The current plans will include landscaping and enhancements to natural features where possible. Additional amenities may be constructed in the future if funding becomes available.*

19. When will the properties be removed from the flood plain?

*At the completion of the RDF project, the US Army Corps of Engineers will submit a request to FEMA to request a re-mapping of the 100-year floodplain. Upon the approval and completion of the re-mapping, the floodplain will be removed.*

20. How long will it take to construct the project?

*The US Army Corps of Engineers anticipates two years for each of the three reaches, the total time frame is estimated at six years. It is anticipated the Lower reach will be constructed first, followed by the Clay Avenue and finally the Upper.*

21. May we meet with the design engineers without City staff present?

*The design engineers are under contract with the City of Flagstaff and have a defined scope of work for their services. City staff's presence is encouraged at all meetings with the public.*

22. May we underground the overhead power lines while we are at it?

*Funding is not available to perform any extensive undergrounding of overhead lines. Overhead power lines will be reviewed on a case by case basis for the potential to be placed underground if the line must be relocated to facilitate the RDF project.*

23. Have you been talking to BNSF and how is that going?

*The City has been coordinating with BNSF on aspects of the RDF project over the course of design that may have an impact to their operations. BNSF understands the need for successful coordination to meet the project success. Coordination includes property rights for the floodway, environmental clearance of BNSF property, the Construction and Maintenance agreement, and the floodway undercrossing of the tracks. Progress continues to be made on all items and BNSF has expressed their commitment to be a community partner for the success of this project.*

24. What is a mitigation area and, where is it located?

*Mitigation is a US Army Corps of Engineer's term for landscaping or re-vegetation. The RDF project will place mitigation measures in the Lower, Clay Avenue and Upper reaches to meet the minimum 3-acre requirement. Mitigation measures include native grasses, wild flowers and shrubs.*

25. Are there trash racks and will they keep people out of the underground box culverts?

*Security gates and/or trash racks are being designed to deter access to the underground box culvert.*

26. What are the effects of a fire upstream? Will there be debris?

*Runoff will increase if there is a wildfire upstream and debris will increase flood risk. Existing detention/retention storm water facilities like Frances Short Pond and the Clay Ave. Wash Detention Basin will act as debris and sedimentation basins, reducing flood risk downstream, but there are no upstream protection measures for either of those detention/retention basins.*

27. Is there any work upstream of Beal Road?

*There is no work planned for any areas upstream of Beal Road with the RDF project as designed by the US Army Corps of Engineers.*

28. What are the effects to the Rio aquifer?

*The RDF would effectively isolate surface flows from groundwater recharge within the project area, both in the composite channel and in the concrete box structure. The closest downstream section of channel that would be connected to soil and bedrock would be the new channel near the Butler Road Tunnel. The effect on aquifer recharge is unknown but likely would reduce recharge to some extent.*

29. How is the coordination with the Coconino Estates project being held?

*The Coconino Estates project and the RDF project are sharing information in areas where work is adjacent. The Coconino Estates Phase I and II will be constructed in 2020 and 2021, respectively.*

30. How will the City clean the composite channel – how is maintenance performed?

*Stormwater will perform maintenance with recommendations from the Operation and Maintenance manual provided by the US Army Corps of Engineers.*

31. Has the Army Corps of Engineers agreed to the composite channel?

*Yes, The US Army Corps of Engineers' contractor will build the composite channel with the RDF project.*

32. Let's talk inflation? Where is the money coming from?

*Funding for the RDF total project cost will come from Federal appropriations and the City's Stormwater fee. Inflation is built into the US Army Corps' process.*

33. Why are they abandoning the benefit cost ratio?

*The Benefit Cost Ratio is still being tracked, but the RDF project is seeking US Army Corps of Engineers funding as proposed by General Semonite. The BCR would be an important factor to seek appropriations from the President's Budget.*

34. How many private properties will be impacted, where are they?

*There are 108 properties that are affected by the RDF project. The location of these properties are within all three reaches and consist of residential, commercial, multi-family, City of Flagstaff and BNSF properties.*

35. Is there room for modifying the design to be less destructive to our natural environment and more aesthetically attractive, yet still serve the purpose?

*The Rio de Flag (RDF) project corridor will be re-vegetated as shown on the improvement plans (i.e. grasses, trees and shrubs) in accordance with the US Army Corps of Engineer Standards and Specifications. Additional details are provided in the separate Composite Channel Concept Plan. The opportunity exists to install beautification elements such as landscaping, benches and public art after the project is complete, funded 100% locally. These improvements cannot impact the function of the RDF project.*

36. Is there more opportunity for community input?

*The Community has conveyed the need to construct the "right" project for the City. The current plans will include landscaping and enhancements to natural features where possible. Additional amenities may be constructed in the future if funding becomes available. Community input on the Composite Channel Concept Plan is welcome. Please go to the City of Flagstaff website to view and provide comments (<https://www.flagstaff.az.gov/4189/Rio-De-Flag-Flood-Control>).*

37. If there was a ground swell of concerned citizens could we still influence the project?

*The Army Corps is aware of the concerns expressed by the community to construct the "right" project. The Army Corps is responsible for the construction and management of the project, in accordance with their Engineering Standards and Specifications and to meet their project schedule. The City of Flagstaff will discuss and consider all opportunities to enhance the project through the Composite Channel Concept Plans.*

38. Why is our property needed? If it is for parking construction vehicles, etc, we feel this could be accomplished on publicly owned property-the other side of the Rio , on the walking path or the parking lot for the ball fields. There is adequate parking near Aztec for temporary use.

*The Army Corps and the City need 5 feet as a temporary work area easement for the construction of the Rio de Flag flood control project improvements. This temporary easement is also commonly referred to as a temporary construction easement or TCE.*

39. Is 5-feet accurate for each and every property?

*Yes, that is what the Army Corps and the design consultant have specified.*

40. Why is it necessary to transfer ownership to the City?

*Ownership is not being transferred. The temporary easement only gives the City and Army Corps the right to use (not own) the 5 feet as a temporary work area during construction.*

41. How long is "temporary?"

*The temporary easement will become effective upon execution and recordation in the County Recorder's Office. The easement will continue until the Rio de Flag flood*

*control project improvements are completed and your property has been restored to its pre-construction condition, as much as possible. After completion of the improvements, the City will record a notice in the County Recorder's Office terminating the easement.*

42. Will the appraisal be based on commercial value or tax value?

*You will receive a copy of the appraisal. The appraisal is based on the fair market value of the easement (not property tax assessed value).*

43. Why isn't a local firm being used for the appraisal?

*The appraiser was selected because he is well-versed in the federal regulations followed when appraising properties for federal projects ("the Yellow Book"), and because his firm was the only one able to deliver multiple appraisal reports in the short time frame required by the City. The Army Corps is completing its own separate "review appraisal".*

44. Why can't public records be used to determine values?

*Public records are used as part of the appraisal process. Public records identify the zoning and associated permissible uses of the property, location, geography, and comparable sales/purchase price data.*

45. We need to know more about the replacement of fences, buildings, trees, and other hard and soft landscaping.

*After talking with our appraiser, we have learned that appraisals for temporary work area easements do not include compensation for improvements and property features that are damaged during the construction period. This is because the easement granted will require the City to restore the site to its pre-construction condition. In other words, after construction is completed, if a fence was torn down, or a tree removed, the City will be required to install a new comparable one for you. During construction, the contractor is going to make efforts to avoid damaging your property and it is possible that some improvements located within the temporary work area easement may not be damaged.*

46. Also, our properties will be more valuable in the five years that it might take for the city to begin work in our neighborhood so why have our properties appraised at this early date?

*The Army Corps of Engineers has directed the City to acquire the property rights needed for the project by the end of May 2020. The purchase price is determined at the time of purchase. This is standard practice.*

Questions from October 15, 2019 council meeting

47. The composite channel will greatly increase the amenity value of the project for the six blocks of the Rio de Flag north of the tracks. Why has there been so little attention to 30 blocks south of the tracks?

*The RDF project will divert flows out of the Southside. The existing Rio de Flag channel in the Southside is not part of the scope as designed by the US Army Corps of Engineers. Improvements to the Rio south of the tracks in the Southside could be a future project if funding becomes available.*

48. Engineering: Please describe US Army Corps of Engineers (ACE) policy regarding projects with BCR < 1. To your knowledge, how often has ACE led other projects with BCR < 1? Are you fully confident that ACE will not reverse course on their decision to lead this project?

*The Benefit Cost Ratio is still a component of the RDF project and will be reported. The US Army Corps of Engineers funding has been proposed by General Semonite and the US Army Corps will continue to lead the project in accordance with the Project Cooperation Agreement. Staff has not completed the research of US Army Corps' project with a BCR < 1.*

49. Capital Improvements: what estimated payments to BNSF are you using in your cost estimates of project costs? My understanding is that ACE cannot share the costs of bridges – at least for road bridges. The shoo-fly is a bridge for a railroad. If the shoo-fly is part of the project, can the ACE pay 65% of the cost of the shoo-fly?

*The City is still working on this issue with BNSF to determine the cost to construct the RDF project across their ROW. The US Army Corps of Engineers has not commented on the cost, and if they will share the cost of a shoo-fly as outlined in the Project Cooperation Agreement. The railroad bridge is a flood control feature, not a sole City responsibility.*

50. For the moment, let's ignore the BNSF demand for \$25 million for a shoo-fly (third rail) over the culvert where it crosses under the tracks. Even if that cost disappears, the City must pay BNSF to run the culvert and open channel on railroad land for about a mile. If BNSF were to demand \$5 million of \$50 million for allowing this disturbance to their property, does the City have to pay whatever BNSF demands? Does the City have any leverage in negotiating payments to BNSF?

*The cost allocations will be based on benefits delivered. The City is not certain that BNSF will require compensation for the right to install the underground box on their property. Continuance with agreements will define roles and responsibilities for work and cost.*



51. If the ACE project is built, would there be public access to the half-mile of open channel on BNSF land?

*The open channel in the lower reach is on BNSF and City property. The City cannot guarantee public access on BNSF property.*

52. To what extent does the current project plan differ from the project (Alternative 6b) that the ACE approved in the Final Environmental Impact Statement (FEIS) of September 2000? Do you have any concerns about proceeding with a project that differs from the project approved in the FEIS, especially when the FEIS will be 20 years old by the time City Council is asked to commit to the project?

*The current plan and alternative 6B differ in, the upper reach, Bonito Rd. to Route 66, 6B proposed a soil and riprap channel with two blocks of a covered channel, the approved plan is an underground concrete box culvert with the composite channel on top. The City has had no indication from the US Army Corps of Engineers that the current scoped project is not approved or that there are any issues with the environmental process. The design is managed by the US Army Corps of Engineers and it is in final review.*

53. On an ACE project, the local partner (City of Flagstaff) must pay 100% of the cost of bridges. In the mid-2000s, the ACE design included an open channel from Frances Short Pond to the railroad, but the City asked ACE to underground the Rio because the ACE plan required 7 new bridges (including 5 vehicle bridges and 2 pedestrian bridges) between Frances Short Pond to the railroad. Did the City ever consider building low-water crossings of the Rio that would cost a tiny fraction of bridges? (photos of 2 types of low-water crossings below. Basically, they allow vehicles and pedestrians to cross when the stream is dry or low flow, but to take another route during the few days per year when the water is deep)

*The City is responsible for all bridge relocations but in no case for more than 35% of the total project cost. Elimination of the bridges was a result of the value engineering to use a concrete box culvert. The City has always felt that maintaining the Aspen, Beaver, Cherry, Dale and Bonito street crossings to be critical to community connectivity in the downtown area and the current design eliminates the need for low flow crossings and street closures.*

54. Councilmember McCarthy asked about the maintenance of the culverts (seems to be a follow up from public participation.) Greg provided some response to the maintenance. Expectation is that a full response be placed on the stormwater website

*Public Works anticipates traditional open channel maintenance to be performed. For the underground infrastructure, a maintenance plan will be developed that may include equipment needs and frequency of cleaning. Maintenance will also comply with the O & M manual to be provided by the US Army Corps of Engineers.*

#### Questions from October 1, 2020 Navajo Drive Property Owner's meeting

55. Can we save the trees? Hopi Tribe harvests trees from the Rio for their tribal ceremonies, can those remain?

*We will investigate saving as many existing trees as possible.*

56. Will the channel adjacent to Navajo Dr. be concrete-lined?

*It was clarified that the channel is not concrete lined.*

57. Who will maintain the Channel?

*The City Stormwater Section will have the maintenance responsibility of the project.*

58. How will we deter people from going in the area between the floodwall and the private fences?

*The Corps has been asked to investigate options.*

59. Plastic stabilization netting is unsightly, please use something that degrades.

*Noted. Design team will work with the Corps to explore options.*

60. Can we move the FUTS to the west to Aztec Street?

*Outside of the scope of work for the flood control project. The citizen will contact the FUTS coordinator at the City.*

61. What if there is a 200 or 500-year flood?

*This project is designed to contain the Army Corps 100-year flood volumes. Larger events may overtop the channel and flood the surrounding area.*

62. Can I see the Environmental Impact Study?

*Yes, this has been requested from the Corps. They are currently working on the current revision. When the Study becomes available it will be posted on the website at: <https://www.flagstaff.az.gov/4189/Rio-De-Flag-Flood-Control>*

63. Can I see the landscape plans for the area?

*Yes, a hard copy of this plan was provided to the resident who requested them.*

64. Can trees be planted on the channel sides?

*Revetment or riprap will not allow for growth of large trees.*

65. Will this project cause me to need flood insurance?

*Stormwater Section is investigating this question.*

66. Will the Corps follow weed mitigation requirements during construction?

*Yes. The Corps is developing those plans currently.*

67. Will the City have a presence on site during construction?

*Yes. The details of what that looks like is yet to be determined.*

68. Will there be a staging yard for the construction?

*The parking lot west of Marshall School is designated as a staging yard that the US Army Corps' contractor may use.*

69. Will this affect our wells on our property?

*It is not anticipated that the wells will be affected by this project.*

70. What happens if the property fence/wall needs to move?

*The project will replace in kind any existing improvements that need to be removed.*

71. Why not construct a detention basin in Thorpe Park?

*This was investigated as part of the original early 2000s feasibility study. It was determined to be too impactful to the area as far as the footprint of the basin and the risk of breach of the embankments and floodwalls that would be required.*