

#	Comment	Name	Response
1	I oppose the planned stream restoration at Taylor Run for many reasons: 1) the funding should be used for other purposes including caring for those suffering from the pandemic and for open space, 2) there is no evidence that the water quality in Taylor Run was tested to verify nutrient overload 3) experts such as John Field have advised that different adjustments can be made to Taylor Run to address specific issues and contain areas of erosion without a massive construction project to raise the stream bed and clear cut the forest, 4) the current plan will harm the acidic wetland adjacent to the stream and also unnecessarily cause the loss of many native plants and trees, and 5) there is no evidence that Taylor Run ever had a flood plain in the length of stream area where the city wants to create one.	Jeremy Flachs	1.The City Council has appropriated local funding and approved the receipt of state matching funds for the project. These funds cannot be used for the purposes suggested. 2.The project is consistent with the approved approach. 3.We met with Dr. Fields and others onsite in early November and working on incorporating comments where applicable. 4.The current plan will not impact the acidic seepage swamp/wetland. The minimal amount of vegetation will be impacted. Without restoration, vegetation will continue to be impacted by stream degradation. 5.The City is not recreating a floodplain. However, historically there was likely a floodplain associated with the stream before it was severely eroded and in the present condition.
2	Was this related to a new residential development proposed on King Street near Church?	NT Crowley	This project is a City capital improvement project and is not associated with any private development.
3	Don't see any advantage, and see many disadvantages, to doing this.	Susan Boyd	Thank you for taking the time to submit your feedback. The goal is to restore the stream corridor to halt the degradation and replant with native species.
4	How can the destruction of all those trees be the solution to the problems in Taylor Run? There must be another solution.	Eileen Grant	The Taylor Run stream banks have experienced severe erosion, mostly during high-flow events. Fallen trees across the stream and newly exposed tree roots are some examples of recent active erosion during these high-flow flood events. There are 124 live trees (about 60%) located within top of bank of the stream in jeopardy of dying if the stream is not restored and allowed to continue to degrade. This process continues and is evident from the many trees that have already fallen into the stream. There are 84 live trees (about 40%) within the proposed access road, the existing sanitary sewer infrastructure easement, proposed regrading, and stockpile area. Trees to be removed will be flash cut with stamps and root left in place for stabilization unless grading required.
5	Why such destruction to gain unneeded Bay credits - how can the removal of habitat, native trees and Alexandria-rare plants possibly be justified?	Barbara Southworth	This project will not remove rare plants from the designated wetland areas. Re-planting of healthy native vegetation such as trees and shrubs is a critical component to the success of a stream restoration. The City anticipates re-planting 2,280 trees for this stream restoration including oaks, maples, dogwoods, and sycamores. An additional 7,200 shrubs are expected to be planted which include buttonbush, winterberry, and spicebush. Along with a warranty period for the re-planting material, as part of the project team, RPCA Natural Resources Division will be the main staff to ensure that invasive species are kept at bay during the establishment period for the new plantings.
6	I read all the info from the emails you sent and since I walk on that path quite often I see the need for restoration work there. I also understand the need to remove trees and other plants in order to do all the work needed. One thing I can't quiet get a picture of is what exactly are you going to do? I know the culvert that leads up to King Street is pretty steep and how are you going to fix that? What will that part of the park look like after all the work is done?	Eileen Grant	The stream itself will look very different from how it looks today and have many of the elements described in the FAQ #14, Riffles, Step Pools, Log Vanes, etc. I recommend looking at the before and after photos we have for the Stream Restoration that was done on Strawberry Run back in 2010. Here's a link to the presentation prepared for that project: https://www.alexandriava.gov/uploadedFiles/tes/oeq/info/StrawberryRunStreamRestorationWebpage.pdf If you visit that section of Strawberry Run, just off of Duke Street at Fort Williams Pkwy, you will see how the planted trees and vegetation have come back. This link can be found on the city's website, here: https://www.alexandriava.gov/tes/oeq/info/default.aspx?id=51332 near the bottom of the page. As far as the culverts from King St, yes we will be improving those outfalls to a more sustainable transition, repairing the pipe ends and end-walls damaged by the erosion. The open field will be used as equipment storage and staging of material and access to the site. We are replanting many thousands of trees and shrubs wherever we disturb the ground, in addition to planting multiple larger trees.
7	Forests are magnificent examples of the efficiency of integrated organic systems, and if we do anything at all, we should be learning how to follow their example, not destroying them. I have taken the tour of Taylor Run and done a lot of research lately. The biggest lesson I've learned is that we can't go barging into the forest with our big equipment and take out a bunch of trees without doing serious damage. And the damage won't be limited to one area. Forest systems don't function as a hierarchy. They don't have "important trees" and "unimportant trees." The participants in the system do not compete against each other to be the "best." Everything in an established forest — plants, animals, bugs, bacteria, no matter how big or how tiny — is essential to the health of the entire system. Not the smallest part of it is expendable. Even dead trees continue to help keep the forest healthy and strong by enriching the soil as they decompose. If they happen to fall across a waterway, they also control erosion of the banks by reducing the velocity of the water flowing downstream. In the top 12 inches of soil around every tree a huge system of feeder roots enables it to take up air, water, and nutrients from the soil. That root system also serves as a communication network between trees, allowing them to share nutrients and remove the bad bacteria that can make trees vulnerable to disease. Any heavy equipment brought into the forest can't help but crush these vital feeder roots, and the more that equipment is moved around, the more damage it will do. Taking out 270 healthy trees is a huge undertaking likely to traumatize the forest so much, that we risk losing all of it. This activity has been justified in the name of "development" and "increasing the tax base," but if we are not thoughtful about the way we "improve" our environment and learn to collaborate with nature instead of working against it, I'm afraid we'll do more harm than good, and end up driving people away, rather than drawing them here.	Barbara Fried	The high-flow storm events eroding the Taylor Run and threaten many older trees along and near their banks. If nothing happens to improve the resiliency of the city's streams, additional tree loss and erosion of the banks will continue to degrade these waterways. See the Taylor Run Stream Restoration FAQ#3,11 & 12 for more details.
8	I really question the value of this project which will remove over 200 native trees from the area adjacent to Taylor Run which I have walked along frequently. There is some stream erosion but bringing in bulldozers to the area will do nothing to restore it a more natural state.	Paul Kaplowitz	See the Taylor Run Stream Restoration FAQ#3,11 & 12 for more details.
9	After raising the stream bed you predict that you will create a flood plain that will occasionally flood and deposit alluvial sediment. Was there ever a flood plain before? What makes you think that flood waters won't instead scour the soil from plain?	James Clark	Taylor Run in the area of Chinquapin Park was channelized in the mid-late 1940's and over the years has down-cut to a point, now where the floodplain is mainly contained in the channel. You can see the aerial images of the floodplain area prior to development occurring before the 1940's in the FAQs, mentioned above. However, what also is contained in the channel is all the energy of the high-flow events; which is why the channel continues to erode and degrade. Despite our best efforts, the early channelization and confinement of the valley by previous development has limited opportunities for complete connection to a contiguous floodplain in the valley. What we end up with is partial inundation very near the top of the new channel and a slightly larger area of inundation at the lower section where the culvert restricts the 100-yr flow and the stream backs up. And that's all it really is, a shallow inundation. Floodplains are typically low velocity inundation that doesn't have the energy to scour. It depends on how long the inundation occurs, that determines the deposition of silt (not alluvial sediment). Periodic floodplain inundation has always been considered good for all wetlands. There is very little chance that the next 100-yr storm event will "blow-out" the wetlands adjacent to the stream.

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10	The use of city greenspace for mitigating the failure to control stormwater runoff from upstream impervious surface and inadequate storm sewer capacity is a shame. I would like to hear about Alexandria's efforts to manage these two problems before we talk about tree removal and stream bed reconfiguration.	Kirsten Conrad	Unfortunately, the environmental regulations we use to regulate development and redevelopment were not in place when the Taylor Run watershed was built out in the 1940's, 1950's, 1960's, 1970's, and 1980's. No one at those times could have predicted today's environmental challenges and consequences of those earlier developments. Building BMPs in the watershed will not reduce erosion in Taylor Run. The City does consider water quality alternatives that can help the City reach its pollution reduction mandates. However, it is the large storm events that cause the lion's share of erosion of the stream banks and subsequent sediment transport to the Bay. Now, it is not only the increased runoff from a built-out watershed, but also increased runoff from more frequent and intense rain storms. Reducing the impervious surface of the watershed helps, but the bigger more intense storms easily overwhelm the benefits of more pervious surface.
11	I submit the following comments on the proposed Taylor Run Stream Restoration Project on behalf of the more than 4,500 members of Audubon Society of Northern Virginia (ASNV). Our mission is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity. Our comments focus on the harm from this project to the sensitive and rare acidic seepage swamp in the Taylor Run stream valley. The September 2011 Conservation Assessment and Natural Resource Management Plan for Chinquapin Park and Forest Park, City of Alexandria, Virginia makes very clear that the acidic seepage swamp that is south of Taylor Run in the Park is regionally significant and the only swamp of its kind in Alexandria. It is a permanently-saturated depression formed by springs and seepage flow. An analysis of the plant types suggests the site's antiquity (i.e., its survival as a habitat that long flourished here and in a larger area in the past) and uniqueness. The habitat is also identified as important for certain wildlife requiring forested seeps and swamps for breeding. See 2011 Assessment, pp. 7-8. See also Table 1 at p. 14. There are other natural habitats and plant communities within the area of the proposed project that are important natural resources, but our comments focus on the acidic seepage swamp, the most unique habitat in the Park. ASNV is concerned that the proposed project, without modification, would destroy permanently this important natural resource. The only measure the project design (presented at the September 29, 2020 public engagement meeting) proposes for avoiding adverse effect on the seepage swamp is NOT routing a temporary trail through the wetlands. Unfortunately, that one measure will not avoid damage to the wetlands area. The plan still routes a broad access path for heavy equipment immediately adjacent to the wetland. Construction of such a path likely will involve fill. Heavy equipment rolling by the wetlands will distribute soil from other areas of the Park as well as associated roadways and possibly other construction sites. The traffic and fill will 1) compact the soil adjacent to the wetland, potentially changing the hydrology, and 2) import invasive species, which the 2011 Assessment indicates are largely absent from the area. 2011 Assessment, p. 8. In addition to likely damage from the construction activity itself, ASNV is concerned that a stated project goal of "re-establish[ing] flood plain connection" will alter permanently the nature of the wetlands and possibly destroy the acidic seepage swamp. Staff did not reply to a question raised in the September 29 meeting regarding whether raising the stream bed in the area of the acidic seepage swamp would change the nature of that habitat. ASNV is concerned because a seepage swamp is not the classic alluvial type of wetland upon which the restoration model is based. It is formed not by flooding from the stream but by springs and seeps. Periodic flooding could change its make-up. In addition, if the stream floods the seepage swamp, it can carry into that unique environment invasive plants from upstream. ASNV understands that there are some important goals the City of Alexandria hopes to meet through this project, specifically stabilizing the stream bed to reduce contaminated runoff and stabilizing the sanitary sewer infrastructure downstream of the wetlands. That notwithstanding, ASNV believes that the City could largely meet its goals while protecting valuable natural resources by re-designing the project to focus stream restoration activities to the area closer to the outlet where erosion is most pronounced, avoiding major alterations to downstream areas adjacent to the vulnerable wetlands, and access the sanitary sewer infrastructure at the stream crossing where it is most vulnerable without constructing a broad access road adjacent to the acidic seepage swamp. In re-designing the Taylor Run project along those lines, ASNV recommends that the City also consider the following measures: Ensure that the project design and construction plans take into account a comprehensive assessment of surface and subsurface water flows and the associated natural resources. The project design should ensure protection of the seepage swamp and the water sources that are required to maintain it. Avoid construction during nesting/breeding season for local natural resources (reptiles, amphibians, birds, etc.). The City could use as a model the seasonal construction restrictions for Ft. Belvoir, which ASNV can provide upon request. If current information on potentially affected resources is not available (e.g., stream monitoring results, wildlife surveys), the City should assess those resources before proceeding. Establish a buffer zone for protecting important natural resources to ensure that trees with critical root zones within the seepage swamp are not disturbed. Erect tree and stream protection fencing during the project and consider whether post-construction measures may be appropriate to protect the seepage swamp (e.g., a post and beam fence or other unobtrusive protective design). Ensure that all post-construction planting is limited to native plants and that post-construction monitoring and mitigation continues for a period adequate to demonstrate restoration of healthy natural resource diversity in the project area. ASNV believes that by protecting the natural resources in Chinquapin Park and Forest Park, the City of Alexandria will be acting consistent with its intent to qualify as a green city, a goal it has demonstrated by adopting its Environmental Action Plan 2040. ASNV appreciates your consideration of its comments. If you have questions, please contact me at info@audubonva.org . AUDUBON SOCIETY NORTHERN VIRGINIA Connie Ericson, Chair Advocacy	Connie Ericson	See the Taylor Run Stream Restoration FAQ#1 & 5 & 8 & 14 for more details. Swamp is outside the limits of disturbance.
12	The City has announced that it will be holding a public hearing on September 29th to discuss its proposal to reconstruct a 1,900-foot segment of Taylor Run. While we have not yet seen the City's plan (it was posted briefly on the City's website last week but was quickly withdrawn), we understand that the City is proposing to cut down more than 250 trees and to potentially adversely affect the unique wetlands at the core of Chinquapin Park. Given this possibility, we wish to present a few preliminary comments prior to the public hearing. We may have other comments and questions, including about the purposes of and justifications for the project, after the public hearing. The City has very few special natural settings. The parkland surrounding Taylor Run is one of them. The park is home to more than forty-five plant species that are rare in the City as well as a wetlands type that is globally rare. It is also home to a wide variety of mature hardwood canopy and understory trees. These features, along with the stream, combine to create an almost jungle-like area that is unique in Alexandria. Based on the withdrawn plan and other information the City has produced, it appears that a significant number of large trees - including the City co-champion red maple - are to be felled. Many others will be in the proposed construction path and would be subject to root damage over the construction period. The wetlands, too, would be in jeopardy, as one of the objectives of the reconstruction would be to "reconnect" the stream to the wetlands in times of high-water flows. Those wetlands are non-alluvial wetlands independent of the stream and could be severely damaged if flooded by the stream. We want the City to ultimately design a plan that protects the wetlands and the major groves of mature trees along the stream, not only during construction, but afterwards as well. We would prefer the City to do this before they present their plan on September 29th, but recognize that the City may wish to hear other comments and ideas at that meeting before amending its plan. We appreciate that the City has emphasized that the plan that appeared on the website is still under review and open to revision. We trust that the City is genuinely open to revising the plan both before and after the public meeting. We strongly urge that before the City proceeds further with its plans, it hold an on-site meeting that includes its storm-water staff and their outside consultants, the City's natural resource experts, representatives of Virginia's Department of Environmental Quality, and an expert in alternative stream reconstruction methods to consider how the wetlands and key trees are to be protected. A citizen representative and a City Council member should participate as well. We look forward to participating in the public hearing and learning the details of the City's proposal.	Brookville Seminary Valley Civic Association Cameron Station Civic Association North Ridge Citizens' Association Parkside of Alexandria Seminary Civic Association Seminary Hill Association Seminary Ridge Civic Association Seminary West Civic Association Strawberry Hill Civic Association Taylor Run Civic Association Wakefield Tarleton Civic Association	Taylor Run plans are posted on Taylor Run project page for public review and comments. During initial design phase proposed plan was modified to avoid impacts to the wetlands and acidic seepage wetland. City's Consultants are working to protect large trees by changing access road alignment. Wood mats will be placed to avoid impacts to the roots. To restore the tree Canopy current design plan proposes replanting of around 2200 native trees and around 7000 shrubs. City is working with small expert group of residents, Natural resources department and also planning to hold additional public information meeting before finalizing design. Please see Taylor Run Restoration FAQ#2, 4, 8, 11 & 12, 13 and 18 for more details.
13	How have you actually avoided impacts the acidic wetland? What about the hundred of trees that will be taken down? The dozens of rare plants identified by the Nat Resource staff? The current plan will cause widespread damage to all these resources, which also protect the Bay.	Anne Peterson	The delineated wetlands are located outside the disturbed area for the project. They are also up-hill from the work area, so any runoff from disturbed areas will not be draining into the wetlands. As shown via aerials in the September 29 public meeting that can be found onsite at https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629 , the area has been impacted over the years. Degradation of the stream corridor continues. The plan includes the replanting of 30 different native species of almost 11,000 trees and shrubs.

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14	Will the raised stream bed near the acidic swamp change that feature to floodplain?	Connie Ericson	The delineated wetlands are located outside the disturbed area for the project. They are also up-hill from the work area, not downhill. Raising the stream bed will bring it near it's historic elevation, thereby not appreciably impacting the wetland.
15	Please explain during the meeting what steps are planned to protect the Acidic Seepage Swamp. It is regionally significant and is the only known example of its type remaining in the City of Alexandria. This kind of habitat is now rare throughout its global range as a result of urbanization. A similarly rare habitat in Arlington County (the Magnolia bog) was preserved, as I hope this one will be, not only because of its unique hydraulic and geologic characteristics but also because it harbored plants and associated habitat that are now rare in northern Virginia.	Connie Ericson	The delineated wetlands are located outside the disturbed area for the project and will not be impacted. They are also up-hill from the work area, so any runoff from disturbed areas will not be draining into the wetlands.
16	Why not drain the "wetland" area? It is not a true, natural wetland but rather a swamp created from water runoff from the parking area above.	Freeman Jelks	The delineated wetlands are located outside the disturbed area for the project. There is no reason to drain the wetlands.
17	This plan reminds me of the terrible decision to build the Potomac Yard Metro station in a wetland where alternatives existed, with the excuse that the City can destroy a large part of the wetland and City Park but then replant and engineer a new and healthy wetland. This is fiction. The replanting will never replace the ecosystem in place which appears to be functioning well without any help.	Jeremy flachs	The delineated wetlands are located outside the disturbed area for the project. They are also up-hill from the work area, so any runoff from disturbed areas will not be draining into the wetlands. As shown via aerials in the September 29 public meeting that can be found onsite at https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629 , the area has been impacted over the years. Degradation of the stream corridor continues. The plan includes the replanting of 30 native species of nearly 11,000 trees and shrubs.
18	Two wrongs don't make a right. We don't need bulldozers in Taylor Run	K Bawer	The area disturbed by this restoration will be kept to a minimum based on the very narrow nature of the stream and it's banks. The area of impact will not go past the edge of the walking path. The walking path generally aligns with the sanitary sewer easement and should remain free of vegetation. Bulldozers will not be used for this type of work.
19	Until the planted trees reach the size of those removed, what amount of carbon sequestration is lost?	K Bawer	The erosion around the stream threatens many other trees along and near their banks. If nothing happens to improve the resiliency of the city's streams, additional tree loss and erosion of the banks will continue to degrade these waterways. There are opportunities to be considered with tree planting. Due to the project using many of the impacted trees in the stream restoration design, and placing the trunk logs at the bottom of the stream channel, the sequestered carbon in those trees will remain sequestered. Additional carbon uptake will occur when the new trees, grasses and shrubs are planted and they begin to grow. 30 different native species of about 11,000 trees and shrubs will be planted.
20	We get 100 year floods every year now.	K Bawer	Like other localities in the region, the City is experiencing more frequent, intense rainfall events. We are working with staff, consultants, staff from our neighboring jurisdictions, and elected officials to address flooding issues.
21	Why are designers recommending creating a new extensive floodplain when one does not exist today? Won't this higher level surface be worn away by stream erosion thus negating any nutrient/sediment reduction benefits from this project?	Anne Peterson	The purpose of the Taylor Run stream restoration is to address the current state of erosion and downcutting. The stream bed will be raised and the stream's energy will be dissipated through the stabilization of the bed. The restoration goal is to return the stream back to a natural state as much as possible and not create additional floodplain.
22	Are you going to work within existing stream geometry or will new meander geometry be created?	Don Brady	The work will take place within the existing stream geometry.
23	Isn't NCD better suited to wide Western watersheds than narrow, naturally deep-channel, headwaters streams?	Erin Winograd	Natural channel design (NCD) methodologies are applicable to most natural river systems throughout the world. The NCD method is based on the idea that natural, dynamically stable streams can be studied to provide the basis for the restoration of disturbed sites. The method is suitable for use in small headwater streams and is supported by USGS regional curve information as well as other local data. As the Taylor Run watershed has been developed the stream bottom has downcut, deepening the channel and disconnecting flows from the surrounding floodplain. This evolution is, in part, shown in the historic aerials given in the concept plan (posted online). This overly deepened condition intensifies erosion and leads to further channel degradation, harming downstream areas and threatening surrounding infrastructure. The restoration of disturbed urban systems such as Taylor Run are influenced by existing site constraints (roads, utilities, valuable natural features, etc.) and require the application of NCD, in combination with other modified design approaches (bankfull benches, localized bank stabilization measures) to account for the challenges of confined valleys and vertical constraints (culverts, sanitary sewer crossings, etc.). The end goal remains - a stable stream channel and healthy riparian ecosystem.
24	The complex web of interactions between fauna, flora, geology, and hydrology that interact in natural areas is irreplaceable and cannot be recreated by engineering projects using bulldozers, backhoes, and trucked-in material to create artificial structures in our natural areas (think Humpty Dumpty). We should be guided by the principal of "Do No Harm" in our stream valleys.	K Bawer	See FAQ # 19. "Do No Harm" implies that there would be no harm in doing nothing. In the case of Stream Restoration on a degraded stream, particularly for Taylor Run, there is considerable risk of continued harm occurring if nothing is done to stabilize the stream banks and bed.
25	A reasonable course of action would be a common sense, temporary pause in "stream restoration" projects (with exceptions for projects noted above), and a robust, respectful, and comprehensive discussion of issues and ideas among all interested parties.	K Bawer	This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised so that natural meandering and migration no longer occur. The project is now bounded by King Street and the trail. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion. No bulldozers will be used. Of the 269 trees currently slated for removal, 20% are dead, with many more in jeopardy of dying from the accelerated erosion. Based on aerials provide at the Sept 29 public meeting, the area has been clear-cut over the years. The restoration includes planting about 11,000 trees and shrubs of over 30 different native varieties.
26	The headline of an article in the Baltimore Sun by Scott Dance says, "As Maryland pours millions of dollars into ailing streams, research shows some projects don't help clean the bay." Plus, "There's limited evidence these restorations work, as far as ecology is concerned," said Robert Hilderbrand, an associate professor at the University of Maryland Center for Environmental Science's Appalachian Laboratory in the article. (Dance, Scott, 2020)	K Bawer	Thank you for taking the time to submit your feedback. Your comment has been recorded. The City's design is consistent with the approved VDEQ and Chesapeake Bay Program approach.
27	There are non-destructive riparian (along stream) alternatives to "stream restorations" Riparian Forest Planting and Riparian Conservation Landscaping. Examples of non-destructive in-the-stream valley practices include Riparian Forest Planting and Riparian Conservation Landscaping. Per Noe et. al. (2013), "Nitrate production by floodplain soils is minimized where the forests are shady, trees are most abundant, and herbs and grasses are least abundant." Such non-destructive projects would allow residents to walk through stream valleys and be rejuvenated by nature, rather than being forced to commune with the results of engineering plans implemented by bulldozers, backhoes, and dump trucks that have destroyed parts of our once-natural areas.	K Bawer	This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised so that natural meandering and migration no longer occur. The project is now bounded by King Street and the trail. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion. No bulldozers will be used. Of the 269 trees currently slated for removal, 20% are dead, with many more in jeopardy of dying from the accelerated erosion. Based on aerials provide at the Sept 29 public meeting, the area has been clear-cut over the years. The restoration includes planting about 11,000 trees and shrubs of over 30 different native varieties.

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Response to Public Comments Received through October 23, 2020

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28	Unfortunately, most "stream restorations" (with some exceptions such as "daylighting" piped streams and concrete culvert removal) convert sections of natural stream valleys into artificial, engineered stormwater conveyances.	K Bawer	This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. The goal is to improve local water quality, enhance and conserve the stream ecology, and the public infrastructure, while meeting Bay goals. (The City is in the Bay Watershed.) Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion.
29	One study (Palmer et. al., 2014) states that "improvements in the five metrics within the water quality category (Table 2) were found for only 7% of the channel reconfiguration projects and for none of the in-stream channel projects (Table 2). ... Unfortunately, recovery of biodiversity was rare for the vast majority of stream restoration projects. ...a recent study has shown that watershed-scale, out-of-channel management practices to restore urban streams can be quite successful."	K Bawer	This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised so that natural meandering and migration no longer occur. The project is now bounded by King Street and the trail. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion. No bulldozers will be used. Of the 269 trees currently slated for removal, 20% are dead, with many more in jeopardy of dying from the accelerated erosion. Based on aerials provide at the Sept 29 public meeting, the area has been clear-cut over the years. The restoration includes planting about 11,000 trees and shrubs of over 30 different native varieties.
30	The scientific basis for the claimed benefits of "stream restoration" projects is disputed in the published literature. The reasonable and conservative course of action would be to err on the side of caution and temporarily pause "stream restorations".	K Bawer	This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program.
31	There are serious concerns with some of the recommendations and scope of the Chesapeake Bay Program's Expert Panel on stream restoration. Bill Stack (Stack, B., 2019) wrote, "I helped lead the effort in developing the Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects with Tom Schueler of the Chesapeake Stormwater Network. ...[T]he Expert Panel [recognized] the root causes of stream bank erosion: impervious cover. ...As a result, municipalities are spending enormous amounts of money on projects that generate the necessary water quality credit but have no real impact on stream function. ...Perhaps [change] will come after we spend billions of dollars on these projects and the taxpayers ask, 'Why can't I catch fish in this stream?'"	K Bawer	Thank you for taking the time to submit your feedback. Your comment has been recorded.
32	How long is the project guaranteed for (i.e., from blowouts, planted tree deaths, etc.)?	K Bawer	Typically, stream restoration projects require the contractor to warranty work for a period of one year. Generally, any failures or damage seen during this period would be the responsibility of the contractor. This period is critical as native vegetation is reestablished. Any plantings not surviving the first growing season would also be replaced by the contractor under the construction contract. Following the first year federal permitting requires additional monitoring (typically 3-5 years) during vegetative establishment. After the permit monitoring period the City maintains responsibility for the project. Unlike other types of stormwater BMPs stream restoration projects are designed to achieve long-term stability, getting stronger with time as woody vegetation is reestablished. Long-term maintenance is expected to be relatively minor, mainly centering on invasive management and periodic removal of debris/trash from the downstream culvert (as is being performed currently).
33	Will the City agree to work with Dr John Field, a fluvial geomorphologist and stream restoration expert who is advising the Environmental Council of Alexandria?	Anne Peterson	The City has held an onsite meeting with 'experts' and representatives from civic associations, along with the City's project team. Specifically, the onsite group included ECA, Dr. Field, Russ Bailey, Rawles Jones, and Carter Fleming; along with experts from Wetland Studies and Solutions (the design engineer). The meeting was productive and the project team is pursuing ways to incorporate items from the discussion into the project design. In addition to a well-respected consultant, the City's project team includes members of T&E, RPCA, and DPI.
34	Thank you. I know you all work hard but this is very disruptive to citizens and educators who love this spot :) If the disruption is not worth it I would like to avoid it.	Lexye Hearing	The goal or objective for the stream restoration is to halt the degradation of the stream corridor and protect it from further degradation. There will be unavoidable disruption for a while as a consequence of this effort. We would welcome ways to partner with citizens and educators in the effort to restore the stream corridor and ensure that it is better than ever.
35	The Taylor Run restoration project is doing more harm than good. Please revise it taking into account the existing flora and fauna at the site.	Anne Peterson	Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion. Of the 269 trees currently slated for removal, 20% are dead, with many more in jeopardy of dying from the accelerated erosion. Based on aerials provide at the Sept 29 public meeting, the area has been clear-cut over the years. The restoration includes planting about 11,000 trees and shrubs of over 30 different native varieties. Wetlands are outside of the project area and will not be impacted. This project will not remove rare plants from the designated wetland areas. Re-planting of healthy native vegetation such as trees and shrubs is a critical component to the success of a stream restoration. The City anticipates re-planting 2,280 trees for this stream restoration including oaks, maples, dogwoods, and sycamores. An additional 7,200 shrubs are expected to be planted which include buttonbush, winterberry, and spicebush. Along with a warranty period for the re-planting material, as part of the project team, RPCA Natural Resources Division will be the main staff to ensure that invasive species are kept at bay during the establishment period for the new plantings.
36	Trees are not problematic, this project is.....	Anne Peterson	Thank you for taking the time to submit your feedback. Your comment has been recorded.
37	And Strawberry run is a mess at the bottom as it's not maintained	Fran Vogel	Thank you for taking the time to submit your feedback. Your comment has been recorded. The lower portion of Strawberry Run will be protected when the upper portion is restored. We will perform any maintenance as needed.
38	Clearly, and I believe that is a lost opportunity. That area is unattractive, catches trash from the water run-off from the paved areas above & could easily be transformed to an attractive, walkable area rather than the mosquito hatchery it is today.	Freeman Jelks	Thank you for taking the time to submit your feedback. Your comment has been recorded. We do believe it is a wise and cost-effective way to restore the environment and protect infrastructure, while meeting the goals to clean up local waterways and the Bay. We will continue to post updates on the process to the project website. https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=11762
39	Jesse: Why are you dismissing my questions?	Jeremy flachs	During the Zoom meeting, complex questions were tagged as "dismissed" only in that they would need to be addressed later during the comment period.
40	Jessie Maines: Clear the air about your church. Who said what to whom when about your proposed construction project in Taylor Run	Jimm Roberts	As stated numerous times, to include at the meeting, I am a member of First Baptist Church. The degradation of Taylor Run has been documented for years before I joined the church. The Phase III Stream Assessment prioritized Taylor Run as a candidate for restoration. Contrary to the assertion, everything has been and remains above board.
41	Why was my comment dismissed?	Mary Zoeter	Staff received over 130 comments during the public meeting and did not have the ability to answer every question that came through which is why comments and responses are being provided during the comment period.
42	Where are results vs. goals for past projects posted?	K Bawer	See the Taylor Run Stream Restoration FAQ#14 & 15 Sheet for more details.
43	Are there alternative stream restoration techniques for this type of situation and project goals? I'm just trying to understand the options considered in the project design and what various individuals/groups in the community may be proposing as alternatives to the current strategy.	Bill Pugh	The City is utilizing the Expert Panel's recommendations for stream restoration practices in the Chesapeake Bay, as approved by the Virginia Department of Environmental Quality (VDEQ) and the Chesapeake Bay Program. To learn more visit https://chesapeakestormwater.net/bmp-resources/urban-stream-restoration/ .

#	Comment	Name	Response
44	What can be done at the state level to prevent stream ecosystem destruction?	Lily Fountain	Taylor Run is located in the City of Alexandria, VA, a fairly dense urban community with a population of 160,000 in 15 square miles. The stream degradation that the City is working with the community to restore occurred over many decades starting with moving the stream from its original channel and piping segments of the stream underground to allow for development. There are several federal, state, and local laws that protect our waterways and the City is acting under the state-issued M54 permit to restore Taylor Run to help improve local water quality and the health of the Chesapeake Bay, downstream.
45	What potential impacts do you anticipate to the use of the heavily used trail during construction, and what is the anticipated duration?	Vivian Daub	Unfortunately the trail will be closed during construction to protect the adjacent natural areas and for the resident safety. A bypass uphill through the park will be marked.
46	How do you plan to deal with the rodents who will scatter during the project?	Ann Shack	There is no evidence of a rodent population at the site.
47	How do the critters get out of the way of bulldozers and other heavy equipment?	Jeremy flachs	Animals do not stay in an environment where they will be disturbed. We have observed in other construction sites that animals will move out of the area once activity begins.
48	I don't think a box turtle or toad can outrun a bulldozer.	K Bawer	Animals do not stay in an environment where they will be disturbed. We have observed in other construction sites that animals will move out of the area once activity begins.
49	What happens to the amphibians, reptiles, etc. that are within the construction site?	K Bawer	Animals do not stay in an environment where they will be disturbed. We have observed in other construction sites that animals will move out of the area once activity begins.
50	What are the impacts of soil compaction (not the construction staging or access road areas)?	K Bawer	Timber matting is used on the access road to mitigate compaction. Place soil material is compacted to stabilize, but most of those areas have cobble placed underneath that allows percolation and inflow. Soil compaction slows flows but does not restrict flow.
51	What kind of equipment and what size is used for this work?	Charles Raasch	Hand tools and construction equipment.
52	What are the streams that this project will try to mimic? Are they analogous to TR? It appears from the photos they are significantly larger and have more substantial water flows.	Russell Bailey	This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. The goal is to improve local water quality, enhance and conserve the stream ecology, and the public infrastructure, while meeting Bay goals. (The City is in the Bay Watershed.) Please refer to the expert panel report.
53	What's the minimum DBH of the trees surveyed?	Bill Pugh	The minimum diameter at breast height (DBH) surveyed for the Taylor Run is 6".
54	35% of the current tree canopy will be cut down? How is that ecologically sound or in concert with the city's tree canopy goals?	Erin Winograd	A critical element of the work is the protection of the existing trees and the landscape along the Taylor Run, The City of Alexandria and the DPI has worked extensively with the project consultants and our landscape architect to determine the specific trees for removal and also the protection during construction. The proposed tree's will responds better to stress, roots establish quicker leading to faster growth. Also they will increase the canopy line. In our stream restoration project, we plan to re-use the trees we take down for rebuilding the stream bed and banks, creating log vanes that helps stabilize the stream bed and slow the water velocity. The current proposed design includes the removal of 269 trees, 61 of which are dead, and others that continue to be at jeopardy of falling into the stream given the continued degradation of the stream. The proposed restoration includes the planting of nearly 11,000 trees and shrubs of over 30 native species.
55	Old growth trees won't come back for decades. All the carbon those trees have absorbed, that filtration system won't be replaced by new growth trees. That type of old growth tree canopy won't come back for decades. The sanctuary feel of the Chinquapin trail will be lost. Destroyed and gone.	Fran Vogel	Majority people only look at the amount of carbon that is absorbed by living trees. They don't consider the CO2 being produced by the decay process. There are lots of tree's within Taylor Run either fair condition or dead and they don't sequester carbon at all. The area has been greatly disturbed over the years as shown in the aerials presented at the September 29 public meeting that can be found on the project website at https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629 . While there will be some disturbance, doing nothing will allow the continued downcutting and degradation, and loss of near-bank trees. The proposed restoration will stabilize the stream and include planting of nearly 11,000 trees and shrubs of about 30 different native species.
56	Are dead trees not important to the stream ecology?	Lexye Hearing	Dead trees and down wood play an important role in ecosystems by providing wildlife habitat, cycling nutrients, but some of them close to the stream channel and creating more obstacle. Accelerated erosion of the stream channel continues to undermine trees causing them to fall in the stream and die, and cause blockages. These blockages increase bank erosion and flows go around the ends of the blockage further increases tree death.
57	Is true that mature tree roots help stabilize the banks?	Lexye Hearing	Plant roots can do a good job of holding soil to the stream banks if the tree's are still alive. You will find many examples of mature trees along the banks of Taylor Run with their roots exposed as the stream bank becomes more incised over time, the roots become unstable and this has caused trees to fall down. Trees to be removed will be flash cut with stamps and root left in place for stabilization unless grading required. Dead trees and down wood play an important role in ecosystems by providing wildlife habitat, cycling nutrients, but some of them close to the stream channel and creating more obstacle. Accelerated erosion of the stream channel continues to undermine trees causing them to fall in the stream and die, and cause blockages. These blockages increase bank erosion and flows go around the ends of the blockage further increases tree death. About 11,000 trees and shrubs will be planted and with the stream stabilized, should not be in jeopardy of death.
58	Why do you use the euphemism "impacted" instead of saying you are going to destroy the trees?	Mary Zoeter	Thanks for your comment. The purpose of removing trees is to restore the stream bed and stabilize the banks and for new plantings to take root without disturbance; to remove threats to existing sanitary infrastructure; and to support access and grading activities with the goal to re-use as much timber as possible within the restoration footprint. Of the total trees surveyed, 269 trees are identified in the current plans to be removed. Approximately 22% of the estimated 269 trees to be removed are dead. Approximately 11,000 trees and shrubs will be replanted for the 208 that will be removed with a chainsaw; many of which are near the top of the bank that is eroding; which undermines the tree and causes them to fall in the stream and die.
59	Do you really believe that by killing 206 trees you are going to "remove pollution"?	Mary Zoeter	The purpose of removing trees is to restore the stream bed and stabilize the banks and for new plantings to take root without disturbance; to remove threats to existing sanitary infrastructure; and to support access and grading activities with the goal to re-use as much timber as possible within the restoration footprint. Of the total trees surveyed, 269 trees are identified in the current plans to be removed. Approximately 22% of the estimated 269 trees to be removed are dead. Approximately 11,000 trees and shrubs will be replanted.
60	I feel we need to get more information before cutting downs trees and honor the green spaces we have presently.	Starlet Zarek	As part of the project, the impacted trees will be replaced with the reseeded of more than 30 native species and the planting of 10,935 native trees and shrubs with dens regrowth expected within three years. Sites where trees were removed had higher nutrient concentrations than sites where no trees were removed
61	After seeing a mature, apparently healthy tree recently cut down at TW Williams, I'm eager to learn how the city determines what mature, healthy trees to actively preserve for our community? Are there existing policies that are followed to evaluate mature trees and determine if they should be preserved? Is it considered a priority to preserve mature trees when projects like this stream restoration are being planned?	Heather Jelks	The City has a notable tree program (https://www.alexandriava.gov/Trees#NotableTreesofAlexandria). RPCA has been working with T&ES to reduce the number of trees impacted on this project, including the preservation of a notable tree within the LOD.
62	accommodate the concerns of citizens who have become so engaged over this matter?	Steven Epting	See the Taylor Run Stream Restoration FAQ#8 Sheet for more details.

#	Comment	Name	Response
63	Who will be responsible for maintaining the work against the inevitable invasive species?	Charles Raasch	RPCA closely monitors construction projects within the parks for invasive plant re-growth. As we have done in locations at Ben Brenman and Lake Cook, staff will plan to monitor and address invasive plants directly after the project has been completed and turned over to the City. This is and will be part of our work plan.
64	It would be really useful to understand how difficult it is to manage invasive in projects like this. Has anyone assessed the ratios of planted natives to invasive in the examples of past projects, say at maybe 3 and 5 and 10 years later?	Eldon Boes	There is not a City study specifically to answer this question. However, there are examples in the City, including the Duke-Telegraph interchange meadow, that was planted with natives, and is now self-sustaining. RPCA-Natural Resources has a program of pro-active maintenance which includes regular monitoring of project sites so that they don't become large, unmanageable areas, and it has been successful in controlling invasive plants.
65	Lake Cook was planted, in part, with non-native species. If that occurred under the watchful eye of city staff, what will prevent that from occurring in this ecologically sensitive area?	Erin Winograd	Lake Cook plant list was reviewed by RPCA-Natural Resources to prefer native species on site. They continue to monitor the health of that plant material.
66	Has not Ben Brenman become over welled with invasive plant life? Why go to lengths to destroy this Canopy and create problems as has happened with other projects.	Kathy McAfee	RPCA staff was on the construction site at Ben Brenman as soon as it was turned over to the City. The invasive plants did not have a chance to overwhelm the construction site, and were treated in a effective manner. Continued follow up each season will control any potential existing outbreaks.
67	After the restoration you plan to plant many native trees and shrubs. Since invasive often completely overrun restored areas and can overgrow and choke the plantings, are you early confident that you can prevent this with the resources you have?	Paul Kaplowitz	RPCA closely monitors construction projects within the parks for invasive plant re-growth. As we have done in locations at Ben Brenman and Lake Cook, staff will plan to monitor and address invasive plants directly after the project has been completed and turned over to the City. This is and will be part of our work plan.
68	Will this meeting be recorded and available for public viewing after the meeting is over?	Anne Peterson	The meeting presentation is available online at https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629 .
69	Why was this project not made more widely known to people who live in the vicinity before it got down the road this far? And what is the urgent need to do it now, given all the other problems the city faces in a collapsing storm runoff infrastructure?	Charles Raasch	The City first identified stream restoration as a viable option to achieving the Chesapeake Bay TMDL goals in 2015. After further study, the City presented results of the stream assessment to the RPCA Commission and incorporated the intent in the Chesapeake Bay TMDL Action Plan and the updated Environmental Action Plan. The Taylor Run project will help to protected sensitive sanitary infrastructure transversing the stream and is partially (50%) funded by the state.
70	I have plenty of comments and thought I was going to be able to ask those questions. I am seeing that we have to put all our questions and comments in writing. I wonder why you have not allotted adequate time to take live comments? We have heard from all the consultants hired by the City but the City has not heard from the citizens. If this is the mo for this meeting it is not a fair exchange.	Jeremy flachs	Providing public comment and response in writing assures that your comments are addressed. Staff addressed some comments during the meeting but could not address the over 100 comments, with multiple parts for each comment, at the meeting.
71	A 21 day comment period is inadequate. It should be more like 90 days.	K Bawer	Project engagement commenced early in the project in 2018 and 2019. Project outreach efforts were stalled by the COVID-19 global pandemic and have been restarted. We continue to listen and incorporate input.
72	These temporary pauses and discussions would, for example, allow all interested parties to 1) understand the selection process of "stream restorations" versus alternative upland projects, 2) have additional opportunity to provide feedback, and 3) evaluate the wisdom of continuing these projects that can cause an unacceptable loss of irreplaceable native forest, wildlife, and landscape memory.	K Bawer	Project engagement commenced early in the project in 2018 and 2019. Project outreach efforts were stalled by the COVID-19 global pandemic and have been restarted. We continue to listen and incorporate input.
73	What citizens insisted this project be undertaken? I get the distinct impression that it originated in TES and is now being justified to citizens who have to pay for a nice but not essential construction project. If my impression is correct, then you are a force unto your own deciding what's good for taxpayers.	Jimm Roberts	In 2015, urban stream restoration was identified as a potential strategy for the City to achieve compliance with the Chesapeake Bay TMDL ("pollution reduction diet"). This pollution reduction diet is a regulatory requirement passed down from the federal U.S. Environmental Protection Agency to the Commonwealth of Virginia and to Alexandria through the Municipal Separate Storm Sewer System (MS4) permit. Taylor Run was identified as a top-ranking stream restoration project based on the Phase III Stream Assessment completed early 2019 by a contractor in consultation with the City's Department of Transportation & Environmental Services (TES), Department of Project Implementation (DPI), and Recreation, Parks, and Cultural Activities (RPCA). Phase III refers to the third assessment with the first assessment completed in 2004 and the second completed in 2008. In total, 2,786 linear feet of streams were assessed throughout the City. TES presented the results of this assessment to the Park and Recreation Commission September 20, 2018 (click here for the presentation) and also hosted a public meeting on December 5, 2018. More information on the stream assessment is available on the City's Stream Restoration web page. The Taylor Run stream restoration will help the City comply with the Chesapeake Bay TMDL and is identified in 2019 Chesapeake Bay TMDL Action Plan. The Taylor Run stream restoration is identified as a mid-term action item in the City's Environmental Action Plan 2040, adopted by Council in 2018, which stemmed from the Eco City Alexandria initiative which launched with the Eco City Charter in 2008.
74	Do we have permission to use all photos taken by AECON and WSSI of this project at all stages?	K Bawer	You may use the images in the presentations, yes.
75	Is there an alternate measure developed -or- under development	Peter Zitta	Redevelopment occurring in this portion of the watershed that drains to this segment of Taylor Run includes the implementation of stormwater management BMPs. The stream is severely degraded and upstream BMPs will not halt the degradation and restore the stream. Just focusing on pollutant reduction, there is not enough public space to install BMPs in the 300 acres. Alternative BMPs to the stream restoration will mean a loss of state grant funding of \$2.225M. The total project cost is estimated at \$4.5M. Alternative BMPs, if feasible in other parts of the City would likely cost around \$20M to achieve the same level of reductions as the stream restoration project, and would not restore this severely degraded stream.
76	The City is looking to defer/cut expenses from the budget. What would the impact be on this project if it were postponed?	Ann Shack	This project is receiving funding from the Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) matching grant. If postponed, the project will lose \$2.255M in funding. The City's portion of the funding is prior year funding from the Stormwater Utility Fee revenues that must be used for stormwater management projects per the Virginia Code.
77	The 2.55 million to be spent by the City could be better used by the City to purchase open space. i.e. Karig which is a headwaters for Strawberry Run, another stream on the City's list of those with stream erosion. Why not spend this money on whatever is causing water to gush into Taylor Run up stream of the rec center? There are plenty of good storm water projects for the City's \$ without clearcutting and bulldozing Taylor Run.	Jeremy flachs	This project is receiving funding from the Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) matching grant. If postponed, the project will lose \$2.255M in funding. The funding is to be applied towards the state and federal mandates to clean up the Chesapeake Bay. The City's portion of the funding is prior year funding from the Stormwater Utility Fee revenues that must be used for stormwater management projects per the Virginia Code. Alternative BMPs to the stream restoration will mean a loss of state grant funding. Additionally, individual BMPs, if feasible, in other parts of the City would likely cost around \$20M to achieve the same level of reductions as the stream restoration project, without the benefits of restoring the degraded stream. The project does not propose to clear-cut the area.
78	Is this restoration project really necessary, especially now when city revenues are reduced, citizen needs are ever increasing and no end to the virus? Despite your copious planning and mastery of your subject, tidying up a stream bed is not a must-do project. And please get off the recurrent theme that dead trees are bad. Tenderfoot scouts know dead trees are essential for a thriving woodland	Jimm Roberts	This project is receiving funding from the Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) matching grant. If postponed, the project will lose \$2.255M in funding. The funding is to be applied towards the state and federal mandates to clean up the Chesapeake Bay. The City's portion of the funding is prior year funding from the Stormwater Utility Fee revenues that must be used for stormwater management projects per the Virginia Code. Alternative BMPs to the stream restoration will mean a loss of state grant funding. Alternate BMPs to meet the Bay mandates would likely cost around \$20M to achieve the same level of reductions as the stream restoration project, without the benefits of restoring the degraded stream.
79	What was the basis of the grant request? What exactly did TES cite when seeking funds from others? I'm led to believe that the grant request was intended to mitigate the release of odious run-offs into the Chesapeake Bay. However, unless I missed it, I heard nothing about the Bay. The closest I heard was something about "Water Quality" in a meandering impossible to understand too-long soliloquy by Jessie Maines	Jimm Roberts	Urban stream restoration is a major strategy in the City's Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan. This project's application to the Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) matching grant included a concept design that was consistent with the expert panel and approved by Council. The project was visited by VDEQ prior to award of the \$2.25M in SLAF funding. The funds must be applied towards the state and federal mandates to clean up the Chesapeake Bay.
80	What is the Total Cost of Ownership of this project. That is, construction cost + cost to replace structures blown out by future storm events + cost to replace planted trees that die (for how many years) + cost to remove invasive plants (for how many years?), etc.	K Bawer	Total project funding is estimated at \$4.5M with \$2.255M in state water quality grants. The life-cycle cost of stream restoration is very low (estimate around \$1,000 or less annually).

City of Alexandria | Taylor Run Stream Restoration
Response to Public Comments Received through October 23, 2020

#	Comment	Name	Response
81	Sorry if I missed it, but what is the projected cost of the restoration effort?	Elizabeth MacIntosh	\$4.5 million total with \$2.255 million of that total cost through a Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) grant for water quality improvements.
82	Isn't fixing the sewer outflow into the Potomac River a water quality project? Wouldn't this money be better spent on accelerating the fix to that problem (millions of gallons of raw sewage), particularly in light of the number and severity of flooding events? Bigger bang for the buck, especially given that Taylor Run puts almost no phosphorous into the Bay watershed.	Erin Winograd	Please visit RiverRenew to learn more about the efforts to remediate combined sanitary sewer overflows. The Taylor Run stream restoration project supports the City's stormwater management efforts as required through our Municipal Separate Storm Sewer System (MS4) permit. The stream restoration will be working to reduce nitrogen, phosphorus, and sediment from entering the Chesapeake Bay, while addressing the ongoing degradation to the stream corridor.
83	How much will this project cost?	K Bawer	\$4.5 million total with \$2.255 million of that total cost through a Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) grant for water quality improvements.
84	How many canopy trees can the City plant with 1.1 million dollars, which is half the amount the City is proposing to spend on this Project? How much run off water would these trees absorb and what would the pollution reduction be for these trees?	Jane Seward	This calculation has not been done. Re-planting of healthy native vegetation such as trees and shrubs is a critical component to the success of a stream restoration. The City anticipates re-planting 2,280 trees for this stream restoration including oaks, maples, dogwoods, and sycamores. An additional 7,200 shrubs are expected to be planted which include buttonbush, winterberry, and spicebush. Along with a warranty period for the re-planting material, as part of the project team, RPCA Natural Resources Division will be the main staff to ensure that invasive species are kept at bay during the establishment period for the new plantings.
85	Has there been any attempt to downscale the project? For example, have we looked at what could be done with half as much money, and what percentage of the benefits could still be realized? Wouldn't a marginal cost vs benefits analysis be prudent?	Eldon Boes	This project is receiving funding from the Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) matching grant. If postponed, the project will lose \$2.255M in funding. The funding is to be applied towards the state and federal mandates to clean up the Chesapeake Bay. The City's portion of the funding is prior year funding from the Stormwater Utility Fee revenues that must be used for stormwater management projects per the Virginia Code. Alternative BMPs to the stream restoration will mean a loss of state grant funding. Alternate BMPs to meet the Bay mandates would likely cost around \$20M to achieve the same level of reductions as the stream restoration project, without the benefits of restoring the degraded stream.
86	Isn't Wetlands Studies owned by Davy Tree, whose business is cutting down trees?	Erin Winograd	Davy is the parent company for WSSI and other firms.
87	Are you amenable to having a third party critique your plan? Has any outside entity reviewed it?	Jimm Roberts	The Taylor Run stream restoration project is managed by the City of Alexandria (DPI, RPCA, SWM) and a team of qualified consultants. The City's project team includes arborists, naturalists, engineers, landscape architects, and environmental scientists. City staff from T&ES, RPCA and DPI are involved with the consulting team on the project.
88	The Environmental Council of Alexandria recommends that you hire noted expert John Field to review your proposal. Are you planning to do that?	Vineeta Anand	The Taylor Run stream restoration project is managed by the City of Alexandria (DPI, RPCA, SWM) and a team of qualified consultants. On Saturday, 11/7 the City's project team, including WSSI, met onsite with ECA, Dr. Field, and representatives from local civic associations to discuss the project. Staff will be following up with this group to discuss concerns/issues raised and to discuss potential ways to address them.
89	Has the Natural Resources Division prepared an independent review of the plan, in particular impacts to existing flora and fauna? And will the City release this EIS to the public?	Anne Peterson	The Natural Resource Division has reviewed and provided comments and concerns to the design team during the design process. The Natural Resource Division is not qualified nor does it have the resources to conduct a formal Environmental Impact Study (EIS).
90	The City's team is top heavy with engineers. The team is lacking in ecologists, entomologists, herpetologists and botanists. The one botanist on city staff, Rod Simmons, has identified 25 highly rare plant species in the acidic seepage and 15 highly rare plant species in the direct path of the Taylor Run construction foot print. Why hasn't this been published?	Jeremy flachs	RPCA-Natural Resources provides comments and concerns to the design team during the development process. These concerns has resulted in a reduction of impact from early designs to the current one. Continuing conversations have identified additional items that can be conserved. This process is a collaboration to ensure input from various sources is incorporated into the final design.
91	Does the Natural Resources Manager of Alex agree with doing this Taylor Run project?	K Bawer	See the Taylor Run Stream Restoration FAQ#18 Sheet for more details.
92	Who are the naturalists, ecologists, and arborists who have endorsed this project?	Mary Zoeter	RPCA has had several staff members from the start of the project through the design process to submit comments and concerns to the design team. We do not have credentialed specialists in riparian structures and design, and focused the comments on areas within which staff had experience or certification.
93	What range of expertise and input went into the design of these restoration projects; what types of scientists were consulted? Given that stream restoration is a changing and evolving field, what diligence did you do to incorporate latest science? Given that there are many objections to the current plans, what can you do to accommodate the concerns of citizens who have become so engaged over this matter?	Whitney Redding	The Taylor Run stream restoration project is managed by the City of Alexandria (DPI, RPCA, SWM) and a team of qualified consultants.
94	Are we going to star	Bob Gronenberg	Question pertaining to starting the presentation.
95	Click on "Slide Show"	Bob Gronenberg	Technical issue during the virtual public meeting that was resolved.
96	Received an email from a friend who is having trouble getting in. That may be why only half of registrants have logged on so far.	Erin Winograd	Technical issue during the virtual public meeting that was resolved.
97	I know the problem	K Bawer	Technical issue during the virtual public meeting that was resolved.
98	Meeting requires you to join and activate a zoom account, most meetings do not require participants to open an account in their name--that is why people are having difficulty, they are reluctant to download/open an account	Roy Byrd	Technical issue during the virtual public meeting that was resolved. You do not need a zoom account to join.
99	Could you explain what the symbols in the stream design slides mean? Also is the plan to raise the stream bed throughout?	Connie Ericson	The symbols on the grading plan (sheets 10-13) represent different types of in-stream grade control structures that will be used to stabilize the channel. A legend is presented on sheet 10. The longitudinal profile on sheets 14-17 provides a look at where the stream bed will be raised. The thick dashed line shows the existing channel bottom relative to the proposed bottom. Generally speaking, the design will raise the channel to reduce channel depth and stresses, reestablishing a more natural flow exchange with the surrounding riparian corridor.
100	If you raise the stream bed to bury the sanitary sewer what makes the City think that water flow over time will not uncover the buried sanitary sewer? The City should hire John Field who is a fluvial geomorphologist. He will have a more targeted solution to some of the problems the City has identified. The key is more targeted, rather than wholesale destruction.	Jeremy flachs	Fill material used to raise the stream bed will be encapsulated by a carefully designed reinforced bed material, appropriately sized based on calculated shear stress in the channel. This material (a mixture of rock (mean diameter of 13.2"), bank run gravel, sand, and topsoil) will be resistant to erosion while allowing for plant growth. In addition to this bed material, boulder structures will be used to lock the bed in place, especially around vulnerable infrastructure. These techniques have been successfully applied on numerous projects throughout the region. Refer to posted plans for detailed information.
101	When you raise a stream bed, you increase the steepness somewhere else.	K Bawer	The point to point slope from the culverts and the upstream and downstream ends of the project will remain the same. However a big goal of the project will be to reduce the slope of the riffle sections of stream and use boulder structures to better protect steeper areas. Currently the channel has severe drops near the upstream end due to severe erosion near the outlet of the 66" culvert and a much flatter slope at the downstream end due to significant deposition at the church culverts. The design will reestablish a more even channel slope consistent with the surrounding floodplain feature.
102	Was that sanitary pipe meant to be under the creek? What would happened to that pipe in the proposed plan?	Lexye Hearing	City documentation indicates that sanitary sewer infrastructure was installed more than 50 years ago. Since installation, channel erosion has been exposed at various locations throughout the restoration areas. Past attempts have been made to stabilize these areas through the dumping of concrete rubble or similar hardening practices. The restoration project proposes to raise the stream bed to levels seen 50+ years ago, providing cover for sanitary infrastructure and creating long-term grade control (boulder structures) to prevent future destabilization. See sheet 18 of the plan set for more information.
103	Were bridges considered for the trail?	Lexye Hearing	The bridge structures that are being removed for access will be replaced in kind after construction has been completed.

#	Comment	Name	Response
104	Exactly where is the historical flood plain? Can the flood plain be pointed out on one the slides?	Russell Bailey	The concept plan is now available online. The extent of the floodplain can be viewed on sheets 75-79 of the plan set. Hydraulic modeling has been performed to ensure that planned restoration measures do not adversely affect existing infrastructure. Data shown provides a comparison of pre- and post- floodplain boundaries
105	How much will stream bed be raised? I have heard that after the project is completed the stream will flow over the seepage swamp during high water events. Is that accurate?	Russell Bailey	The stream bed will be raised various amounts based on the local elevation. A full longitudinal profile of the stream bed is provided on sheets 14-17 of the concept plan (now posted online) and shows exactly where and how much the stream bed will be raised. The seepage swamp will likely see overbank flow during very high rain events (e.g. the 10-yr recurrence interval storm). The duration of inundation will be temporary, with water draining back into the stream channel through existing swales. Overbank velocities during these events will be low, limiting erosion potential. Based on current site conditions, ongoing research regarding the effect of restoration on adjacent wetlands, and evidence provided by the elevation of existing sanitary infrastructure, the City feels that this project is likely to enhance existing wetland resources. Existing wetlands have been adversely impacted by past and ongoing channel erosion. Without restoration, the existing seepage wetland is likely to see continued decline in extent and quality.
106	How wide exactly will be the "narrow sliver" that is going to be opened in the canopy?	Russell Bailey	The width of the LOD varies from 50ft to 80ft wide (including the 20-30 ft channel width), and is NOT a wholesale clearing operation of the entire valley. The canopy opening is expected to be approximately 50-60 ft following construction. Based on similar project experience, it is anticipated that revegetation efforts will reestablish shading and cover in 5 to 10 years post-construction. The construction footprint has been minimized to reduce site disturbance as much as possible while maintaining constructability. Many of the trees slated for removal lie on or near the existing top of bank and are threatened by ongoing erosion. Several have fallen during the project development process.
107	Re: Community gardens, please include potential impacts both during and post construction.	Vivian Daub	There will be no impact to the community gardens as part of this project.
108	What are the potential impacts on the community gardens and access to them, including the parking area at the lower garden?	Vivian Daub	There will be no impact to the community gardens as part of this project.
109	Given that there are apparently 61 dead trees in the impacted area that have not been maintained or removed, doesn't this indicate a clear lack of ongoing maintenance in this park, so how can residents have confidence that now that there will be an appropriate level of maintenance to ensure that these tiny plants and trees have any chance of survival?	Carter Flemming	<p>The presence of 61 dead trees is at least in-part due to the instability of the stream corridor and not a direct indication of the need for forest management. Typically, stream restoration projects require the contractor to warranty plantings for a period of one year. This period is critical as native vegetation is reestablished. Any plantings not surviving the first growing season would be replaced by the contractor under the construction contract. Following the first year, federal permitting requires additional monitoring (typically 3-5 years) during vegetative establishment. Vegetation monitoring will be performed to track establishment and manage invasive species.</p> <p>The plans call for smaller stock at high densities to be used for replanting. These smaller plantings provide higher survival than large caliper-size trees/shrubs and are better suited to use in stream corridors where periodic flooding is expected.</p>
110	Based on the dates of the photos and what they depicted regarding tree density, won't 70 years elapse before the forest is restored?	Erin Winograd	Much of the forest along Taylor Run will remain undisturbed. It is estimated that construction will impact less than 20% of existing forest resources in the area. The design has been developed with a priority on avoiding disturbance to mature trees as much as possible in order to minimize the long-term effects. Reestablishing mature trees along the stream will indeed take decades. Restoration aims to create stable conditions in hopes that the riparian corridor can begin to heal instead of continue to decline.
111	Who is responsible for ensuring compliance with this plan, in terms of max # trees to be removed, etc., during construction? Will City staff be present during construction, or be conducting regular inspections?	Steven Epting	City staff (including arborist and Park staff) will hold regular meetings with the contractor, and AECOM/WSSI project team members. At this time the City anticipates having full-time inspection/oversight by experienced staff throughout the construction phase.
112	If the stream banks are on longer deep enough to obtain sudden high volume rain events will it still be safe for Tc students to be on the paths during a sudden high volume rain event. People are regularly on the property rain or shine	Pat Laane	Flood waters may inundate parts of the walking trail during the most extreme rain events for a brief period. Flood inundation is shallow, slow moving, temporary ponded waters and typically will be less than 6" deep. Once the stream flow begins to lower, after the most intense rain has passed, the flood inundation will drain out. Signage is being developed to inform path users to be cautious during inundation events.
113	The presentation in on the Alexandria website where you registered for this	Betg Clark	Presentation was posted to website after the meeting, along with a recording of the virtual meeting, found here: https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629
114	Will you (please) be sending the meeting participants a copy of this presentation?	James Jennings	Participants were informed that the meeting presentation would be posted to the City's website along with a recording of the virtual meeting, found here: https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629
115	Again, if you don't address the root cause of the problems in this section of the watershed won't we right back in the same place in a few years ?	Anne Peterson	The intent of the design is to build resiliency back into the stream channel such that the channel is no longer degraded by the changes in the watershed that has occurred over the last 80-years. It is unfortunate that effective environmental regulations did not come into effect until the federal Clean Water Act was enacted in 1972, and the Chesapeake Bay Preservation Act was enacted in 1988. Most of the development in the Taylor Run watershed had already occurred by that time. Today's regulations limit runoff from development/redevelopment to not increase over currently existing runoff rates. Currently, there is no law in Virginia that authorizes municipalities to require property owners, not developing/redeveloping, retrofit existing properties to today's standards.
116	Has the City considered addressing the higher stormwater runoff that accompanies development by storing some of excess runoff upstream of the culvert? I believe this was an original design idea. How much development upstream has occurred since the City adopted its Chesapeake Bay ordinance?	Anne Peterson	The intent of the design is to build resiliency back into the stream channel such that the channel is no longer degraded by the changes in the watershed that has occurred over the last 80-years. It is unfortunate that effective environmental regulations did not come into effect until the federal Clean Water Act was enacted in 1972, and the Chesapeake Bay Preservation Act was enacted in 1988. Most of the development in the Taylor Run watershed had already occurred by that time. Today's regulations limit runoff from development/redevelopment to not increase over currently existing runoff rates. Currently, there is no law in Virginia that authorizes municipalities to require property owners retrofit existing properties to today's standards.
117	Is the City also looking at SW runoff sources upstream in the Taylor Run watershed? Any major culprits, low hanging fruit for reducing volumes/rates?	Bill Pugh	Building BMPs in the watershed will not reduce erosion in Taylor Run or fix the ongoing degradation. Yes, the City does consider water quality alternatives that can help the City reach its pollution reduction mandates. However, it is the large storm events that cause the majority of the accelerated erosion of the stream banks and subsequent sediment transport downstream and to the Bay. Now, it is not only the increased runoff from a built-out watershed, but also increased runoff from more frequent and intense rain storms. Reducing the impervious surface of the watershed helps, but the bigger more intense storms easily overwhelm the benefits of more pervious surface. We have looked at detention adjacent to the project but determined it was not feasible to control the runoff from larger storms given the constraints.

#	Comment	Name	Response
118	I was wondering what the impact of this will be to the rest of Taylor Run downstream and if this might increase or reduce potential flooding when there are heavy rainfalls. I worry that doing this work doesn't make sense without a more comprehensive plan. Also, if part of the issue is the sewer system, has this been factored in to an overall plan?	Edward Kelleher	This stream restoration will reduce velocities in the stream for all flow events by increasing the roughness (friction) of the channel, slowing the flow of water through the corridor. There are also two culverts at the end of the project that will act as a regulator, as they've always done since they were installed in the late 1950's and there is a limited capacity for those pipes. There will be no appreciable effects on the hydraulics of the downstream sections of Taylor Run due to this project.
119	Is the City aware of any plans for construction/development in the Taylor Run watershed that could lead to increased water flows or run off into the stream	Jacqueline Coleburn	Today's regulations limit runoff from development/redevelopment to not increase over currently existing runoff rates.
120	The recent slump (2018-19) that occurred near the playground of the chinquapin drive dumped tons of sediment into the run. How will the "project" deal with these. Undoubtedly the most likely event to occur to the run.	James Jennings	Northern Virginia and surrounding areas experienced the wettest year on record in 2018. At the end of that year, there was a slope failure on the west side of the Taylor Run valley. These natural occurrences are difficult to predict and are rare. While originally considered, prevention of future slope failures and landslides is not part of this project as it would likely impact an onsite wetland that was delineated by the consulting team and confirmed by the U.S. Army Corps of Engineers. The sediment deposited from the landslide is not in the limits of disturbance for this project.
121	What is the evidence that there ever was flood plain on the portion of Taylor Run scheduled for construction?	Jeremy flachs	It is generally understood that all lowland natural streams have a floodplain, in some shape or form. The City has aerial photographs of the area of Taylor Run dating back to 1927. In that photo is evidence of a braided stream system and adjacent floodplain. Early disturbance due to development upstream and channelization by construction of the sanitary sewer in the late 1940's effectively disconnected the stream from the floodplain. The aerial photos can be viewed in the Taylor Run FAQs on the City's website.
122	Why isn't the stormwater being controlled upland, before it enters Taylor Run?	K Bawer	Building BMPs in the watershed will not reduce erosion in Taylor Run. The City does consider water quality alternatives that can help the City reach its pollution reduction mandates. However, it is the large storm events that cause the lion's share of erosion of the stream banks and subsequent sediment transport to the Bay. Now, it is not only the increased runoff from a built-out watershed, but also increased runoff from more frequent and intense rain storms. Reducing the impervious surface of the watershed helps, but the bigger more intense storms easily overwhelm the benefits of more pervious surface. The intent of the design is to build resiliency back into the stream channel such that the channel is no longer degraded by the changes in the watershed that has occurred over the last 80-years. It is unfortunate that effective environmental regulations did not come into effect until the federal Clean Water Act was enacted in 1972, and the Chesapeake Bay Preservation Act was enacted in the City in 1992. Most of the development in the Taylor Run watershed had already occurred by that time. Today's regulations limit runoff from development/redevelopment to not increase over currently existing runoff rates. Currently, there is no law in Virginia that authorizes municipalities to require property owners, not developing/redeveloping, retrofit existing properties to today's standards.
123	There are alternative, upland (out of stream valley) stormwater retrofit/"restoration" (or control) projects that could be done in previously disturbed areas to meet regulatory requirements. These upland projects would address the root cause of the problem – keeping stormwater from impervious surfaces out of streams – and include rain gardens, bioretention, and more.	K Bawer	The Taylor Run stream corridor was previously disturbed several times since the 1930's. Lastly, in the late 1950's when the First Baptist Church was built and moved the stream approximately 90-feet to the east. It is a testament of the resiliency of nature that the valley is now considered a desirable natural area. You can see the progress of development and disturbance of the stream valley on the aerial photos in the Taylor Run FAQs. Building BMPs in the watershed will not reduce erosion in Taylor Run. The City does consider water quality alternatives that can help the City reach its pollution reduction mandates. However, it is the large storm events that cause the lion's share of erosion of the stream banks and subsequent sediment transport to the Bay. Now, it is not only the increased runoff from a built-out watershed, but also increased runoff from more frequent and intense rain storms. Reducing the impervious surface of the watershed helps, but the bigger more intense storms easily overwhelm the benefits of more pervious surface.
124	We are concerned that "stream restoration" projects are proceeding without sufficient transparency in the selection process, without adequate public input, and without due consideration of upland (out of stream valley) alternatives that would protect our natural areas and streams by controlling stormwater within previously disturbed areas.	K Bawer	This year has been a challenge for public engagement, mainly due to the global COVID-19 pandemic. However, the City has taken a pause for the Taylor Run stream restoration project, and other projects, to adequately and transparently re-engage with the public as much as possible, using the virtual tools that became available to us just a few months ago. The Taylor Run stream corridor was previously disturbed several times since the 1930's. Lastly, in the late 1950's when the First Baptist Church was built and moved the stream approximately 90-feet to the east. It is a testament of the resiliency of nature that the valley is now considered a desirable natural area. You can see the progress of development and disturbance of the stream valley on the aerial photos in the Taylor Run FAQs. Building BMPs in the watershed will not reduce erosion in Taylor Run. The City does consider water quality alternatives that can help the City reach its pollution reduction mandates. However, it is the large storm events that cause the lion's share of erosion of the stream banks and subsequent sediment transport to the Bay. Now, it is not only the increased runoff from a built-out watershed, but also increased runoff from more frequent and intense rain storms. Reducing the impervious surface of the watershed helps, but the bigger more intense storms easily overwhelm the benefits of more pervious surface.

#	Comment	Name	Response
125	What prevents the new bed material from being blown out by the next big storm?	K Bawer	The intent of the design is to build resiliency back into the stream channel such that the channel is no longer degraded by the changes in the watershed that has occurred over the last 80-years. Our consultants are subject matter experts and have designed many, many miles of successful stream restoration projects intended to be resilient to today's increasingly intense and extreme storm events. The new bed material is held in place by the use of Natural Channel Design techniques which employs a field of engineering in hydraulics that uses large stones and grade-control structures made of logs and root balls.
126	How long should this restoration last before the stream gets washed out again? Assuming climate change doesn't increase precipitation, what else will cause an increase? Does the city still allow new construction that increases stormwater runoff?	Patrick McCusker	The restoration will promote natural bank protection using grasses, shrubs and trees. The velocity of the flows are what causes erosion. Flow velocity in the stream is managed by restoration practices of grade control, and maintaining a slope and energy dissipation points (drops) along the stream. Reconnection to the floodplain is also a method for controlling velocity by spreading the flows. Predicting how long a restoration will exist before a large enough storm comes by that damages the work performed isn't something anyone can predict with any certainty. What is certain is that the restoration will provide much greater resiliency for the stream. Doing nothing will not prevent further degradation of Taylor Run, even from moderate storm events. All new development and redevelopment must meet stormwater management requirements in the Alexandria zoning ordinance (Article XIII) to not increase stormwater runoff and to provide BMPs for water quality.
127	Has the City explored options for green infrastructure (e.g., bioretention in right-of-ways) in upstream areas to reduce runoff?	Steven Epting	Building BMPs in the watershed will not reduce erosion in Taylor Run. The City does consider water quality alternatives that can help the City reach its pollution reduction mandates, and the right-of-way of upper King Street was considered in the planning for the Bay cleanup mandates. However, it is the large storm events that cause the lion's share of erosion of the stream banks and subsequent sediment transport to the Bay. Now, it is not only the increased runoff from a built-out watershed, but also increased runoff from more frequent and intense rain storms. Reducing the impervious surface of the watershed helps, but the bigger more intense storms easily overwhelm the benefits of more pervious surface.
128	sorry - you may have covered this but... what is the downside of elevating the stream - is this not an area that does not usually flood, and would elevating the stream cause more flooding in this area	Whitney Redding	An essential part of effective Natural Channel Design is reconnecting the stream to the floodplain. Taylor Run in the area of Chinquapin Park was channelized in the mid-late 1940's and over the years has down-cut to a point, now where the floodplain is mainly contained in the channel. You can see the aerial images of the floodplain area prior to development occurring before the 1940's in the FAQs, mentioned above. However, what also is contained in the channel is all the energy of the high-flow events; which is why the channel continues to erode and degrade. Despite our best efforts, the early channelization and confinement of the valley by previous development has limited opportunities for complete connection to a contiguous floodplain in the valley. What we end up with is partial inundation very near the top of the new channel and a slightly larger area of inundation at the lower section where the culvert restricts the 100-yr flow and the stream backs up. And that's all it really is, a shallow inundation. Floodplains are typically low velocity inundation that doesn't have the energy to scour. It depends on how long the inundation occurs, that determines the deposition of silt (not alluvial sediment). Periodic floodplain inundation has always been considered good for all wetlands. There is very little chance that the next 100-yr storm event will "blow-out" the wetlands adjacent to the stream.
129	How will this impact Taylor Run downstream?	Edward Kelleher	See the Taylor Run Stream Restoration FAQ#19 Sheet for more details.
130	Please explain how a naturally narrow, deep-channel, headwaters stream has a connected floodplain.	Erin Winograd	Taylor Run is very incised and currently not connected to the floodplain given the severe downcutting of the channel. Before major alterations and downcutting that has led to the degradation of the stream corridor, the stream would have historically had some floodplain connection.
131	What is being done, within the entire watershed, to minimize impervious area and thus minimize rapid runoff to this stream? Is there a citywide strategy in place?	Keith Leonard	Development and redevelopment in the watershed must meet the City's Environmental Management Ordinance that incorporates the Virginia Stormwater Management Program (VSMP) regulations and the Chesapeake Bay Ordinance. Redevelopment must meet stormwater management requirements for runoff. Redevelopment must also adhere to Bay Act requirements to minimize the disturbance and the amount of impervious area onsite.
132	What about replacing the small herbaceous plants that will be destroyed?	K Bawer	Re-planting of healthy native vegetation such as trees and shrubs is a critical component to the success of a stream restoration. The City anticipates re-planting 2,280 trees for this stream restoration including oaks, maples, dogwoods, and sycamores. An additional 7,200 shrubs are expected to be planted which include buttonbush, winterberry, and spicebush. Along with a warranty period for the re-planting material, as part of the project team, RPCA Natural Resources Division will be the main staff to ensure that invasive species are kept at bay during the establishment period for the new plantings.
133	Will the planted tree/shrubs be local ecotypes and the same species as being removed?	K Bawer	Re-planting of healthy native vegetation such as trees and shrubs is a critical component to the success of a stream restoration. The City anticipates re-planting 2,280 trees for this stream restoration including oaks, maples, dogwoods, and sycamores. An additional 7,200 shrubs are expected to be planted which include buttonbush, winterberry, and spicebush. Along with a warranty period for the re-planting material, as part of the project team, RPCA Natural Resources Division will be the main staff to ensure that invasive species are kept at bay during the establishment period for the new plantings.
134	Will there be any loss of rare plants in the area?	Christine Coussens	The rare plant species in the wetlands will not be impacted by the stream restoration project.
135	What about water quality results, not just photos?	K Bawer	See the Taylor Run Stream Restoration FAQ#14 & 15 Sheet for more details.
136	I thought part of the problem is the phosphates in the water (and part of the reason for doing this project). How does any of what you propose to do decrease phosphates going into the Chesapeake Bay? Also, we've been told there are almost no phosphates in the Taylor Run area to begin with.	Andy and Mimi Saunders	The phosphates are associated with the sediment being eroded from the stream banks due to lack of stability. The sediment is delivered downstream. The City of Alexandria is in the Bay.
137	What are the phosphorous levels in the watershed? In sediments and soils that will be part of this proposal?	Anne Peterson	Phosphorus is associated with the sediment that is being eroded from the stream banks. Stabilization and restoration of the stream will mitigate erosion and therefore transport of sediment and the associated phosphorus and nitrogen.
138	You have still not answered what the nutrient reduction benefits will be? All vague, models, expert panels, infrastructure, etc.	Anne Peterson	Phosphorus is associated with the sediment that is being eroded from the stream banks. Stabilization and restoration of the stream will mitigate erosion and therefore transport of sediment and the associated phosphorus and nitrogen. Onsite values are taken and then compared with the approved expert panel approach.
139	So the answer to this question about the level of existing pollution in the stream is that there is no actual data specific to it, and that the project has been put forward and designed largely through a formula?	Charles Raasch	Phosphorus is associated with the sediment that is being eroded from the stream banks. Stabilization and restoration of the stream will mitigate erosion and therefore transport of sediment and the associated phosphorus and nitrogen. Onsite values are taken and then compared with the approved expert panel approach.

#	Comment	Name	Response
140	Are nitrogen, phosphorous and sediment runoff from Taylor Run a significant factor in moving forward with this project? Has the flow of these pollutants to/towards the Chesapeake Bay from Taylor Run been studied? Also, it seems there is a relation to storm water runoff - is there a percentage increase of storm water that Taylor Run will be able to absorb additionally under the restoration? Or is it more of a theoretical correlation? Thank you.	Elizabeth MacIntosh	Phosphorus is associated with the sediment that is being eroded from the stream banks. Stabilization and restoration of the stream will mitigate erosion and therefore transport of sediment and the associated phosphorus and nitrogen. Onsite values are taken and then compared with the approved expert panel approach.
141	Mr. Rahal said the erodibility measurement "determines" how much sediment is sent into the watershed. What he really meant is erodibility is used to model the amount of sediment, correct? Modeling is quite different from conclusively determining.	Erin Winograd	Phosphorus is associated with the sediment that is being eroded from the stream banks. Stabilization and restoration of the stream will mitigate erosion and therefore transport of sediment and the associated phosphorus and nitrogen. Onsite values are taken and then compared with the approved expert panel approach.
142	A recent test found the phosphorous level to be negligible. How can this project improve an almost zero phosphorous measurement?	Erin Winograd	The City has not performed nor is not fully aware of recent testing presumably done by an Arlington resident. Any testing must be done under proper procedures.
143	What impact will making the river shallower, and thereby warmer, have on the native fauna?	Erin Winograd	The overall depth of the water will not be modified. The stream bed will be raised to where it was likely historically before all of the downcutting and erosion occurred. The depth of the stream (depth of the water column) will not be affected. There should be no perceivable effect on fauna.
144	My question about the "Slump" is directly related to the "pollution" that this stream is delivering to the bay. The project will introduce significant runoff during its execution to an otherwise very stable stream which, as you point out, is very constrained. What sediment load analysis has been performed? Where is the data that makes this stream such a rich target?	James Jennings	The project will be done in sections and erosion and sediment control measures will remain in place. After a section is done, it will be stabilized to mitigate erosion. The stream was initially identified as a candidate for restoration in the Phase II Stream Assessment and further analysis was done during the Phase III Stream Assessment found on the City's website.
145	Are you aware that the City has tested Taylor Run for phosphorus and the test results determined it is minimal. Who within the City is aware of these test results and why haven't we heard about them?	Jeremy flachs	City staff recently became aware of tests that are attributed to an Arlington County resident that has shared them with certain members of the public. These were not performed by the project team and the veracity of the results cannot be determined.
146	The city's Natural Resource Division of Dept of Recreation, Parks and Cultural Activities is mandated under the City's 2018 Natural Resources Management Plan to perform a vegetation survey (not just a tree survey) and inventory Taylor Run which is a natural area. Where are those inventories? The water quality is good and the City's high school students have confirmed quite a bit of life in the stream and adjacent to the stream.	Jeremy flachs	The management plan is a set of recommendations on how to put together a work plan for natural resources. The inventory is not in a work plan and has not been funded.
147	Can you provide the actual results vs goals for past projects. For example, what were the before and after figures for N, P, and sediments?	K Bawer	The calculation for pollutant load reductions for the Taylor Run project can be found in the Phase III Stream Assessment on the City's website; consistent with the approved Expert Panel methodology.
148	Has soil at Taylor Run been tested for N and P?	K Bawer	The project team has not tested the soils for nutrient concentrations, per the approved expert panel approach.
149	In addition, there is evidence of inappropriately targeting sediment-control projects in places with low levels of the very nutrients for which funding is based. For two sites in Alexandria, Simmons (2020_3) found that "...there are extremely negligible levels of phosphorus in the soil...."	K Bawer	RPCA Natural Resources role as part of the project team, is not soils testing.
150	Many "stream restorations" result in the removal of large numbers of trees (not to mention understory shrubs, herbaceous plants, seeds in the soil, and animal life). Kaushal et al. (2018) used groundwater sampling studies of five Maryland streams (including Paint Branch) to show that sites where trees were removed had higher riparian groundwater nutrient concentrations than sites where no trees were removed. They also cite many other studies that show increased nutrient concentrations after tree removal in watersheds.	K Bawer	The current design of the restoration includes the removal of 269 trees, 61 of which are dead. It includes the planting of over 30 native species of 764 overstory trees, 1,516 understory trees, 55 large 'trailside' trees and over 7,800 shrubs. This totals almost 11,000 native trees and shrubs.
151	Is there pollution data available over time? Are there measurable levels of PO4, NO3 and Sediment in this stream?	Lexye Hearing	Phosphorus is associated with the sediment that is being eroded from the stream banks. Stabilization and restoration of the stream will mitigate erosion and therefore transport of sediment and the associated phosphorus and nitrogen. Onsite values are taken and then compared with the approved expert panel approach.
152	I am still wondering if there is measurable amount of the 3 main pollutants entering the bay from Taylor run point source?	Lexye Hearing	The stream was initially identified as a candidate for restoration in the Phase II Stream Assessment and further analysis was done during the Phase III Stream Assessment found on the City's website where the calculations can be found. https://www.alexandriava.gov/tes/oeq/info/default.aspx?id=51332
153	Wouldn't the loss of canopy to engineer this channel to be wider and more shallow increase the temperature of the water? This would lead to less oxygen and allow more light for invasive. I'm curious if this was considered?	Lexye Hearing	The stream channel is incised due to accelerated erosion. The bed will be restored to a higher elevation. There should be no appreciable change to the depth of the water column. The restoration includes the planting 30 different native species of almost 11,000 trees and shrubs.
154	What percent reduction do you anticipate in sediment, nitrogen, and phosphorus levels after this project?	Vivian Daub	Calculations of removal for the project can be found in Appendix G of the Phase III Stream Assessment study on the City's website. https://www.alexandriava.gov/tes/oeq/info/default.aspx?id=51332 For TSS, TN, and TP, these are 34,303.35 lbs/yr, 641.08 lbs/yr, and 295.23 lbs/yr, respectively.
155	What have been the results of past stream restoration projects?	K Bawer	In the City of Alexandria, one example is Strawberry Run which was completed in 2010 (the downstream portion). An excellent video of a similar restoration project in Maryland is available at https://www.youtube.com/watch?v=CGpS09UApWI&feature=youtu.be . Examples of completed, successful stream restoration projects were provided during the presentation which may be found online at https://www.alexandriava.gov/uploadedFiles/tes/Stormwater/TaylorRunStreamResSept2020.pdf .
156	1. Where will the soil come from that will be used to raise the stream bed? What fraction of it will come from the project area by re-grading? 2. What are the total carbon emissions associated with the project? More specifically, what are the carbon emissions associated with the actual project restoration activities, including equipment emissions for demolition, removal of debris, transport of new material and plantings to the site, etc. And, how does that total compare with the total annual emissions of the City of Alexandria (not including citizen or institutional or commercial emissions)? Finally re emissions, how are the project area net annual emissions (esp the carbon uptake) expected to change from year 0 (before restoration is begun) to year 5 or year 10?	Eldon Boes	Policies and guidelines that would be used to calculate the carbon emissions associated with specific projects have not been developed yet. The criteria for projects and the methods are planned as part of EAP 2040 action 1.1.2 and are not available yet. Staff is working with MWCOG on adding a forestry metric for the City's GHG inventory in the future (maybe 2021) using tree canopy metrics. The forestry tool will not be project specific metrics.
157	1. What are the existing phosphorous and nitrogen numbers? How many monitoring reports does the city have? 2. What other pollutants are found in the water column? In addition to nutrients an urban stream like this would typically have grease and oil, bacteria, lead, copper, pesticides and other chemical contaminants. How much in-stream monitoring has been done? 3. What is the status of the existing aquatic community. In walking the stream I don't see much of anything. Are there any macroinvertebrates present? 4. I have some clarifying questions concerning the stream channel work being proposed. Presenter said that you were planning to work within the existing "scar" yet intend to raise the bed elevation up to the grade of the culvert near the rec center. Is the meander geometry going to be restored or adjusted to maintain stable banks and prevent new downcutting. There was reference to USGS regional curves which would imply changes to existing stream geometry. I haven't looked closely at the specs, but it does seem that natural width depth ratios can be established within the existing channel. Maybe I am wrong or misunderstand the proposal. 5. Is it possible to move the equipment from King Street or the church parking lot rather than along the stream corridor from the rec center?	Don Brady	Calculations of removal for the project can be found in Appendix G of the Phase III Stream Assessment study on the City's website. https://www.alexandriava.gov/tes/oeq/info/default.aspx?id=51332 For TSS, TN, and TP, these are 34,303.35 lbs/yr, 641.08 lbs/yr, and 295.23 lbs/yr, respectively. As shown in the aerial photography in the September 29 public meeting that can be found on the City's website at https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629 , the stream corridor has been greatly impacted over the years. This includes the meander of the stream, which is now confined by King Street and the Heritage trail. All of the work is not done in the stream. The slope along King Street and the church does not allow access there, and would impact traffic. It is done in sections and then stabilized, and then the contractor will move to another section. The access path approximates the current trail and sanitary sewer easement.

#	Comment	Name	Response
158	<p>I am writing to express my opposition to the City's current redesign plan for Taylor Run. There are multiple reasons why the current plan represents a huge waste of natural and monetary resources, but I will limit this letter to a few. First, the current plan appears to include the destruction of more than 250 trees. Many of these trees have significant canopies. Moreover, the City's co-champion red maple is among those slated for destruction. These are not resources that can be simply replaced. Similarly, the area is home to a globally rare wetland and the greatest variety of Alexandria-rare or uncommon plants in the City. The current stream reconstruction plan ignores these valuable resources, ones that will be lost forever if the City moves ahead. While the City's intentions are presumably good, with an eye toward water quality improvement, the actual plan is misguided and (as with many things going on in Washington, DC) not supported with meaningful scientific data. I hope we can learn from the mistakes going on in the federal government and not ignore the environmental damage that will result from ill-informed decisions.</p> <p>It appears that Alexandria is trying to check off a few boxes on a list in order to comply with the Clean Water Act, while actually not accomplishing anything positive. May I suggest that this is the lazy person's way of doing things. Alexandria would do well to stop and take a step back on this project. There is no hurry to spend our citizens' tax dollars on a plan that clearly lacks the input of our local environmental experts.</p> <p>Instead, the City should, at the very least, hold a meeting that would allow its storm-water staff and their outside consultants, the City's in-house naturalist experts, other stream restoration experts, and a representative of the State Environmental Quality Department (DEQ) to meet on-site to discuss whether the project should be terminated or modified. At the same time, we should hear from our local naturalist experts and advisors about other projects that could actually benefit the taxpayers of Alexandria. There are many areas in the City that are crying out for redesign in terms of storm-water management. Let's not ignore these areas as we dump our hard earned money down Taylor Run.</p>	Susan Berry	<p>Based on tree counts and canopy analysis, only 20% of tree canopy will be impacted due to restoration. City's Consultants are working to protect large trees (Including co champion red maple) by changing access road alignment. Current design plan proposes replanting of around 10,000 trees and shrubs. City met with local expert group and continue to coordinate with them during design, construction and even after construction. Current design has been reviewed by City natural resource department and held onsite meetings with staff. City also held meetings with representative of regulatory agencies including USACE, Virginia DEQ to satisfy their permit requirements.</p> <p>Please see Taylor Run Restoration FAQ#2, 4, 8, 11 & 12, 13 and 18 for more details.</p>
159	<p>(1) If run-off is the main culprit, why wasn't addressed head-on? I had expected to hear about efforts to replace impermeable surfaces with permeable ones and to promote the use of cisterns to capture rain water that could be used to water parks, the plants in median strips, and in the water tanks of street cleaning trucks. With a little thought, I'm sure we could come up with other ideas.</p> <p>(2) What provision has been made for a 6-fold increase in water flow through Taylor Run? According to the USDA's Forest Service, one 100-ft tree draws up about 11,000 gallons of water during one 9-month growing season. As written, the project's proposed removal of 6 old-growth oak trees, will add a minimum of 66,000 gallons per season to the stream. Summer storms could add significantly more. The project also calls for raising the stream bed in an effort to reduce erosion. But has the additional 66,000 gallons of water been factored in—including the impact they will have on the flood plain?</p> <p>(3) A detailed answer to this question is vital for the survival of the ancient acid water wetland about 100 feet from the edge of the stream. What precautions are in place to protect the wetland from the flood water? I'd like to hear more details.</p> <p>(4) Research has uncovered a previously unsuspected complexity of forest systems—the trees form mutually beneficial symbiotic partnerships that enable them to share nutrition and health sustaining bacteria through their root systems. The Douglas Fir and Paper Birch in the forests of the Pacific Northwest are just one example of this collaboration. Such bonds are vital, not just for the health of individual trees, but for the survival of the forest as a whole. That being said, if there is to be a true restoration of Taylor Run, the replacement trees proposed for the cleared area on the street side of Taylor Run must be able to form these partnerships if they are to thrive. They must also be compatible with the trees in the hopefully "untouched" area on the other side of the stream, so they can become integrated with the rest of the forest. That suggests to me that the selection of the replacement trees and their location should be in the hands of a professional with a deep understanding of these dynamics.</p> <p>(5) The size of the proposed replacement trees raises some additional issues. The largest trees mentioned are only 2 inches in diameter. Their root systems are going to be proportionately small. It will be decades before they are mature enough to help improve the quality of our air and water, as the old trees are doing. The proposal does not mention what provisions will be made in the meantime to compensate for the loss of this valuable environmental benefit once the old growth trees are gone—a benefit they have been providing for years, free of charge.</p>	Barbara Fried	<p>1.Redevlopment projects after 1992 had to install stormwater management facilities, such as those at TC Williams, the Safeway, Blessed Sacrament, Episcopal High School, and other properties. There is not enough available area in the 300 acres that drain to this section of the stream to reduce continued impacts, and even if land was available, the stream would continue to be degraded.</p> <p>2.Not sure where the 6-fold increase in water flow came from. Based on old aerial photography, the stream valley has been seriously impacted through cutting of trees and realignment of the stream bed. While currently 269 trees are slated for removal – with 61 of those dead – over 30 native species of about 765 overstory trees will be replanted, along with many understory trees and shrubs. In the current degraded state, the stream will continue to lose trees near the top of bank.</p> <p>3.The acidic seepage swamp has been flagged as a wetland and is outside of the limits of disturbance. Currently large storms drain into the seepage swamp from the surrounding area, to include the hill. That will remain. Raising of the stream bed to close to the historic bottom will have no appreciable affect on the swamp/wetland.</p> <p>4.Replanting will include over 30 native species. The replanting plan was developed by a professional and reviewed by RPCA Natural Resources.</p> <p>5.The area will be stabilized and monitored to remove invasive to allow for plant establishment. Nearly 11,000 native trees and shrubs will be planted.</p>
160	<p>On September 25th, eleven civic associations wrote you setting out some of their concerns about the City's proposed plan to "restore" a 1900-foot segment of Taylor Run. In that letter, the associations asked that the City hold an on-site meeting of experts that includes representatives of the City's storm-water staff and their outside consultants, the City's senior natural resources manager/plant ecologist, a representative of the State Department of Environmental Quality, and an expert in alternative stream reconstruction methods, to consider ways of protecting the wetlands and key trees and other vegetation. We recommended that a City Council member and a citizen representative participate as well. An almost identical request has been made for some time by Russell Bailey, independent of the associations' letter.</p> <p>We continue to believe that convening such an "experts' group" would provide an excellent – and perhaps the best path - to the development of alternatives or modifications to the City's proposed plan that could satisfy the key interests of both the proponents of the plan and those who have concerns about its effects on the stream and the surrounding park land. We have seen the letter of the Environmental Council of Alexandria's request asking that the City consult with Dr. John Field about the restoration project. We would be glad to have Dr. Field participate in the meeting of experts, but believe the group must include the wider range of participants that we have identified above. Our understanding is that ECA agrees with our view.</p> <p>We appreciate that the City has said that it welcomes additional comment on the proposed Taylor Run project and that the storm-water staff has committed to supply written answers to the questions that were submitted before and during the September 29th public hearing. We believe that further engagement can result in an acceptable way forward for Taylor Run and that the experts' group, with Dr. Field as part of it, will be an important part of that engagement.</p>	Carter Flemming and Russell Bailey	<p>The City has held an onsite meeting with 'experts' and representatives from civic associations, along with the City's project team. The City submitted a concept plan to VDEQ with the grant application and VDEQ staff visited the site prior to awarding the matching grant. We have also held onsite meetings with members of the City Council. Specifically, the onsite group included ECA, Dr. Field, Russ Bailey, Rawles Jones, and Carter Fleming; along with experts from Wetland Studies and Solutions (the design engineer). The meeting was productive and the project team is pursuing ways to incorporate items from the discussion into the project design.</p>

#	Comment	Name	Response
161	<p>Friends of Holmes Run is a nonpartisan, all-volunteer organization dedicated to the preservation and protection of the 42-square-mile Holmes Run/Cameron Run watershed, which includes Strawberry Run and Taylor Run. On behalf of our members, including City of Alexandria residents, I respectfully request that the city accommodate the critical feedback it has received on the restoration plans' specifics from Alexandria residents and watershed scientists. Stream restoration is an evolving discipline. Experts often disagree on the best way to proceed. Our citizen-run organization believes that any projects to improve the stream should affirm the following:</p> <ul style="list-style-type: none"> • Does it prioritize existing natural resources over construction convenience; • Does it respect the latest scientific understanding of stream preservation, in addition to accepted engineering practices; • Will it provide a net benefit to the health of Holmes Run by either improving existing conditions or providing protections that exceed good forested conditions; • Is it part of a comprehensive, carefully planned strategy to address the causes of damage to the watershed such as the loss of green space, surfeit of impervious surfaces and other byproducts of ongoing urbanization; • Does it have significant public support. <p>The Chesapeake Bay Act was a landmark piece of legislation conceived to protect the watershed. It essentially acknowledged that all land use decisions are also watershed decisions and sought to systematize an entire region's response. Jurisdictions such as the City of Alexandria are obligated to clear specific pollution-reduction goals within a specific timetable. Ultimately, however, the only metric by which this (or any) stream restoration will be judged is not whether it satisfied an obligation intended to help the bay, but whether it actually helped the bay, without causing counterproductive harm to its immediate watershed. Please take the necessary precautions to ensure this is the case.</p> <p>Thank you for your attention and for your stewardship of these important natural resources.</p>	Whitney Redding	<p>1. Yes. The construction access was designed to be as small as possible while still allowing for efficient construction. Several access paths were considered, including coming down off of the community garden area. This entrance was removed from the project, however, due to proximity to some of the largest trees in the stream valley. Additionally, the access is being moved away from the seepage swamp and large maple of concern to many, and will cross the channel further upstream. This will pull the limits of disturbance farther away from this wetland.</p> <p>2. Yes. The latest science indicates that when imperviousness in a watershed exceeds a certain threshold (generally accepted to be approx. 10%) that stream channels become impacted/impaired. The Taylor Run watershed far exceeds this threshold and the attempts at armoring (concrete rubble, etc.) and exposed sanitary infrastructure seen in the Taylor Run stream demonstrate the degree of instability. Research indicates that these types of channel are a main contributor to pollution in downstream receiving waters due to excessive channel erosion. Though some systems are more appropriately handled through preservation, systems such as Taylor Run necessitate a more holistic approach to restoration.</p> <p>3. Yes. The larger watershed will benefit through reduced erosion of the restored reach. A robust planting plan is an integral part of the restoration effort and seeks to enhance the long-term quality of the riparian corridor.</p> <p>4. This project is the result of a multi-phase long-term planning effort undertaken by the City.</p> <p>5. Yes, there is general public support. A small number of local stakeholders have expressed concerns and the City is working to address those concerns to the greatest extent practicable.</p>
162	Please ensure that the hired contractor protects the wetlands. Assuming they do, this project seems to be a net positive. I'd like to see more information about the kinds of trees and shrubs that will be planted.	John Yuda	The delineated wetlands are located outside the disturbed area for the project and will not be impacted. The restoration includes over 30 native species of almost 11,000 trees and shrubs. The current design plans include the planting schedule and can be found here. https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629
163	I would recommend that the City design a plan that protects the wetlands and the major groves of mature trees along the stream, not only during construction, but afterwards as well. The City should also do actual testing for phosphates rather than relying on modeling.	Arthur Impastato	The delineated wetlands are located outside the disturbed area for the project and will not be impacted. The restoration includes over 30 native species of almost 11,000 trees and shrubs. The current design plans include the planting schedule and can be found here. https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629 . The City followed the state and federally approved approach for the design.
164	My two teenagers and husband went to the December 5, 2018 meeting at MacArthur. They were shocked that the City will be spending \$4.5 million to restore the stream and plan to cut down over 200+ live trees when there are more pressing issues like flooding that needs to be addressed in our neighborhood. We live on near Janney's Lane and Taylor Run Parkway and have watched the stream turn into a river and overflowing on to West Taylor Run Parkway when it rains. Additionally, my boys attend TCW and my family frequently walk through the Alexandria Heritage Trail and around Chinquapin Loop. There is no mention of the City fixing a large portion of the asphalt which has fallen behind the play ground/picnic area around Chinquapin Loop which seems like a more pressing danger for residents. Lastly, my boys have been helping plant trees and native shrubs at different City parks with the Tree Stewards, and it's surprising for them to hear so many trees being cut down in one big swoop. How are projects being prioritized in the city? Even though the city sends out all these surveys for public comments, the city does not listen to its residents' input. Please refer back to the Seminary Road bike lane/sidewalk project where \$1 million with questionable results. If the city listened to it's residents who live in the area, they would have used the \$1 million towards the part of Seminary Road which needed to be improved -- in front of Hammond Middle School, library, and fire department which is still a dangerous intersection for residents.	Han Calamug	Stabilized Stream systems prevent the erosion and transport of sediment from the restored section of stream to downstream. Also, post restoration, can provide a foundation for beneficial aquatic plants to establish that may have more impacts to water quality, as the system finds equilibrium and matures. The area has been impacted over the years and is degraded. Many trees are dead and have fallen in the stream or are in jeopardy of falling in the stream with the ongoing accelerated bank erosion. The restoration includes the planting of over 11,000 trees and shrubs of over 30 different native species. The City portion of the funding comes from the Stormwater Utility fee that, by Virginia law, must be used for stormwater projects. The state matching grant must be used for this particular water quality project.
165	I am strongly opposed to destroying an existing stream bed. Overhanging trees are not serious contributors to bad water quality. Sewage, pesticides, herbicides, and fertilizers, not to mention human trash, are the real culprits. Heavy-handed efforts at controlling nature have not proven effective and are budget busting. While a successful outcome is questionable, the incalculable loss to our quality of life here in Alexandria is guaranteed.	Lori Farnsworth	Alexandria's streams are remnants of their former selves, lacking the capacity and structure for stability in a changing climate connected to ultra-urban watersheds. Reducing the high vertical banks to allow safer access to the stream .Building a foundation of resiliency to future storm events allowing quicker natural rebound. As shown via the aerials during the public meeting on September 29 and included on the project website, the stream has been impacted quite a bit over time. The project will restore the stream corridor, to include over 30 native plant species for the planting of about 11,000 trees and shrubs.
166	I am deeply disturbed by this project. Taylor Run currently is home to one our city's only remaining healthy woodland areas and streams. It is fully canopied with mature trees that are many decades only, and whose shade helps prevent invasive species growth. It is home to rare native plants, aquatic life and diverse bird species. This project reflects poorly on Alexandria's prioritization of what remains of our natural heritage. I strongly encourage City Council to reconsider this project, and to seek alternative projects to address regional water quality that do not require destruction of our City's very few remaining healthy natural areas.	Samantha Ahdoot	One of the measurement of the successful stream restoration project is the removal of the invasive non-native plants , and re-establishment of the native plants. Improving the foundations of these streams, by using Natural Channel Design (NCD) and introducing grade control (fall), bank stabilization, reconnection to the floodplain, and riparian plantings of native species will provide a foundation for future natural rebound in an urban watershed. The area has been severely impacted over the years and the stream corridor is degraded and will continue to degrade if nothing is done. The project team will monitoring post-construction to control invasives and ensure establishment of the replanting.

#	Comment	Name	Response
167	<p>Comments regarding the 9/29/20 Virtual Meeting about Taylor Run</p> <p>(1) If run-off is the main culprit, why wasn't addressed head-on? I had expected to hear about efforts to replace impermeable surfaces with permeable ones and to promote the use of cisterns to capture rain water that could be used to water parks, the plants in median strips, and in the water tanks of street cleaning trucks. With a little thought, I'm sure we could come up with other ideas.</p> <p>(2) What provision has been made for a 6-fold increase in water flow through Taylor Run? According to the USDA's Forest Service, one 100-ft tree draws up about 11,000 gallons of water during one 9-month growing season. As written, the project's proposed removal of 6 old-growth oak trees, will add a minimum of 66,000 gallons per season to the stream. Summer storms could add significantly more.</p> <p>The project also calls for raising the stream bed in an effort to reduce erosion. But has the additional 66,000 gallons of water been factored in—including the impact they will have on the flood plain?</p> <p>(3) A detailed answer to this question is vital for the survival of the ancient acid water wetland about 100 feet from the edge of the stream. What precautions are in place to protect the wetland from the flood water? I'd like to hear more details.</p> <p>(4) Research has uncovered a previously unsuspected complexity of forest systems—the trees form mutually beneficial symbiotic partnerships that enable them to share nutrition and health sustaining bacteria through their root systems. The Douglas Fir and Paper Birch in the forests of the Pacific Northwest are just one example of this collaboration. Such bonds are vital, not just for the health of individual trees, but for the survival of the forest as a whole.</p> <p>That being said, if there is to be a true restoration of Taylor Run, the replacement trees proposed for the cleared area on the street side of Taylor Run must be able to form these partnerships if they are to thrive. They must also be compatible with the trees in the hopefully "untouched" area on the other side of the stream, so they can become integrated with the rest of the forest. That suggests to me that the selection of the replacement trees and their location should be in the hands of a professional with a deep understanding of these dynamics.</p> <p>(5) The size of the proposed replacement trees raises some additional issues. The largest trees mentioned are only 2 inches in diameter. Their root systems are going to be proportionately small. It will be decades before they are mature enough to help improve the quality of our air and water, as the old trees are doing. The proposal does not mention what provisions will be made in the meantime to compensate for the loss of this valuable environmental benefit once the old growth trees are gone—a benefit they have been providing for years, free of charge.</p>	Barbara Fried	<p>1. These measures would be beneficial in terms of nutrient and pollutant removal and should be encouraged wherever possible. However, even with a large scale, drainage area wide overhaul and installation of numerous (possibly hundreds) of stormwater facilities on private property we would not expect to significantly reduce channel forming flows in Taylor Run. Past analysis of similar urban watersheds has shown that the disturbance involved in this distributed approach is an order of magnitude greater and costs similarly prohibitive. Even with a watershed-scale approach, the stream remains deeply incised and in need of restoration. Installing BMPS throughout the watershed may result in a design channel size reduction of 10-20% (e.g. instead of a 20-ft wide channel it may be 16-18 ft). Stream restoration is a necessary tool, and does not preclude watershed-wide efforts. The two should be used in concert wherever economically feasible and supported by local landowners.</p> <p>2. The hydrologic effects of tree loss, though important, are of a dramatically different scale relative to the storm flows seen in the Taylor Run channel. The equivalent uptake of 6 mature oak trees is on the order of 1 cfs (converting units and using the 9-mo time period and suggested annual uptake). The design flow rates considered in the stream restoration design are storm event driven and are in the range of 200 cfs.</p> <p>3. The design team is re-routing the access path to the other side of the channel upstream of where the seepage swamp is located. This will move all construction traffic and activity far from the boundary of this wetland. As for increased flooding, it is expected (and demonstrated through ongoing research on similar projects) that floodwaters during high flow storm events will likely contribute to preserving, protecting, or even expanding the wetland footprint by reversing the detrimental effects which have occurred as the stream has been cut down and separated from the surrounding floodplain. This downcutting is evidenced by the degree of exposure of the existing sanitary sewer crossing. Careful consideration has been given to the frequency and duration of overbank flows to prevent over inundation of these areas. Hydraulic modeling indicates that overbank flows will occur in larger infrequent storms. These flood waters will have low, non-erosive velocities as compared to those within the channel and existing topography will allow flows to drain relatively quickly following storm events. Thus, restoration measures are most likely to benefit existing wetland features, not harm them.</p> <p>4. Our planting plan utilizes a carefully selected palette of native species well-adapted to and suited for riparian corridors in this geographical area. The plan set (posted online) gives the species breakdown and is diverse to allow natural selection and stratification stemming from the range of microclimates seen throughout the site. City staff have reviewed and approved the plantings as part of the project development effort.</p> <p>5. The size of planting stock is the product of years of research on what material is most appropriate and viable in a stream/wetland restoration context. Smaller stock (e.g. 1-gal container) is specified for much of the site. This size stock can be planted at much higher densities, allows flood flows to occur without damaging planting materials, has a higher survival rate, and does not require supplemental watering. Research has also shown that smaller stock retain more root mass relative to above-ground biomass, and often reach the same level of maturity as larger caliper stock within the first decade post-planting (due to the fact that larger caliper trees must expend significant energy on rebuilding lost rootmass). Larger caliper trees are specified along the existing trail alignment where flood flows are unlikely and immediate post-restoration aesthetics are desired.</p>
168	<p>This project is ill-conceived and scientifically unsound. Although it won't produce the sediment and phosphorous reductions that are supposedly the driving factors, it will decimate the native ecology, cause a significant, detrimental carbon release and continue to raise the City's carbon footprint for decades. The City must not proceed with this project until independent experts, who do not stand to profit from this effort, have assessed the plan as currently designed. These outside experts must be certified in ecology with a specialty in Virginia native flora and fauna, natural landscape hydrology, and forestry (with a focus on preserving native forests in urban environments). Additionally, the City's own natural resources manager and arborist must publicly approve every aspect of the plan before it is executed. There is not enough space to elaborate on every City claim that is erroneous, so I'll just hit the highlights. This project will not "restore" 1900 linear feet. Several hundred feet (between 400 and 700 ft) of Taylor run already have been armored with boulders and are not susceptible to erosion. The city must accurately state the number of feet currently not reinforced. Stream meandering - what the City calls lateral migration - is a natural process. In no way is it undesirable, unless the city plans to develop even more land in Taylor Run park and surrounding areas. If that's the case, acknowledge that the objective of this project is to support more density and more impervious surface, not to "restore" the stream. Taylor Run does not endanger any properties. If First Baptist is concerned about its parking lots, it should pay for stormwater and runoff mitigation on its parcel. Better yet, as the church is the source of substantial waterflow during rain events, the City should require First Baptist to install and maintain stormwater BMPs (also known as bio-retention areas) within its property line as it has of many other commercial and residential developments, including my own. Taylor Run is a narrow, deep-channel, headwaters stream. Its geology and that of the surrounding park indicate it has never been connected to a floodplain. "Reconnecting" is a misnomer; in reality, the plan represents a fundamental, potentially illegally, altering of the native ecology and landscape. Recent testing of Taylor Run's banks and water at multiple locations in the park registered phosphorous levels of negligible and zero. City assertions that this project will reduce phosphorous emissions into the Potomac and Chesapeake are false. Sediment has not been measured, and models using a watershed in Arkansas and one in North Carolina do not accurately represent Taylor Run and its native ecology. Therefore, any effect on sediment cannot be proven. The stated objectives of this project are thus null and void. Razing 35% of the park's trees will release thousands of pounds of carbon into the atmosphere. Disturbing the soil will release thousands of more pounds of carbon. Destroying more than 220 mature canopy trees that range in age from 70 to 150 years, including the city's magnificent co-champion Maple, defies logic, sound environmental practice and the city's own published tree canopy goals. The replanting plan does not conform to best practices; even if it succeeds, which is highly unlikely, the canopy will not be restored for 50 to 150 years. This project, therefore, will environmentally impoverish three to seven generations of Alexandrians. The globally rare acidic seepage swamp is unquestionably at risk. Overflow from a "reconnected" Taylor Run would change the pH and destroy the swamp, or simply drown it. Construction activities cannot avoid harming it. Removing trees and thereby altering the amount of light that reaches the ground will negatively impact the flora native to the swamp, and consequently the native fauna. At least 30 species of imperiled and critically imperiled plants are found in Taylor Run Park - some of them nowhere else in the city and at few other locations in the Commonwealth. This plan offers no guarantee that they will survive and, in fact, presents an existential danger to them. Further, raising the streambed (which has already hit bedrock and is extremely unlikely to get any deeper) will change water temperature and the amount of light that reaches the bottom; this, in turn, will negatively affect (perhaps render extinct) the invertebrates, fish, amphibians, and other fauna native to Taylor Run. The current plan fails to address the egregious amount of impervious surface above, and the forced culvert flow into, this portion of Taylor Run. Until runoff above this section of Taylor Run is reduced and the unnatural high-volume funneling of the culvert is addressed, Taylor Run will remain at risk of scouring events. The City has failed to consider other methods of bank stabilization, notably reinforcement using the trunks of already dead trees and cocoon logs. These techniques are widely utilized by the National Park Service (notably at Kenilworth Aquatic Gardens) and do not require the extraordinary amount of heavy equipment called for in this plan. Until the City consults NPS and other entities that have a proven track record in environmental preservation but no opportunity to profit from this project, it has failed to execute proper due diligence and protect the interests of its taxpaying residents.</p>	Erin Winograd	<p>The project team includes staff from T&ES, DPI, RPCA, and a consultant (WSSI) that have completed many successful projects. This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised so that natural meandering and migration no longer occur. The project is now bounded by King Street and the trail. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion. First Baptist Church has multiple water quality BMPs and has installed detention; meeting the City's zoning ordinance (Article XIII, the Environmental Management Ordinance). Of the 269 trees currently slated for removal, 20% are dead, with many more in jeopardy of dying from the accelerated erosion. Based on aerials provide at the Sept 29 public meeting, the area has been clear-cut over the years. The restoration includes planting about 11,000 trees and shrubs of over 30 different native varieties. Since we learned of the "co-champion" maple from reading about it online and discussing onsite with representatives of the community, we believe that we can fully save this tree and the nearby Tulip Poplars. The acidic swamp is not at risk. It is not within the project limits of disturbance. Additionally, historically as you probably know, the stream would have been connected to the floodplain and ergo to the acid swamp during high flow events. However, the accelerated erosion and downcutting (incising) of the stream has disconnected the stream from the floodplain. While most restorations would want to achieve historic floodplain reconnection, the restoration will not achieve as much as hoped for given that the invert (bottom) of headwall at the upstream portion of this stream segment dictates the vertical level to which the stream bed can be restored. Finally, if flows in the stream are enough that the stream does exceed bankful and flow onto the floodplain, other flows from the hillside and elsewhere would be flowing into the swamp/wetland</p>
169	<p>Hi there, I think that this project is slightly misguided but has the intentions of improving the ecological area around Taylor Run, and thus improving quality of the stream. However, the literature that is being used to guide this project seems to be lacking, and there also seems to be an insufficient survey done of this particular stream prior to the planning process. With that said, this project cannot be environmental successful and your goal won't be met. My suggestion would be to conduct some sort of EIS that evaluates the forested area in the 1,900 ft around the creek, so that you could justify why you would bulldoze that area (I think evidence would show that it would hold negative consequences). With a \$4.5M budget, you would think there would be better methods to fix bank erosion than cutting down all of the surrounding trees... right? Most of Taylor Run is in areas of our community that are used for environmental research by scouts, high school science classes, and holds a strong intrinsic value for me and my neighbors. Additionally, Taylor Run goes through residential neighborhoods that are diverse and not super affluent. Clearing a naturally forested area would just be another way of disadvantaging our minority communities. Also, your plan states that you would replant native species in the area. How will you prevent them from being outcompeted by invasive plants that are spread easily here? Will there be regular management of this wild area? Why would you replant a new succession of species rather than keeping this forest? I think more research is needed before this project is started. Also, if you are hiring interns, I am a third year in college studying Environmental Science, Policy and Management at the University of Minnesota. I would love to learn more about your planning process. Feel free to contact me hogan384@umn.edu</p>	Ithaca Hogan	<p>The planning and design of the project is consistent with the approved approach for stream restoration projects.</p> <p>While currently 269 trees are slated for removal – with 61 of those dead – over 30 native species of about 765 overstory trees will be replanted, along with many understory trees and shrubs. In the current degraded state, the stream will continue to lose trees near the top of bank. There will be disturbance to the area; however, it will rebound for those areas disturbed. And the stream degradation will be halted allowing for a more resilient stream corridor to be enjoyed by future generations.</p> <p>We continue to work with RPCA Natural Resources as we do on other projects, to control invasive vegetation so it doesn't outcompete the native vegetation before it can get established. Thanks for your interest in interning and for providing your contact information. We'll get in touch if we are looking to hire interns, as we welcome additional input from the community.</p>

#	Comment	Name	Response
170	There must be a better way to utilize the state and local funding than to clear cut those beautiful old trees and demolish a beautiful wooded park. I just returned from a 2 hour walk through the Taylor Run Stream forest. From what I understand there is more research that needs to be done to better understand the actual nitrogen and phosphorus levels in the stream. My uneducated eye sees no stream bed erosion. Please find another way to meet the environmental standards goals for the City. Stop the overdevelopment of urban hardscapes that flow into Taylor Run as well as other stream beds in Alexandria. Once its paved over it cannot be restored. Please explore other alternatives to this project.	Judy Carter	I do understand and appreciate your concern for the removal of trees. The stream corridor has been impacted a lot over the years. Aerial photos in the September 29 presentation at the public meeting can be found on the project website page at https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629 . You can see where the trees have been cut down many times and the stream has been straightened and moved about 90' over time. If you look at the banks you can see where erosion has occurred. Redevelopment in the watershed must meet the City's ordinance for stormwater management, and we use that as a tool to reduce the amount of impervious. However, we are in a highly urbanized City with little natural areas. This is one of them. The restoration will counter the stream degradation that has occurred over time and stabilize the stream bed so that trees on the top of the bank don't continue to get undermined and fall in the stream. Of the current trees being removed, about 20% are dead. Once the over 2,200 trees are established, they will grow without those near the stream being in danger of falling in the stream. We are working on renderings to show the existing conditions and what the stream will look like after the restoration.
171	The City's efforts to control phosphorous and nitrogen from City stormwater runoff is ahead of your own schedule meeting the goals set for 2023. It would seem that doing this project isn't necessary as proposed for this reason. The destruction of more than 265 trees, many large canopy trees, doesn't even follow your own Urban Tree agenda as stated in your web site from the Arborist. The plan will also imperil a globally-rare wetland near the stream. This wetland is home to the greatest variety of Alexandria-rare or uncommon plants and flowers in the City, one, which ONLY grows here in Alexandria and nowhere else in the State. The State of Virginia, one of seven states feeding into the Chesapeake watershed, has recently entered into a partnership with the US Forest Service to maintain existing trees and plants that are necessary for the health of the Bay. Destruction of this tree canopy might very well be in conflict with this new partnership. Your web site states that 80% of the trees to be removed are dead or diseased. That is untrue after having just walked the trail today. There are dead trees and they will fall naturally and add to the soil needs of the woods. I strongly recommend before going anywhere else with this plan you allow your stormwater staff, your outside consultants, your own in-house naturalist experts, and other stream restoration experts, and a representative of DEQ to meet on-site to discuss whether the project should be terminated or be modified. I understand there are ways of achieving your goals to mitigate the flow of the stormwater by other means than to destroy one of three existing urban forests still in the City.	Linda Holland	The state and federal mandates ramp up at the end. While the City has 10 years to meet the first 40% of those mandates, the remaining 60% must be met in 5 years or less. Because of that, it is imperative to see progress prior to the timeline. And during that time, water quality and habitat benefits from these efforts. Of those trees slated for removal, 20% are dead and more are in danger of collapsing into the stream due to ongoing erosion. Staff has noted a number of trees newly fallen into the stream from recent storms. The restoration also includes the planting of over 2,200 native trees of many species. The project will not impact the acidic seepage swamp/wetland. The project team has met with a number of concerned citizens and has received review and approval from the state, and the project is consistent with the state and federal mandated approach.
172	As someone who regularly uses this portion of Taylor Run on my morning runs, I am dismayed and shocked that the city believes that, on balance, tearing up and reconfiguring this stream and the surrounding riparian area will do more good than harm. How much sediment and nutrient loading is really going to be reduced in the Potomac from a small stream like this -- even if you can get it right, which is iffy with such projects? Won't the disruption from the construction project actually increase any such loading in the near term? Hard to believe that wouldn't be the case as a result of tearing out over 200 trees, including 84 on land that will be dedicated to a new access road. How certain are you that the stream, if left alone, won't ultimately self correct? -- e.g., fallen trees and boulders over time may stabilize the banks. My concern is also personal. Taylor Run/Forest Park is one of very few natural areas I can reach walking or running from my house in Old Town. Simply put, Alexandria has so little natural habitat that removing any of it needs to be carefully considered and reduced to the absolute minimum necessary to achieve an important public goal. I strongly doubt this bulldozer approach is the least intrusive means of improving water quality in Taylor Run and I question whether an aggressive attack on this small portion of the watershed is a meaningful part of the solution to the nutrient and sediment loading problems in Alexandria. Thank you for the opportunity to comment. Mark Dyner	Mark Dyner	The project team includes staff from T&ES, DPI, RPCA, and a consultant (WSSI) that have completed many successful projects. This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised so that natural meandering and migration no longer occur. The project is now bounded by King Street and the trail. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion. No bulldozers will be used. Of the 269 trees currently slated for removal, 20% are dead, with many more in jeopardy of dying from the accelerated erosion. Based on aerials provide at the Sept 29 public meeting, the area has been clear-cut over the years. The restoration includes planting about 11,000 trees and shrubs of over 30 different native varieties.
173	There really has not been the time or information publicly for residents to properly consider this project and its implications. Please extend the comment period. Many of us have been holed up due to COVID. I've tried to quickly read the engineer reports and info on the project page. Personally, I feel the damage to Taylor Run from stream reconstruction and tree removal in the City of Alexandria outweighs the benefits to the Chesapeake Bay watershed. I've read the reports that the City prepared as well as the Q&A and was very disappointed that there is little to no discussion of the project impact on natural experience, climate, wildlife habitat and native species - major eco considerations. Over 30% of the world's bird population has been lost in the past few decades - urbanization and loss of habitat is the primary contributor (see CITES and Audubon Society et al). Even in the short run, this project seems ill-conceived and has the consequence to perpetuate damage caused by past unsustainable development rather than remedy it. IMHO, the City TES should defer to City naturalists and arborists in designing any projects that disrupt our natural landscapes and even our purpose built ones. Cost effectiveness should include other factors, such as species and habitat loss as well as natural landscape conservation. Please postpone and rethink this project at Taylor Run. Reconsider alternatives to tree removal and stream area disturbance. Extend the comment and study period. It is not the path for an Alexandria that tries to claim the mantle of Eco City. Thank you for the opportunity to comment.	Mary Harris	The public engagement period has been extended due to the impact of COVID on the ability to do public engagement. Information is on the City's project page at https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629 . The project will not only meet state and federal mandates to clean up the Bay by enhancing water quality, it will restore the stream corridor that have been impacted over time and is currently severely degraded. The project is consistent with the approach approved by the Virginia Department of Environmental Quality and the Chesapeake Bay Program. The City's project team includes arborists, naturalists, engineers, landscape architects, and environmental scientists. City staff from T&ES, RPCA and DPI are involved with the consulting team on the project.
174	It is said that the definition of a hypocrite is one who cuts down a magnificent tree and then uses the stump to stand on to make a speech about conservation. When it comes to environmental issues, the "Eco City" of Alexandria stands out as a prominent practitioner of hypocrisy at its worse. The City is currently pushing for a "restoration" of Taylor Run which will result in disruption or destruction of native plants and a unique wetlands. They also plan to destroy more than 200 trees in the process. While the City pushes for this destructive plan, Alexandria for many years has been dumping 11.3 million gallons of raw sewage each year into the Potomac River every time it rains. Obviously, this sewage pollutes not only the river but also the Chesapeake Bay into which the Potomac flows. Ironically the City claims it needs to restore Taylor Run in order to comply with Chesapeake Bay regulations. If it is truly concerned about the health of the Bay, it should make an urgent effort to address the raw sewage problem rather than to engage in the Taylor Run project which will destroy a precious ecological jewel in Alexandria. Perhaps City officials need to be reminded that trees put oxygen into the air, thus playing an important role in fighting climate change. With each tree that is cut down, the effects of climate change are exacerbated. The City must choose whether it prefers to remain on a tree stump mouthing platitudes about the environment (perhaps the TC Williams tree stump) or to go out on a limb and become a true Eco City. It is up to you elected officials. We voters are tired of your hypocrisy. Mary Zoeter Alexandria, VA (703-461-3283) (523 N. Paxton Street, 22304)	Mary Zoeter	Thanks for your comments and your feedback has been recorded. Due to current situation of the stream, there is significant risk of continued harm, if nothing is done to stabilize the stream banks and bed. While there will be removal of trees there will be replanting. The changes in the stream corridor where shown via aerial photography during the September public meeting and can be found on the project website at https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629 . For information on the RiverRenew project, visit the website at https://riverrenew.com/ .
175	1. Is there a list of the long-term harm/damage that will be caused to wildlife/plants by this project, if any? 2. What is the root cause of the erosion along Taylor Run? 3. If the root cause is not addressed, won't the erosion continue? 4. How does the city rank potential projects? Are there smaller projects that would cost less but have a bigger ROI in terms of erosion prevention? Does the city have a list of all the erosion problems in the city? 5. Other than erosion mitigation, what other pollution problems with this project solve? 6. Does the city require that all new construction (including government buildings) be run-off neutral (i.e., not add more water to the city's stormwater system)? 7. Will the watershed above Taylor Run become more dense with impervious surfaces, thus increasing run-off over the years to come? And, does this project take into account the increased run off due to increased population density and urbanization? 8. How long will this restoration last before it is washed out again?	Patrick McCusker	1. The restoration includes planting of nearly 11,000 trees and shrubs and the stabilization of the severely eroded stream that will continue to degrade if nothing is done. 2. High velocity flows with lots of energy that will be dissipated with the project design. 3. Not familiar with the issue. Please provide details to staff. 4. All new construction and redevelopment must meet stormwater management requirements for water quality and quantity. The project must not increase the amount of runoff.
176	While I appreciate the modifications to the project to save a couple of trees and perhaps the acidic wetland, I am still very skeptical that the benefits of the project are worth the cost of removing 269 trees and disrupting one of the few natural stream areas in the city. The amount of phosphate found in soil samples appears to be low so reduction of phosphate run-off into the river and bay may be minimal. Also the natural stream restoration model used may not be the best way to restore the health of the waterway even after replanting trees and shrubs. I urge the project managers to consider ways to limit the amount of healthy trees removed when bulldozers are brought into the area and listen to the input of Rod Simmons and Andrew MacDonald who have serious reservations about the project.	Paul Kaplowitz	The project goal is to minimize and conserve, while protecting and enhancing the area. Left alone, it will continue to degrade and get worse. Tree removal will be done with chainsaws and not bulldozers. The project team has met with ECA and others onsite to get their input and are modifying designs as applicable.
177	Our local experts have not indicated that the project is a good idea. The project will cut down more than 200 trees in the project area. It will take decades or longer for the area to return to its current state. The project will destroy plant and animal life in the project area and endanger unique and sensitive ecological areas adjacent to the stream. Proposed water quality improvements claimed by the project are based on estimates, not measurements, so reductions in nitrogen, phosphorous and sediment pollution are not assured. The proposed project has not considered how water quality will be degraded by raising the stream bed or operating heavy equipment in the project area. Large increases in suspended sediment pollution will likely occur during the project. Invasive, non-native plants have been removed along Taylor Run. The proposed project will denude the area and create an opening for the re-invasion of unwanted plants. The money being used for the project could be devoted to better planned projects with a likelihood to actually improve water quality.	Susan Berry	The project will not only meet state and federal mandates to clean up the Bay by enhancing water quality, it will restore the stream corridor that have been impacted over time and is currently severely degraded and provide a net water quality benefit. The project is consistent with the approach approved by the Virginia Department of Environmental Quality and the Chesapeake Bay Program. The City's project team includes arborists, naturalists, engineers, landscape architects, and environmental scientists. City staff from T&ES, RPCA and DPI are involved with the consulting team on the project. An estimated 269 trees, 61 of which are dead, and many within the top of bank and in jeopardy of falling into the stream as accelerated erosion continues sans the restoration, the restoration proposed the replanting of nearly 11,000 trees and shrubs of over 30 different natives species as reviewed by the project team. As with other projects, the team will provide oversight to ensure that invasives do not take over and allows the replanted native vegetation to establish and thrive.

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#	Comment	Name	Response
178	As someone who grew up along the banks of the Taylor stream, I can tell you that the Baptist Church's unchecked expansion has created a severe environmental situation that cutting down existing trees will only exacerbate. Thanks to the city's ill-advised spraying of DDT into the creek, many species of flora and fauna were eradicated along with the mosquitoes in the 1960s. The woods adjacent to the stream once offered homes to rare flora and fauna, such as red-eared turtles, whippoorwills, red-tailed hawks, eagles, pilliated woodpeckers, minnows, salamanders, frogs, snapping turtles, snakes, rabbits, red foxes, possums and also countless rare species of trees such as the tulip poplar and persimmons that lined its banks. There was also one of the city's oldest and tallest sycamore trees in the entire city along its banks. It lived in front of our house. At one time, the woods were filled with flowers, honeysuckle, wild roses, raspberry and blackberry bushes. It was the closest thing to heaven for us to grow up next to, just as my grandfather had planned when he built our house and others on our street. COVID or no COVID, if I had heard of this ill-advised plan to ruin the creek, I would have come to the meetings to voice my displeasure at the notion of cutting down any trees in order to stabilize the soil. Frankly, I do not believe that is the sole reason for the sudden desire to "stabilize" the creek bed. I believe it is to prepare this area for development which would be an environmental crime of the highest order. Alexandria has so few "wild" areas left. By the way, I worked with the EPA for many years while employed by the Justice Department's Environmental Enforcement Section, and I have seen how this happens all too frequently. Since the creek feeds into the Potomac, an Environmental Impact Statement or "EIS" is required by law under the Clean Water Act. I did not read that this had been performed in your article. I would be happy to file a lawsuit to keep this area as pristine as possible.	Robin Grenadier	The City has obtained all required permits for this stream restoration. This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised so that natural meandering and migration no longer occur. The project is now bounded by King Street and the trail. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion. No bulldozers will be used. Of the 269 trees currently slated for removal, 20% are dead, with many more in jeopardy of dying from the accelerated erosion. Based on aerials provide at the Sept 29 public meeting, the area has been clear-cut over the years. The restoration includes planting about 11,000 trees and shrubs of over 30 different native varieties.
179	You have the right answer to the wrong problem! There are bigger issues such as the millions of gallons of raw sewage spilling into the Potomac due to the antiquate sewer system.	Laura Williams	Please visit RiverRenew to learn more about the efforts to remediate combined sanitary sewer overflows.
180	This project represents \$2 mil. wasted to check a box. City hall should, instead, collaborate with experts supporting less invasive solutions to come up with a new conservation plan for the park and stream that is environmentally sound, a plan that will avoid significant destruction of the forest canopy, rare plants, wetlands, and stream channel. There is very little evidence, based on actual water quality samples, that Taylor Run makes more than a de minimis contribution of pollution to the watershed or Chesapeake Bay.	Dino Drudi	This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. The goal is to improve local water quality, enhance and conserve the stream ecology, and the public infrastructure, while meeting Bay goals. (The City is in the Bay Watershed.) Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion. Of the 269 trees currently slated for removal, 20% are dead, with many more in jeopardy of dying from the accelerated erosion. Based on aerials provide at the Sept 29 public meeting, the area has been clear-cut over the years. The restoration includes planting about 11,000 trees and shrubs of over 30 different native varieties. Wetlands are outside of the project area and will not be impacted.
181	This project looks like a destructive use of time and money. Instead of improving an area, you would be making it much, much worse and for a ridiculously small benefit as you define it. If there even is any benefit. Strike me as more likely to be lose lose lose. All for the sake of using up your budget. Paraphrasing a Vietnam War war paradigm you seem to be "destroying the stream environment in order to save it." And for what??	Jack Smith	The stream restoration will have other benefits other than meeting pollution goals such as stabilizing the channel banks and protecting infrastructure. Please refer to FAQ number 10.
182	This plan seems ill-considered; a fashionable idea that may have worked somewhere else, but would cause great damage to the City's parkland. Moneys that would be spent on this useless project are being diverted from regular maintenance, furthering the harm.	Nina Schwartz	The stream restoration will have other benefits other than meeting pollution goals such as stabilizing the channel banks and protecting infrastructure. Please refer to FAQ number 10.
183	Test	Andrew Macdonald	N/A
184	I'm trying to attend the meeting but zoom will not let me in. I registered in advance	Ann Shack	This issue was resolved during the public meeting.
185	I think you have not done enough to listen to the ecological community in Alexandria. You have not answered their questions or concerns. If you could address their concerns, you would have more support in the city.	Christine Coussens	The City has held an onsite meeting with 'experts' and representatives from civic associations, along with the City's project team. The City submitted a concept plan to VDEQ with the grant application and VDEQ staff visited the site prior to awarding the matching grant. Specifically, the onsite group included ECA, Dr. Field, Russ Bailey, Rawles Jones, and Carter Fleming; along with experts from Wetland Studies and Solutions (the design engineer). The meeting was productive and the project team is pursuing ways to incorporate items from the discussion into the project design.
186	I support this project moving forward. I have heard that there are people who want it to stop. I know people are unhappy that there will be trees cut down, but my understanding is that some of them are already dead and others are in danger and most of them are small. Plus, something like 10x the amount will be planted. I understand the project will help reduce pollution into the Bay, and that is very important to me. The state grant is covering half the project cost and I assume the city would lose out on that money if this project does not go forward. I read in the FAQs that alternatives to this project would cost \$20 million, as opposed to this project's cost of \$4.5 million (of which half is being paid by the state.) We have a lot of needs in this city that could use the \$15+ million that would otherwise need to be spent on this. It would be fiscally irresponsible to taxpayers for this project not to move forward. I would not be able to vote for anyone who voted to stop this project. I don't pay taxes so you can waste my money.	Emory Radcliffe	Thanks for your feedback and following the project. We do believe it is a wise and cost-effective way to restore the environment and protect infrastructure, while meeting the goals to clean up local waterways and the Bay. We will continue to post updates on the process to the project website. https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629
187	I love it	Gus Chiarello	Thank you for taking the time to submit your feedback. Thanks for your support.
188	By all appearances this project is an unsound attempt at destroying local environment for some undetermined political gain. Once done, it cannot be undone. Attempts at steering the project with science and logic have been met with astounding levels of ignorant bullying. If anyone with a shred of integrity reads this, you need to find the brakes to this un-environmental steam roller and listen to any of the environmental scientists banging on your door.	Jim Huddle	The City has held an onsite meeting with 'experts' and representatives from civic associations, along with the City's project team. The City submitted a concept plan to VDEQ with the grant application and VDEQ staff visited the site prior to awarding the matching grant. The meeting with the project team and local residents was productive and the project team is pursuing ways to incorporate items from the discussion into the project design.
189	I have attended the City meetings for this project. I find the plans acceptable and in line with stream restoration BMPs.	Michelle Ryan	Thank you for taking the time to submit your feedback. We appreciate your support for the project. We do believe it is a wise and cost-effective way to restore the environment and protect infrastructure, while meeting the goals to clean up local waterways and the Bay. We will continue to post updates on the process to the project website. https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=11762
190	I support the project. I imagine these forms are primarily used by people voicing opposition (I got a flyer on my mailbox today) and so I want to be sure to show my support. I think the goal of the project, to reduce nutrient pollution in the bay, is of higher priority than preserving individual specimens of trees and other native plants. I read the City's material and think the City's plan incorporates thoughtful and reasonable measures to restore native plants and habitat, in addition to meeting the pollution reduction goals. It appears to be well thought out and well designed using current best practices. I therefore support the project and think that it will be money well spent.	Misha Gill	Thank you for taking the time to submit your feedback. We appreciate your support of the project and it's goals. We do believe it is a wise and cost-effective way to restore the environment and protect infrastructure, while meeting the goals to clean up local waterways and the Bay. We will continue to post updates on the process to the project website. https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=11762
191	Save it!	Nicole Rosario-Flores	Thank you for taking the time to submit your feedback. Your comment has been recorded.
192	I trust the experts that know what the Chesapeake Bay and Taylor Run needs. I'm glad that the City is listening to them and embarking upon this important project. Amateur 'experts' making noise throughout our community to oppose this project have little data and evidence to back up their sensationalist claims. Please move forward and ignore the rhetoric.	Steve Canady	Thank you for taking the time to submit your feedback. We appreciate your support of the project and it's goals. We do believe it is a wise and cost-effective way to restore the environment and protect infrastructure, while meeting the goals to clean up local waterways and the Bay. We will continue to post updates on the process to the project website. https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=11762
193	I live on Janneys near this park. I am all in favor of this project. We must prevent drainage and sediment issues in the bay and restore our bay. There's no excuse for continuing to pollute downstream. It isn't as though I don't use this part. I run in it or mountain bike through it at least once a week. However, we have to start looking after our planet as well.	William Kruse	Thank you for taking the time to submit your feedback. We appreciate your support of the project and it's goals. We do believe it is a wise and cost-effective way to restore the environment and protect infrastructure, while meeting the goals to clean up local waterways and the Bay. We will continue to post updates on the process to the project website. https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=11762
194	Please do not do this. The trees, seep swamp, and Taylor Run should be left undisturbed. We will be harming an Alexandria forest - and a heavily used nature trail and park - to reduce in a very marginal way Chesapeake Bay pollution. This is a bad tradeoff.	William Maher	See FAQ # 19. "Do No Harm" implies that there would be no harm in doing nothing. In the case of Stream Restoration on a degraded stream, particularly for Taylor Run, there is considerable risk of continued harm occurring if nothing is done to stabilize the stream banks and bed. The swamp will not be disturbed. The benefit is not only to the Bay, but in restoring a severely degraded stream corridor for the health of the stream corridor and for residents to enjoy.
195	We are at a point where we are about to destroy Taylor Run to "save" it from the effects of thoughtless over-building in general, and inadequate SWM engineering on the built sites that drain into it. I want the City to use my tax dollars to stop this project (which will fail at great expense and irreplaceable loss.) re-group, and consult with experts who see the big picture, know that this stream does not and should not have a floodplain, for example, and have a history of creating successful measures to stop destructive erosion while maintaining the natural functions and vegetation of similar stream systems. We are lucky that our local stream banks are very resistant to erosion. That has bought us time, to this point, where we can choose to integrate our built sites more functionally with the stream system. This can be retractive as well as part of a comprehensive SWM plan for the City that conserves our scarce remaining natural open space and protects against the effects of too much impervious surface runoff that is currently piped into our streams, falling out with great force. I would like to see retroactive SWM, even something at this site like re-creating a streambed in front of the Rec Center, with plenty of rough surfaces (like big rock) to artificially slow the water before it reaches the natural stream. It would be much cheaper and easier to achieve SWM goals in this spot than to go into the woods, removing the vegetation and the natural streambed. The proposed project is simply too destructive.	Kathleen Kust	Thanks for your comments and your feedback has been recorded. Due to current situation of the stream, there is significant risk of continued harm, if nothing is done to stabilize the stream banks and bed. Recent development in the Taylor Run watershed includes stormwater BMPs. There is not much space available to add more controls upstream. Also cost of the implementing those additional controls will be much higher with limited or no benefits. See the Taylor Run Stream Restoration project page for more details. https://www.alexandriava.gov/tes/stormwater/info/default.aspx?id=117629

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#	Comment	Name	Response
196	Don't bulldoze it I'm idk why I'm hearing that this is what the city wants but unless we want Alexandria looking like some Arlington pop up mall stop bulldozing the trees that help stop pollutants from getting into the stream!?	Piper Bucholz	The proposed restoration will halt the continued degradation of the stream corridor. Re-planting of healthy native vegetation such as trees and shrubs is a critical component to the success of a stream restoration. The City anticipates re-planting 2,280 trees for this stream restoration including oaks, maples, dogwoods, and sycamores. An additional 7,200 shrubs are expected to be planted which include buttonbush, winterberry, and spicebush. Along with a warranty period for the re-planting material, as part of the project team, RPCA Natural Resources Division will be the main staff to ensure that invasive species are kept at bay during the establishment period for the new plantings.
197	This project shouldn't go through. It is not worth it to destroy the ecosystem already in place and cut down so many trees, especially as the stream itself is not in terrible condition. As a TC Williams student, I believe it is important to preserve the ecosystem already in place at Taylor Run and leave the trees, some of which are hundreds of years old and represent the history of Alexandria.	Allie Gibbs	See the Taylor Run Stream Restoration FAQ#3,11 & 12 for more details.
198	I understand and agree with the very important work of stream restoration. However, I also believe that the minimal impact should be made on the existing natural resources as possible. ...old growth trees in particular. We have so little of them in our increasingly urban areas.	Barbara Lerch	The purpose of the Taylor Run stream restoration is to reduce and limit the ongoing erosion, widening, and downcutting in the corridor as well as increase plant and animal diversity and improve the filtering capacity of the Chesapeake Bay. The Taylor Run Watershed draining to this section of stream is approximately 300 acres and consist of densely developed urban land.
199	Our city is unique. It is an inclusive, caring and diverse community where neighbors care about each other -- and the environment in which we live, and with which we have been charged to care. It is difficult to see how this proposed project is at all consistent with Alexandria's mission as an Eco City. The project will not restore the Taylor Run channel to its natural state, and will destroy mature forest land when we should be looking to expand rather than destroy our city's green space. It is not clear the proposed project has incorporated the recommendations the City's in-house scientific natural resource experts, or addresses the fact that urban watersheds like Taylor Run are eroding their channels because of excessive storm water runoff caused by poorly planned development. This will only likely get worse if the City continues on its ill-conceived march to promote more density in our city in the midst of a pandemic. What is ironic is that this project will not help clean up the Chesapeake Bay nor reduce any potential flooding downstream. There is no clear mandate for this project. Rather, it is perhaps the most controversial and divisive environmental proposal floated in years. I would hope before proceeding the City will seek a consensus in the community behind any restoration project. The City should halt all storm-water 'restoration' projects until these projects have been reviewed by a group of multi-disciplinary independent experts approved by the community. The final project design should be brought before the community and receive community support. And, science must be the basis for all decisions made by the City with regard to this and other environmental projects. Thank you for your consideration of my views.	Darryl Nirenberg	The T&ES has the responsibility for the ensuring that stormwater and groundwater runoff on private properties does not create a nuisance on adjacent properties within public right-of-way (ROW). Under extreme conditions, such as we experienced July 8, 2019, July 23, 2020, and again September 10, 2020, the drains in the street can be overwhelmed and cause flooding. The purpose of the Taylor Run Stream Restoration is preventing streambank erosion, to protect properties and infrastructure as well as provide compliance with Chesapeake Bay requirements, including the reduction of pollutants by reducing erosion. See the Taylor Run Stream Restoration FAQ#3,11 & 12 for more details. The Taylor Run stream restoration project is managed by the City of Alexandria (DPI, RPCA, SWM) and a team of qualified consultants. On Saturday, 11/7 the City's project team, including WSS, met onsite with ECA, Dr. Field, and representatives from local civic associations to discuss the project. Staff will be following up with this group to discuss concerns/issues raised and to discuss potential ways to address them.
200	As a Tree Steward for Alexandria, I must speak out for these mature trees and against their removal. Alexandria is a Tree City with a goal of a 40% tree canopy. We are woefully behind in this goal, having only a tree canopy of 25%. Mature trees have a special ecological value to the community and we recently saw much public outcry over one mature tree at TC Williams, the Witness Oak, when it was recently taken down and there was a lot of outrage at the City for allowing this to happen. Similarly, the public was dismayed at the tree destruction at Potomac Yards. In any case, please take out Tree Comments to heart now, at the beginning of the process and reconsider whole scale removal of mature trees. Merely replanting does not replace what is lost. Woods and undisturbed wetlands are increasing rare and valuable for nature, wildlife, and the community. Please save Taylor Run! Sincerely.	Deirdre MacNeil	Restoration efforts are expected to impact part of the surveyed trees along the stream corridor. The purpose of removing trees is to restore the stream bed and stabilize the banks and for new plantings to take root without disturbance; to remove threats to existing sanitary infrastructure; and to support access and grading activities with the goal to re-use as much timber as possible within the restoration footprint. Without intervention, the stream will continue to experience accelerated erosion and trees near the top of bank will continue to fall into the stream. The wetlands will not be disturbed at all. Past disturbances have occurred and through proper management, much of the area is in excellent shape. However, the stream will continue to degrade if the restoration does not occur.
201	After reviewing the city's proposal for Taylor Run, I have concluded that the scope of the plan needs to be scaled back considerably. While it is clear that some "tidying up" of fallen trees in the stream is called for, the idea of removing some 269 healthy trees along the stream to "restore" the area seems ridiculous. Equally absurd is the idea of planting more than 9,400(!) trees and shrubs among the stumps. I have no idea what the cost of those plantings would be, but the task of regularly watering them to keep them alive would be enormous. Why not just keep the trees that are already there and save ourselves the cost and aggravation?! I am just cynical enough to point out that, with the state offering to pay for half the cost of the proposed project, the city may be eager to proceed without careful consideration that "the cure may be worse than the problem". I recommend that we save the money earmarked for this project and instead put it towards the more immediate need of flood mitigation - so readily apparent in Rosemont and other areas of the city. I am not opposed to workers taking a few days to clean out the fallen trees visible in the stream, but the city's plan, as proposed, is way over-the-top and should be sent back to the drawing board.	Freeman Jelks	The City continues its commitment to address identified flooding and capacity issues. Flooding was widespread throughout the city those days, flooding many streets, streams, and private properties. Once the rain stopped, the flood waters drained out within an hour, indicating there were no major blockages to the system. The Tree's planning to remove with the Limit of work in order to give an access for equipment and vehicles as well as the required grading otherwise remaining trees will flash cut with stamps and root left in place.
202	I am concerned about the proposed plan to "restore" the Taylor Run Stream. The scope of this plan includes the removal of many trees and the elimination of one of the few remaining forested areas in our community. Based on my recent tour of the area, I remain unconvinced that a project of this scope is necessary and will not do irreparable harm to an area that's home to wildlife, wetlands and many trees. While the plan calls for a number of trees to be planted, we know that new trees cannot replace the value of mature trees and that many trees, unless meticulously cared for, will not survive. I feel strongly that a city that is environmentally conscious looks for meaningful ways to address pollution and erosion that don't actually destroy forested habitat. There must be other options available that will help Alexandria City meet its state pollution requirements and receive grant funding from the state without the removal of so many trees and the destruction of a forested area.	Heather Jelks	Restoring the hydrologic function, including dynamic channel processes is one of the stream restoration project purpose. See the Taylor Run Stream Restoration FAQ#3,11 & 12 & 14 for more details.
203	Please reconsider the City's plans for restoration at Taylor Run. The park is a city treasure. It is a lovely place to walk, an outdoor school room for TCW, and a home to a variety of native plants and animals. It is irreplaceable. It's my understanding that work on the park is part of the city's efforts to cut down on pollution in the Chesapeake Bay. I'm sure we can find ways for the city to fulfill its important responsibilities to the bay and maintain the beautiful canopy trees in the park, and all the living things underneath them.	Jackie Coleburn	This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. The goal is to improve local water quality, enhance and conserve the stream ecology, and the public infrastructure, while meeting Bay goals. (The City is in the Bay Watershed.) Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion. Of the 269 trees currently slated for removal, 20% are dead, with many more in jeopardy of dying from the accelerated erosion. Based on aerials provide at the Sept 29 public meeting, the area has been clear-cut over the years. The restoration includes planting about 11,000 trees and shrubs of over 30 different native varieties. Wetlands are outside of the project area and will not be impacted.
204	I do hope you reconsider taking down so many trees and ruining the habitat of many animals in the area. There has been so much development in Alexandria and the loss of the wildlife that live in the area would harm the character of our city.	Joanna Bopp	This project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. The goal is to improve local water quality, enhance and conserve the stream ecology, and the public infrastructure, while meeting Bay goals. (The City is in the Bay Watershed.) Taylor Run has been impacted, portions piped, and is severely degraded and has been channelized and is severely incised. The restoration will stabilize the stream corridor and halt the death of trees as they are undermined and fall into the stream; causing blockages and further accelerated erosion. Of the 269 trees currently slated for removal, 20% are dead, with many more in jeopardy of dying from the accelerated erosion. Based on aerials provide at the Sept 29 public meeting, the area has been clear-cut over the years. The restoration includes planting about 11,000 trees and shrubs of over 30 different native varieties. Wetlands are outside of the project area and will not be impacted.
205	It is outrageous that we would sacrifice hundreds of healthy trees for a speculative plan to improve the flow of water to the Chesapeake. Getting free money to do this does NOT justify doing it. I urge the City to reject this plan and save these trees by finding a far less dramatic way to approach this issue, if at all. It's important to remember that the new trees planted would take decades to rebuild the existing canopy.	Paul Friedman	The purpose of removing trees is to restore the stream bed and stabilize the banks and for new plantings to take root without disturbance; to remove threats to existing sanitary infrastructure; and to support access and grading activities with the goal to re-use as much timber as possible within the restoration footprint. Of the total trees surveyed, 269 trees are identified in the current plans to be removed. Approximately 22% of the estimated 269 trees to be removed are dead. Approximately 11,000 trees and shrubs will be replanted.
206	This area of Alexandria has seen an acceleration in loss of mature tree in the last 3 years. This plan appears directed at erosion control and rain water management. In that sense this is an environment positive plan. Serious consideration should also be given the impact caused by the loss of soil fixing trees and the habitat lost for wildlife. The work proposed is deeply invasive to the plant and animal life of this area and in that sense this is an environment destroying plan. If the city committed to preservation of mature trees, use of only small equipment (think Bobcat, instead of backhoe), and gave a full account of the number and type of trees removed so that they can be immediately replaced then this plan would be balanced. As it stands, this looks like a publicity stunt 'eco' project for some campaign scrap book. The public can tell that's what this is. I could be wrong, but you would have to take the time to educate and get your message out if you really stand behind this and it doesn't seem like you want to do that. So I am firmly against this plan.	Rev. Charles Russell	A critical element of the work is the protection of the existing trees and the landscape along the Taylor Run, The City of Alexandria and the DPI has worked extensively with the project consultants and our landscape architect to determine the specific trees for removal and also the protection during construction. The proposed tree's will responds better to stress, roots establish quicker leading to faster growth. Also they will increase the canopy line. In our stream restoration project, we plan to re-use the trees we take down for rebuilding the stream bed and banks, creating log vanes that helps stabilize the stream bed and slow the water velocity.

City of Alexandria | Taylor Run Stream Restoration
Response to Public Comments Received through October 23, 2020

#	Comment	Name	Response
207	I am a member of Tree Stewards of Arlington and Alexandria. As a volunteer, I have planted and pruned many trees in Arlington and Alexandria. I find it surprising and troubling that the city would cut down a mature forest and then spend the time and money to replant trees and shrubs in the same area. This is a very poor use of scarce city resources. It is hard to imagine the city planting 2,280 trees and 7,200 shrubs in the small, narrow project area identified in Taylor Run. I, along with many other Tree Stewards, would be happy to help city staff identify locations in the city where 2,280 trees and 7,200 shrubs could be planted without cutting down a single tree in Chinquapin Park. Tree Steward volunteers would likely assist the city in planting the new trees. As any person who has planted a tree or shrub knows, planting the tree or shrub is just the beginning. Who will water and care for the new plantings for the next two to three years until they are well established? For 9,480 new plantings, the future watering and care requirements are huge. Who will ensure the city's investment survives? Please contact John Marlin, the Alexandria City Arborist, and other tree experts to determine whether it makes sense to cut down a mature forest and plant 9,480 new trees and shrubs in a narrow stream valley.	Rita Leffers	Prior to Construction the limits of disturbance(LOD) shall be walked by WSSI, Contractor and city arborist to confirm tree removal. In the event that the contractor believes a tree within the LOD could be saved, the contractor shall contact WSSI and city determine if the tree should be saved or removed. Re-planting of healthy native vegetation such as trees and shrubs is a critical component to the success of a stream restoration. The City anticipates re-planting 2,280 trees for this stream restoration including oaks, maples, dogwoods, and sycamores. An additional 7,200 shrubs are expected to be planted which include buttonbush, winterberry, and spicebush. Along with a warranty period for the re-planting material, as part of the project team, RPCA Natural Resources Division will be the main staff to ensure that invasive species are kept at bay during the establishment period for the new plantings.
208	I am very concerned about plans to remove both mature native trees and rare, for our area, native plants. There must be a less destructive way to accomplish the desired goals.	Scarlett Swan	Lots of trees are dying close to stream bank due to sever channel erosion and If the stream is not restored and allowed to continue to degrade. This process continues and is evident from the many trees that have already fallen into the stream. See the Taylor Run Stream Restoration FAQ#3,11 & 12 for more details. The wetlands are outside the project limits which include the ferns, skunk cabbage, and other plants. Goals of the project are to restore the severely degraded stream and half the accelerated erosion, improve local water quality, enhance and conserve the stream ecology, and protect the public infrastructure. All of these goals are critical. Ancillary to that, the City will address the Chesapeake Bay cleanup mandates since Taylor Run is in the Chesapeake Bay.
209	The Taylor Run restoration project is a bad idea. Alexandria City should not destroy one of the only green spaces we have left. The "restoration" will cut down so many trees and will not ultimately benefit the stream. I do not support it and I hope the city won't either.	Abigail St. Jean	Lots of trees are dying close to stream bank due to sever channel erosion and If the stream is not restored and allowed to continue to degrade. This process continues and is evident from the many trees that have already fallen into the stream. See the Taylor Run Stream Restoration FAQ#3,11 & 12 for more details. The wetlands are outside the project limits which include the ferns, skunk cabbage, and other plants. Goals of the project are to restore the severely degraded stream and half the accelerated erosion, improve local water quality, enhance and conserve the stream ecology, and protect the public infrastructure. All of these goals are critical. Ancillary to that, the City will address the Chesapeake Bay cleanup mandates since Taylor Run is in the Chesapeake Bay.
210	I feel that cutting down trees and infringing on the forest wetland is an awful way to improve Chesapeake Bay water quality. In fact it is preposterous! I have seen better ways to reduce pollutants such as storm water retention that was put in beneath the synagogue parking lot on Valley Drive. The I have enjoyed the trail next to Taylor Run in Chinquapin for decades. I live close enough to walk there. There is nothing else of its size around. Thank you for considering stopping the planned "restoration".	Thomas Greco	Lots of trees are dying close to stream bank due to sever channel erosion and If the stream is not restored and allowed to continue to degrade. This process continues and is evident from the many trees that have already fallen into the stream. See the Taylor Run Stream Restoration FAQ#3,11 & 12 for more details. The wetlands are outside the project limits which include the ferns, skunk cabbage, and other plants. Goals of the project are to restore the severely degraded stream and half the accelerated erosion, improve local water quality, enhance and conserve the stream ecology, and protect the public infrastructure. All of these goals are critical. Ancillary to that, the City will address the Chesapeake Bay cleanup mandates since Taylor Run is in the Chesapeake Bay.
211	DO NOT BULLDOZE, protect this trail area	Caroline Schuler	Re-planting of healthy native vegetation such as trees and shrubs is a critical component to the success of a stream restoration. The City anticipates re-planting 2,280 trees for this stream restoration including oaks, maples, dogwoods, and sycamores. An additional 7,200 shrubs are expected to be planted which include buttonbush, winterberry, and spicebush. Along with a warranty period for the re-planting material, as part of the project team, RPCA Natural Resources Division will be the main staff to ensure that invasive species are kept at bay during the establishment period for the new plantings. The area will not be bulldozed.
212	This project as designed will destroy an age old natural seepage wetland and some 270 native trees and shrubs along with species only found at Taylor Run with questionable benefits. We need a totally rethinking of this 'stream restoration' model that is slated to be applied to other natural stream beds. To reduce stream erosion and pollutants, we need upstream projects that retain and redirect stormwater. We need projects that preserve rather than destroy the few natural stream beds, forests and wetlands that remain. The project should be put on hold until we get an in-depth analysis by outside conservation experts as well as our City's natural resources experts; we should consider a more limited and environmentally sound project that works with rather than against nature. Given the outpouring of citizen concern, its implications for other natural stream beds, and its high tax payer cost, this project in whatever form it takes should not go forward without City Council review and approval.	Jane Seward	Thanks for your comments and your feedback has been recorded. Recent development within the watershed of Taylor Run includes the stormwater management BMPs. Unfortunately current stream situation is worst and upstream BMPs will not help to stop degradation and stream corridor will be further damaged. Please see Taylor Run Restoration project page more details.
213	As is demonstrated at Brenman Park, invasive species have resulted since the work on the pond was completed. This is a very real concern for Taylor Run. Removal of any vegetation and canopy is a cause of climate change.	Kate Kate	RPCA staff was on the construction site at Ben Brenman as soon as it was turned over to the City. The invasive plants did not have a chance to overwhelm the construction site, and were treated in an effective manner. Continued follow up each season will control any potential existing outbreaks.
214	I would like to add another voice in strong opposition to this "restoration" project. It is imperative that we preserve the few natural spaces we have left in the city and it does not sound to me like the science behind this project is convincing either. Thank you.	Scott Sidley	Thank you for your comment.
215	I believe this is a well conceived project. I would suggest First Baptist Church which interrupted the flow of the stream with some damaging construction and mitigation efforts be asked to share in costs of this project.	Ross Simons	First Baptist Church owns a portion of the property where the project is located. The church is in the process of granting easements over their property that allows for the project to move forward and remain in perpetuity. The church pays the City's stormwater utility fee that is funding the City's portion of the project.
216	Please refocus this grant money in the Del Ray and Rosemont areas which are continually flood impacted. Taylor Run does not need this project as urgently as do those areas. Please do not remove 208 live trees from an area that provides shade, carbon offsets and added value to our city. I strongly oppose the current plan for this project.	Tracey Moorhead	This project is receiving funding from the Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) matching grant. If postponed, the project will lose \$2.255M in funding. The funding must be applied towards the state and federal mandates to clean up the Chesapeake Bay. Alternative BMPs to the stream restoration will mean a loss of state grant funding. Alternate BMPs to meet the Bay mandates would likely cost around \$20M to achieve the same level of reductions as the stream restoration project, without the benefits of restoring the degraded stream. Completing this very cost-effective project will allow the City to identify funding for capacity and spot projects to reduce flooding. The restoration includes planting approximately 11,000 trees and shrubs of about 30 different native varieties.
217	When considering the goals of this project, it is inconceivable that this will be \$4.5 million well spent. Destruction of relatively "old growth" woodland is unnecessary to solve the stated problems. Much less money could be spent managing the flow through this stream. The residual money could be applied to other similar projects yielding a far greater impact vis-a-vis the stated goals. Please evaluate the money trail on this one and see if it truly makes sense. Thank you for your consideration.	Walter Lubsen Jr.	This project is receiving funding from the Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) matching grant. If postponed, the project will lose \$2.255M in funding. The funding must be applied towards the state and federal mandates to clean up the Chesapeake Bay. Alternative BMPs to the stream restoration will mean a loss of state grant funding. Alternate BMPs to meet the Bay mandates would likely cost around \$20M to achieve the same level of reductions as the stream restoration project, without the benefits of restoring the degraded stream. Completing this very cost-effective project will allow the City to identify funding for capacity and spot projects to reduce flooding. The restoration includes planting approximately 11,000 trees and shrubs of about 30 different native varieties.
218	I generally support this project. I also am the Chair of the Chinquapin Gardens Advisory Board which helps the City manage these community gardens (Oscar Mendoza is our City rep). As you know, our gardens (over 160 plots) are part of Chinquapin Park just west of the Taylor Run corridor. We don't think this project will affect our garden community in any way. Can you please confirm this and confirm that the garden road around the south and east of the gardens will not be used for construction vehicles. If this road is used for project-related vehicles, I know some of our gardeners may object. Can you respond to my email so I can pass this on to our Board members and if needed the gardeners as well (we have all their email addresses and actively use this to keep them posted of garden-related events and activities). You can also reach me at my cell number - 703-980-2431 - if it's more convenient to talk in person. Thank you. - Richard Dorrier, Chair, Chinquapin Gardens Advisory Board	Richard Dorrier	The project will not impact the Chinquapin community gardens. The garden road around the south and east of the gardens will not be used for construction vehicles.

#	Comment	Name	Response
219	<p>This project is a very bad idea that will destroy one of the last mature forests in the city. It is a poor use of 4.5 million scarce state and city dollars. Here are some specific concerns.</p> <ul style="list-style-type: none"> •The project will cut down more than 200 trees in the project area. It will take decades or longer for the area to return to its current state. •The project will destroy plant and animal life in the project area and endanger unique and sensitive ecological areas adjacent to the stream. •Proposed water quality improvements claimed by the project are based on estimates, not measurements, so reductions in nitrogen, phosphorous and sediment pollution are not assured. •The proposed project has not considered how water quality will be degraded by raising the stream bed or operating heavy equipment in the project area. Large increases in suspended sediment pollution will likely occur during the project. •Invasive, non-native plants have been removed along Taylor Run. The proposed project will denude the area and create an opening for the re-invasion of unwanted plants. •Before embarking on any project in Taylor Run, the water quality at the beginning and end of the project area should be monitored for an extended period of time to determine if pollution originates in the stream or in the urban environment upstream. <p>Most important, the stream bank erosion observed in Taylor Run and the consequent sediment pollution from the stream is the result of the city's failure to install modern stormwater control structures and devices upstream of Taylor Run. There is ample space to construct stormwater collection and infiltration structures along King Street near the Bradlee shopping center, in the open field along King Street in front of the Chinquapin Park Recreation Center, and at other locations. These stormwater control measures would capture and sequester pollutants before they enter Taylor Run. It would be terrible mistake to destroy the beautiful, natural woodland along Taylor Run and not address the root problem – high volume, high velocity stormwater runoff that occasionally roars through Taylor Run.</p> <p>One of the stated goals of the proposed project is water quality improvements prescribed by the Chesapeake Bay Total Maximum Daily Load (TMDL) program. We strongly support water quality improvements that improve and protect the Chesapeake Bay. We believe other stormwater projects and initiatives, however, not this one, will achieve much greater water quality improvements at lower costs.</p> <p>Please cancel the ill-advised Taylor Run “stream restoration” project. Please study and present smart alternatives to the proposed project.</p>	Bill Gillespie	<p>Your comments are recognized and taken into consideration. Many of your concerns are addressed in the Taylor Run FAQs, available for download on the City's website.</p> <p>The Taylor Run Stream Restoration project is designed by subject matter experts that have many of the same concerns listed and they have been taken onto account in the overall design effort. The methods used to estimate the load of sediment and associated nutrient pollution leaving the stream banks was performed using Virginia DEQ and Chesapeake Bay Foundation approved and accepted methods.</p> <p>The intent of the design is to build resiliency back into the stream channel such that the channel is no longer degraded by the changes in the watershed that has occurred over the last 80-years. It is unfortunate that effective environmental regulations did not come into effect until the federal Clean Water Act was enacted in 1972, and the Chesapeake Bay Preservation Act was enacted in Virginia in 1988. Most of the development in the Taylor Run watershed had already occurred by that time. Today's regulations limit runoff from development/redevelopment to not increase over currently existing runoff rates. Currently, there is no law in Virginia that authorizes municipalities to require property owners, not developing/redeveloping, retrofit existing properties to today's standards.</p>
220	<p>I live off of W Taylor Run Parkway and often use the Chinquapin trail for walking, running, and exploring. It would be a shame for so much of it to be disturbed and I don't believe this restoration project is a good enough reason to do so. If the city is going to spend the money and time on a project like this, it would be better for them to address the source of the problems of erosion and pollution instead of papering over the crack with this stream restoration. Then the impact would be greater and longer lasting. I'd urge the city to continue researching, consulting experts, and developing plans that will provide better results and not harm the ecosystem here. I don't care if it takes more time and/or money - just do it right.</p>	Ellen White	<p>Building BMPs in the watershed will not reduce ongoing erosion and degradation in Taylor Run. The intent of the design is to build resiliency back into the stream channel such that the channel is no longer degraded by the changes in the watershed that has occurred over the last 80-years. It is unfortunate that effective environmental regulations did not come into effect until the federal Clean Water Act was enacted in 1972, and the Chesapeake Bay Preservation Act was enacted in the City in 1992. Most of the development in the Taylor Run watershed had already occurred by that time. Today's regulations limit runoff from development/redevelopment to not increase over currently existing runoff rates. Currently, there is no law in Virginia that authorizes municipalities to require property owners, not developing/redeveloping, retrofit existing properties to today's standards. However, many redevelopment projects such as the TCW High School, Safeway, Episcopal School, Blessed Sacrament and others have stormwater management facilities.</p>
221	<p>This project, as proposed by City of Alexandria leaders conflicts with previous plans for Chinquapin Park and the provisions of the Land and Water Conservation Fund. This is a water infrastructure project that cuts and scrapes the stream corridor in the name of saving the Chesapeake Bay. Initially the idea was to develop alternatives and determine the feasibility of the restoration. It is obvious that alternatives weren't considered; a strategy for managing water quality and runoff wasn't done on a watershed basis and there was no early-design-coordination with the Commonwealth of Virginia and the National Park Service about the deed restrictions that came with the Land and Water Conservation Fund grant. The project converts parkland and outdoor recreation areas into a water infrastructure projects which violates agreements and law. City leaders need to pull this proposal and work with the community to redesign a solution.</p>	Joseph Glenn Eugster	<p>The City's project team of T&ES, DPI, and RPCA has worked with Virginia DCR and the Land and Water Conservation Fund representatives in ensuring that this project does not conflict with the grant conditions.</p>
222	<p>The mayor and city council want to build up the surrounding area, with high density housing. How will this impact the water flow in Taylor Run and the sewers?</p>	Lori Hartmann	<p>All new development and redevelopment must meet stormwater management requirements in the Alexandria zoning ordinance (Article XIII) to not increase stormwater runoff and to provide BMPs for water quality.</p>
223	<p>This proposed project is not necessary, will not achieve its objectives, and should not be undertaken. It would destroy a lovely wooded area that includes one of the oldest trees in Alexandria, a beautiful walking trail, and a small marshland area. That far outweighs the perceived benefits. I have walked this trail almost every day for the past 8 months and have not noticed any erosion along the banks of Taylor Run. I believe that the pollution problem is best controlled by addressing its sources, which extend well beyond the boundaries of this portion of Taylor Run. In sum, I fear that if completed, this project will fail to accomplish its intended purpose while destroying a lovely natural refuge in the process. That seems to me to be a lose-lose proposition and a waste of taxpayer money.</p>	Preston Brown	<p>Your comments are recognized and taken into consideration. Many of your concerns are addressed in the Taylor Run FAQs, available for download on the City's website.</p> <p>The Taylor Run Stream Restoration project is designed by subject matter experts that have many of the same concerns listed and they have been taken onto account in the overall design effort. The methods used to estimate the load of sediment and associated nutrient pollution leaving the stream banks was performed using Virginia DEQ and Chesapeake Bay Foundation approved and accepted methods.</p> <p>The intent of the design is to build resiliency back into the stream channel such that the channel is no longer degraded by the changes in the watershed that has occurred over the last 80-years. It is unfortunate that effective environmental regulations did not come into effect until the federal Clean Water Act was enacted in 1972, and the Chesapeake Bay Preservation Act was enacted in Virginia in 1988. Most of the development in the Taylor Run watershed had already occurred by that time. Today's regulations limit runoff from development/redevelopment to not increase over currently existing runoff rates. Currently, there is no law in Virginia that authorizes municipalities to require property owners, not developing/redeveloping, retrofit existing properties to today's standards.</p> <p>Building BMPs in the watershed will not reduce erosion in Taylor Run. The City does consider water quality alternatives that can help the City reach its pollution reduction mandates. However, it is the large storm events that cause the lion's share of erosion of the stream banks and subsequent sediment transport to the Bay. Now, it is not only the increased runoff from a built-out watershed, but also increased runoff from more frequent and intense rain storms. Reducing the impervious surface of the watershed helps, but the bigger more intense storms easily overwhelm the benefits of more pervious surface.</p>
224	<p>As a former president of the Taylor Run Citizens association 2003- 2006, there was serious flooding affecting many houses on E Taylor Run Parkway. Again this year a heavy rain event overwhelmed the stream capacity flooding this same area. How will this restoration project reduce this problem for these residents? Will it make it worse?</p>	Randy Cole	<p>Flooding from Taylor Run is more a function of Hydrology (rainfall runoff delivered to the stream) than Hydraulics (flow of water in the stream). The Taylor Run stream restoration addresses hydraulic (flow) conditions in the stream and is not intended to address flooding downstream. However, by using Natural Channel Design, the high flows from the extreme storms will be slowed. Also, the twin culverts at the end of the project, installed over 60-years ago, have a limited capacity in passing flows downstream and do act as a regulator, metering flows. The project neither appreciably reduces or increases flooding downstream.</p>
225	<p>Living near the corner of Janney's and Francis Hammond Parkway, we've become a bit concerned that the stream has flooded 3 times since July 2019, turning our street and Janney's into a river. I think this stream project needs to get expert reviews of the current situation and the potential impact of the proposed approach before committing money to bulldozing and planting more trees. It doesn't appear as the right steps have been taken to ensure that this project will be a success. I'd rather not have our house, or our neighbors flooded regularly, much less do I want to continue to see people trapped in cars due to raging water on Janney's with every large rain event.</p>	Christine Barbour	<p>The stream restoration will help to dissipate the energy currently in the channel which will lesson the impacts downstream.</p>
226	<p>Assuming your project achieves a certain amount of sediment or potassium reduction on the project site, how much of that benefit reaches the Potomac or the bay? As I understand physics, there is a limit to how much sediment water moving at a certain speed can pick up. And water that has less sediment in it than it could otherwise pick up is essentially seeking such sediment until it reaches equilibrium. So if you succeed in starving the water of 10 pounds of sediment in the project area by armoring or restoring the stream, after that that sediment starved passes through the two pipes under the First Baptist bridge, which is not part of the project, it will be seeking to pick up more silt or potassium. And somewhere between chinquapin and the Potomac, it is likely to succeed. If that is true, little, if any, sediment or potassium savings will reach the Potomac or the bay. You guys are the experts. Am I wrong?</p>	James Clark	<p>Phosphorus is associated with accelerated erosion caused by high stormwater flows that is eroding the sediment from the stream banks. Stabilization and restoration of the stream will mitigate erosion and therefore transport of sediment and the associated phosphorus and nitrogen. Onsite values are taken and then compared with the approved expert panel approach. Stream restoration benefits the local waterway, which is in the Chesapeake Bay.</p>
227	<p>I haven't followed all the details about the Taylor Stream Restoration but with the information that I have, I believe that the issues such as phosphate runoff haven't been fully verified and that less destructive alternatives are available to address flooding. I urge the City Council to ensure that all options have been fully considered before committing to a plan. Make sure that the staff responsible for the plan did not first decide a course of action and then find justifications for it while discounting other options. I am very familiar with this style of "confirmation bias" from my career.</p>	Michael Olex	<p>The project is aimed at restoring the degraded stream corridor and protecting infrastructure. Stabilization of the stream will make it more resilient to the more frequent, intense storm events that are occurring. Stabilization and restoration of the stream will mitigate erosion and therefore transport of sediment and the associated phosphorus and nitrogen, based on the approved approach.</p>

City of Alexandria | Taylor Run Stream Restoration
Response to Public Comments Received through October 23, 2020

#	Comment	Name	Response
228	I understand that the City would receive credits for this project. However, despite the many words on the Restoration Project's page, the City has not provided essential answers to the most basic questions: what are the ACTUAL (not modeled) benefits that the City would gain from this project? What are the actual reductions in nutrients (P and N) that would be achieved, and at what cost? Does the proposed reconstruction actually recreate the river's natural structure or does it create a manmade structure at the cost of losing all the plants and canopy now at that location? Please note that a replanting of trees would be of species and genotypes that are not native to Alexandria, thus doing PERMANENT damage to our ecosystem and taking away a canopy that residents enjoy. Despite what TES is saying, the plants in this area are healthy and will be damaged, not helped, by this project. Permanently.	Susan Gitlin	The calculation for pollutant load reductions for the Taylor Run project can be found in the Phase III Stream Assessment on the City's website; consistent with the approved Expert Panel methodology. The stream corridor has been greatly altered as evidenced in the aerial photography and remains highly degraded. Doing nothing will lead to more degradation of the stream corridor. The approved approach includes using natural channel design techniques to restore the stream corridor. The current design of the restoration includes the removal of 269 trees, 61 of which are dead. It includes the planting of over 30 native species of 764 overstory trees, 1,516 understory trees, 55 large 'trailsides' trees and over 7,800 shrubs. This totals almost 11,000 native trees and shrubs.
229	As someone who regularly uses this portion of Taylor Run on my morning runs, I am dismayed and shocked that the city believes that, on balance, tearing up and reconfiguring this stream and the surrounding riparian area will do more good than harm. How much sediment and nutrient loading is really going to be reduced in the Potomac from a small stream like this -- even if you can get it right, which is iffy with such projects? Won't the disruption from the construction project actually increase any such loading in the near term? Hard to believe that wouldn't be the case as a result of tearing out over 200 trees, including 84 on land that will be dedicated to a new access road. How certain are you that the stream, if left alone, won't ultimately self correct? -- e.g., fallen trees and boulders over time may stabilize the banks. My concern is also personal. Taylor Run/Forest Park is one of very few natural areas I can reach walking or running from my house in Old Town. Simply put, Alexandria has so little natural habitat that removing any of it needs to be carefully considered and reduced to the absolute minimum necessary to achieve an important public goal. I strongly doubt this bulldozer approach is the least intrusive means of improving water quality in Taylor Run and I question whether an aggressive attack on this small portion of the watershed is a meaningful part of the solution to the nutrient and sediment loading problems in Alexandria.	Mark Dyner	See FAQ # 19. "Do No Harm" implies that there would be no harm in doing nothing. In the case of Stream Restoration on a degraded stream, particularly for Taylor Run, there is considerable risk of continued harm occurring if nothing is done to stabilize the stream banks and bed.
230	1. Why is the City using estimates based only on computer modeling versus actual sampling from the stream? One such actual sampling showed almost no phosphorus in the stream. 2. Can the project minimize the impact of the heavy equipment to better protect and preserve the major trees and the swamp? 3. Did the city explore any options other than the Natural Channel Design? 4. How did the City determine that 2,280 trees and 7,200 shrubs to be planted after the project is done will survive in this area?	Patricia Soriano	Phosphorus is associated with the sediment that is being eroded from the stream banks. Stabilization and restoration of the stream will mitigate erosion and therefore transport of sediment and the associated phosphorus and nitrogen. Onsite values are taken and then compared with the approved expert panel approach that includes natural channel design techniques fitted appropriately to the project. There is no work planned within either wetland area. Their is a design change in the works that will protect a greater number of trees near the second wetland area (seepage swamp). The number of plants are based on the design and as with all plantings, does not assume 100% survivability.
231	Hi, thank you for the detailed information. I have 4 questions: 1. Can you list the long-term harm/damage that will be caused to wildlife/plants by this project, if any? 2. What is the root cause of the erosion along Taylor Run? 3. A few years ago I contacted the city about erosion in a ravine the runs from Woodland Terrace to Russell Road. I was told at the time that the project would need to be funded in a future year. I'm wondering how the city ranks these projects, evaluates ROI, and decides which ones to do. Is there is a list of planned projects that can be shared with the public? The continuing erosion in the ravine is less than Taylor Run, but the cost of the restoration/mitigation would be much less too, so maybe the ROI is higher. 4. Does the city require that all new construction (including government buildings) be run-off neutral (i.e., not add more water to the city's stormwater system)?	Patrick McCusker	1. The restoration includes planting of nearly 11,000 trees and shrubs and the stabilization of the severely eroded stream that will continue to degrade if nothing is done. 2. High velocity flows with lots of energy that will be dissipated with the project design. 3. Not familiar with the issue. Please provide details to staff. 4. All new construction and redevelopment must meet stormwater management requirements for water quality and quantity. The project must not increase the amount of runoff.
232	Please reconsider the City's plans for restoration at Taylor Run. The park is a city treasure. It is a lovely place to walk, an outdoor school room for TCW, and a home to a variety of native plants and animals. It is irreplaceable. It's my understanding that work on the park is part of the city's efforts to cut down on pollution in the Chesapeake Bay. I'm sure we can find ways for the city to fulfill its important responsibilities to the bay and maintain the beautiful canopy trees in the park, and all the living things underneath them.	Jackie Coleburn	The City is working with a designer that has done a lot of stream restorations in this City. The project team includes environmental scientists, arborists, and engineers. Without intervention, the stream corridor will continue to degrade. The plan includes minimizing impacts to the local ecology and conservation techniques. But there will be some impacts. However, as evidenced by the multiple impacts over the years, and through careful oversight during re-establishment, the replanted vegetation will thrive and the loss of trees from bank erosion will be halted.
233	I'm trying to attend the meeting but zoom will not let me in. I registered in advance	Ann Shack	This issue was resolved during the public meeting.
234	I think you have not done enough to listen to the ecological community in Alexandria. You have not answered their questions or concerns. If you could address their concerns, you would have more support in the city.	Christine Coussens	Project outreach efforts were stalled by the COVID-19 global pandemic and have been restarted. We continue to listen and incorporate input.
235	Please refocus this grant money in the del ray and rosemont areas which are continually flood impacted. Taylor Run does not need this project as urgently as do those areas. Please do not remove 208 live trees from an area that provides shade, carbon offsets and added value to our city. I strongly oppose the current plan for this project	Tracey Moorhead	This project is receiving funding from the Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) matching grant. If postponed, the project will lose \$2.255M in funding. The funding must be applied towards the state and federal mandates to clean up the Chesapeake Bay. Alternative BMPs to the stream restoration will mean a loss of state grant funding. Alternate BMPs to meet the Bay mandates would likely cost around \$20M to achieve the same level of reductions as the stream restoration project, without the benefits of restoring the degraded stream. Completing this very cost-effective project will allow the City to identify funding for capacity and spot projects to reduce flooding. The restoration includes planting approximately 11,000 trees and shrubs of about 30 different native varieties.

#	Comment	Name	Response
236	<p>I submit the following comments on the proposed Taylor Run Stream Restoration Project on behalf of the more than 4,500 members of Audubon Society of Northern Virginia (ASNV). Our mission is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity. Our comments focus on the harm from this project to the sensitive and rare acidic seepage swamp in the Taylor Run stream valley. The September 2011 Conservation Assessment and Natural Resource Management Plan for Chinquapin Park and Forest Park, City of Alexandria, Virginia makes very clear that the acidic seepage swamp that is south of Taylor Run in the Park is regionally significant and the only swamp of its kind in Alexandria. It is a permanently-saturated depression formed by springs and seepage flow. An analysis of the plant types suggests the site's antiquity (i.e., its survival as a habitat that long flourished here and in a larger area in the past) and uniqueness. The habitat is also identified as important for certain wildlife requiring forested seeps and swamps for breeding. See 2011 Assessment, pp. 7-8. See also Table 1 at p. 14. There are other natural habitats and plant communities within the area of the proposed project that are important natural resources, but our comments focus on the acidic seepage swamp, the most unique habitat in the Park. ASNV is concerned that the proposed project, without modification, would destroy permanently this important natural resource. The only measure the project design (presented at the September 29, 2020 public engagement meeting) proposes for avoiding adverse effect on the seepage swamp is NOT routing a temporary trail through the wetlands. Unfortunately, that one measure will not avoid damage to the wetlands area. The plan still routes a broad access path for heavy equipment immediately adjacent to the wetland. Construction of such a path likely will involve fill. Heavy equipment rolling by the wetlands will distribute soil from other areas of the Park as well as associated roadways and possibly other construction sites. The traffic and fill will 1) compact the soil adjacent to the wetland, potentially changing the hydrology, and 2) import invasive species, which the 2011 Assessment indicates are largely absent from the area. 2011 Assessment, p. 8. In addition to likely damage from the construction activity itself, ASNV is concerned that a stated project goal of "re-establish[ing] flood plain connection" will alter permanently the nature of the wetlands and possibly destroy the acidic seepage swamp. Staff did not reply to a question raised in the September 29 meeting regarding whether raising the stream bed in the area of the acidic seepage swamp would change the nature of that habitat. ASNV is concerned because a seepage swamp is not the classic alluvial type of wetland upon which the restoration model is based. It is formed not by flooding from the stream but by springs and seeps. Periodic flooding could change its make-up. In addition, if the stream floods the seepage swamp, it can carry into that unique environment invasive plants from upstream. ASNV understands that there are some important goals the City of Alexandria hopes to meet through this project, specifically stabilizing the stream bed to reduce contaminated runoff and stabilizing the sanitary sewer infrastructure downstream of the wetlands. That notwithstanding, ASNV believes that the City could largely meet its goals while protecting valuable natural resources by re-designing the project to focus stream restoration activities to the area closer to the outlet where erosion is most pronounced, avoiding major alterations to downstream areas adjacent to the vulnerable wetlands, and access the sanitary sewer infrastructure at the stream crossing where it is most vulnerable without constructing a broad access road adjacent to the acidic seepage swamp. In re-designing the Taylor Run project along those lines, ASNV recommends that the City also consider the following measures: Ensure that the project design and construction plans take into account a comprehensive assessment of surface and subsurface water flows and the associated natural resources. The project design should ensure protection of the seepage swamp and the water sources that are required to maintain it. Avoid construction during nesting/breeding season for local natural resources (reptiles, amphibians, birds, etc.). The City could use as a model the seasonal construction restrictions for Ft. Belvoir, which ASNV can provide upon request. If current information on potentially affected resources is not available (e.g., stream monitoring results, wildlife surveys), the City should assess those resources before proceeding. Establish a buffer zone for protecting important natural resources to ensure that trees with critical root zones within the seepage swamp are not disturbed. Erect tree and stream protection fencing during the project and consider whether post-construction measures may be appropriate to protect the seepage swamp (e.g., a post and beam fence or other nonobtrusive protective design). Ensure that all post-construction planting is limited to native plants and that post-construction monitoring and mitigation continues for a period adequate to demonstrate restoration of healthy natural resource diversity in the project area. ASNV believes that by protecting the natural resources in Chinquapin Park and Forest Park, the City of Alexandria will be acting consistent with its intent to qualify as a green city, a goal it has demonstrated by adopting its Environmental Action Plan 2040. ASNV appreciates your consideration of its comments. If you have questions, please contact me at info@audubonva.org. AUDUBON SOCIETY NORTHERN VIRGINIA Connie Ericson, Chair Advocacy</p>	Audubon Society of Northern VA	<p>The proposed Taylor Run Stream Restoration project is consistent with the approach that must be used according to the Virginia Department of Environmental Quality (VDEQ) and the USEPA Chesapeake Bay Program. The goal is to improve local water quality, enhance and conserve the stream ecology, and the public infrastructure, while meeting Bay goals. (The City is in the Bay Watershed.) The project will not impact either wetland onsite, to include the acidic seepage swamp / wetland delineated on the project plans and confirmed with the U.S. Army Corps of Engineers (USACE). The access path is outside of the limits for either wetland. Additionally, we are working on a redesign for that portion of the project that would move the access path even further from the wetland and not require the trees outside of the wetland to be impacted. Minimal fill, if any, is required for the access path, that will include the deployment of wooden mats to spread the load from equipment to reduce com action – all outside of the delineated wetland. Equipment will be staged onsite to limit the import of invasive seed banks. Historically as shown in the aerial photography at the September 29 meeting that captured impacts over time, the stream used to be a braided channel with a connected floodplain. Over time the upstream portion was piped that now daylight at the headwall. Along with the upstream being piped, the stream was also moved and straightened related to nearby development. Over time the straightened channel, with increased velocities, has experienced accelerated erosion of the banks and bed, causing a sever incision to the bottom elevation as it is today. The stream has been identified previously as a candidate for restoration and the funding availability and ancillary Bay benefits allow the City to address the restoration efforts that include the goal of enhancing local water quality and cleaning up the Bay. Most of the sanitary sewer easement is close to the current trail and the access path is proposed close the current trail and the sanitary sewer easement. The sanitary sewer crosses the stream in two locations, with sanitary work to be done on the opposite bank from the seepage swamp/wetland. This work must be done to protect the infrastructure to prevent the release of raw sewage. The redesign being worked on require equipment to cross the stream in an area upstream from the seepage swamp/wetland to avoid equipment being near the swamp and to save the stand of maples and tulip poplars. Fencing will be installed around the work area and a third-party onsite contractor would ensure that work does not stray from the work zone, with special focus on the wetland areas. We will take a look to see if more substantial fencing could be used to further protect these areas. We've also made special note of avoidance of construction during nesting/breeding season and will work with RPCA Natural Resources to coordinate appropriately. Thank you for the well thought out comments and will contact you if we need to follow up directly. Otherwise stay tuned for a follow up meeting to discuss any changes made to the design and discuss some of the concerns in more detail. Also see the Taylor Run Stream Restoration FAQ#1 & 5 & 8 & 14 for more details.</p>
237	<p>I want to thank you and other members of this project for hosting the recent webinar on the Taylor Run Stream Restoration project. However, the presentation did not allay our concerns about the environmental impact of this stream restoration project. The project needs to be re-designed to protect the rare flora and fauna that is found in Chinquapin Park along Taylor Run (Native Vascular Flora of the City of Alexandria, Rod Simmons, 2015) The Environmental Council of Alexandria (ECA) asked Dr. John Field to review the City's FAQ document for the project before this meeting. His assessment raises numerous questions about the project that were not answered in this community update on the project. (see Dr. John Field's questions and comments related to the City's FAQ, ECA, 2020). We still have many questions about the stated objectives of the project and the techniques that the City and its consultants say will then be used to restore the stream channel naturally. The primary goal of the project is apparently to reduce nutrient and sediment pollution downstream in the Potomac River and Chesapeake Bay in order to meet more stringent Total Maximum Daily Load standards for these watersheds. Unfortunately, too many stream restoration projects fail because they are not designed properly. Here is what fluvial geomorphologist Dr. Field had to say about this issue in his recent review of a nearby project in Fairfax County: In my view, projects completed on rivers and streams can rightfully be called "stream restoration" only if they achieve all of the following three things: 1) they move the stream towards an equilibrium condition; 2) they are sustainable over time (and as such do not require maintenance after completion); and 3) they do not destabilize (i.e., worsen conditions) upstream or downstream sections of the stream. ("Critical Analysis of the Stream Restoration Design for Brickelmaier and Goodman Parks in Hollin Hills," 2020) The City appears to have added a number of additional reasons for doing the project, including protecting infrastructure and reducing flooding. There is no reason to assume, however, that these objectives will be any more achievable than the pollution reduction goals. If the reconstructed channel does not move the stream towards some natural equilibrium state, it will not help protect sewer pipes, for instance, either. Understanding how streams like Taylor Run respond to such changes will be especially important an era of rapid climate change. We think it makes sense to try to reduce the volume of rain water that flows into Taylor Run from its developed and impermeable headwaters upstream before embarking on a controversial and costly plan to reconstruct the part of Taylor Run channel that has been destabilized by this runoff. We should be able to reduce some of the pollutants before they reach the Chinquapin Park culvert too. Yet, the City explicitly states that they prefer stream restoration as opposed to upland retention of storm-water. The City's natural channel design for this project is based, like so many, on models and data collected from other watersheds. Streams, however, are not all alike. Restoring urban streams is particularly difficult and requires a deep understanding of how such stream channels are being destabilized in the first place, in order to avoid causing unwanted environmental problems. We believe that the City's project will fail to achieve the desired objectives outlined by Dr. Field (see above), in part because not enough watershed-specific scientific data has been collected about Taylor Run. The project is likely to cause significant environmental harm to the plants and trees and wetlands that still flourish in this stream valley. The presentation did not alleviate this concern. The focus of the City and its consultants seems to be on replanting what will be destroyed—unnecessarily, we believe—rather than on carefully preserving hundreds of trees, dozens of rare plants and at least one special wetland. This sort of restoration cannot be called eco-friendly. In our view, the project will damage the ecological integrity of natural resources that also important to protect and preserve for their environmental benefits. The City and its consultants have provided little evidence to support their claim that this project will also help keep critical pollutants out of the Potomac and Bay. As currently designed, the project simply cannot be called an environmentally sound or sustainable project. We believe that the City needs to investigate alternative natural channel design approaches that: (1) will not have such a significant environmental impact on the natural resources that are present now and, (2) that clearly meet</p>	Andrew Macdonald for Environmental Council of Alexandria	<p>Thank you for your comments. Recreation, Parks and Cultural Activities, Natural Resources Division continue to be part of the project team. (Dr. John Field's comments on the City's FAQ mentioned in this letter will responded to separately. While the referenced document lists Dr. Field as a "Stream restoration specialist," it is important to note that it does not appear he is a licensed professional engineer credentialed to perform stream restoration design. The project design consultant includes professional engineers and others with design experience.) Issues in this stream reach were identified as far back as 2008 during the Phase II Stream Assessment prior to Bay pollution reduction goals. The goal is to stabilize the stream corridor, enhance and conserve the stream ecology, and protect the public infrastructure while meeting Chesapeake Bay cleanup goals. The design approach is to provide functional uplift and stability, and is consistent with the approach in the <i>Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects (September 8, 2014)</i> which is the approach approved by the Virginia Department of Environmental Quality (VDEQ) and the US Environmental Protection Agency's (EPA) Chesapeake Bay Program. The source of the pollution is the continual accelerated erosion of stream banks that occur from channelization (which has occurred as shown in the presentation at the September 29 public meeting) and banks continue to erode. Sediment and associated nutrients move down stream and trees along the bank are undermined, fall into the stream, and die; taking away the riparian buffer and removing the benefit of trees in the stream corridor. Approximately 300 acres drains to this segment of Taylor Run, with over 1/3 of that watershed already containing stormwater management structural best management practices (BMPs) required by the City after 1992 with implementation of the Bay Act. Adding more BMPs upstream will not halt and reverse the continued degradation of the Taylor Run stream channel and corridor. As mentioned, the approach is approved by VDEQ and the Bay Program and includes a mix of onsite data and reference data, per the expert panel. The design team has many years of qualified experience in designing successful stream restoration projects. About 60 along the stream are already dead and others are in jeopardy of falling since bank erosion will accelerate without our help. We will replant 2,280 trees and 7,200 shrubs (using over 30 native species) to replace these and another 209 trees that will be removed. Also, as discussed in the September 29 public meeting, the nearby wetlands have been identified and are well outside the project boundary. Per your request, city staff and the design consultant met with ECA, Dr. Field and representatives from civic associations on 11/7/2020. We noted your concerns and are addressing those and the comments received otherwise as appropriate. The project team was conducting outreach until it was paused due to the COVID-19 global pandemic, and is not able to perform that outreach with small face-to-face groups like the one on 11/7 that met onsite, but also we must use the same sort of tools that is being used all over the globe to carry out business; which means we have to use tools like Zoom and Survey Monkey to get feedback.</p>

#	Comment	Name	Response
238	<p>These are my comments on the City's "90 percent plan" ("the Plan") for the proposed Taylor Run Stream reconstruction project. I am using this email format because the comment mechanism on the City's website does not lend itself to the easy submission of lengthy comments.</p> <p>At the outset I would like to recap "where we are" in the consideration of the project. The City has recently held (September 29) a public hearing on the Plan. The City has established a period for comments on the Plan, with an October 23 deadline. The City has also committed itself to responding to the many written questions submitted before and during the public hearing. At the hearing City staff and their consultants said they recognized the concerns that have been expressed about potential damage the plan could cause to the City co-champion red maple, a rare wetlands, and several mature trees, and would look at ways to avoid that damage. The staff also said there would be more public hearings on the Plan and that they intend to continue engagement with the public. All of these are positive steps and should bode well for eventually reaching a result that achieves both the City's pollution reduction objectives and the desires of those who wish to protect the key features of one of Alexandria's natural gems.</p> <p>The Plan, however, has not yet been amended, nor have several statements about how the Plan might be carried out. Accordingly, these comments are addressed to the Plan as it is now and to those statements. Also, the City has not yet posted its answers to the submitted questions, and I understand it is not likely to do so before the October 23 comment deadline. Once those answers are posted, supplementary comments may be in order.</p> <p>What's the Fuss About?</p> <p>At the outset, it is worth describing the key natural elements of Chinquapin Park in the area immediately surrounding Taylor Run.</p> <p>The area that will be affected by the proposed project is the subject of a 2013 study - "Remnant Natural Areas in Parks, Waterways, and Undeveloped Sites in the City of Alexandria, Virginia Seminary Hill Area," by Roderick Simmons - that describes the natural floral community along the section of Chinquapin Park that would be affected by the proposed stream reconstruction. The study found:</p> <p>"At the southeastern end of the Chinquapin Park is a large Acidic Seepage Swamp. This natural community is regionally significant and is the only known example of the type remaining in the City . . . Old age Tulip Trees grow at the edges of the swamp . . . Old and large Red Maples comprise the fairly open canopy in wetter areas . . . The mostly open understory and shrub layers consist of a variety of species, including Red Maple, Black Gum, Smooth Arrow-wood Winterberry, Common Alder, Elderberry Fringe Tree, Round-leaved Greenbrier, Fox Grape and others. * * * In addition to being a rare natural community, the Chinquapin Park swamp harbors many plant species that are highly rare in the City including Cinnamon Fern, Royal Fern, Evergreen Wood Fern, Downy Arrowhead, Bog Sedge, Upright Sedge, Wild Yam, Turk's Cap Lily, Smooth Carrion Flower, Cowbane, White Turtlehead, Eastern Serviceberry, and Primrose-leaved violet. The site is also one of the two locations in Alexandria for Spinulose Wood Fern and Netted Chain Fern." Study at 17. https://www.alexandriava.gov/uploadedFiles/recreation/parks/RemnantNaturalAreasUndevelopedSitesSHA.pdf.</p>	Russell Bailey	<p>Thanks you for your comments. The City project team of T&ES, DPI, and RPCA, along with the consulting team, continue to work on incorporating comments as applicable; with the plans currently under revision. Once the revisions are made, the current plans on the project webpage will be updated with the new set. The two onsite wetlands, to include the "acidic seepage swamp" have been identified and are outside of the project area and uphill from the work area. Neither will be impacted. This forest has thousands of beautiful trees. About 60 along the stream are already dead and others are in jeopardy of falling since bank erosion will accelerate without restoring the stream corridor. We will replant 2,280 trees and 7,200shrubs (using over 30 native species) to replace these and another 209 trees that will be removed. We discussed the large red maple and other stand of trees nearby at the 11/7 onsite meeting. Currently the design team is working to redesign access in that area to move it away from those trees, and preliminary feedback is positive that the red maple and the stand will be avoided. With regard to concerns of compaction within the drip line, the design includes the use of wood mats to reduce compaction and impact to trees not slated for removal. To be clear, the plan does not include the construction path crossing over the corner of the wetland. Raising of the stream bed near the historic elevation, where it would have been before the accelerated erosion and downcutting caused by the channelizing that occurred before regulations, means that historically the stream would be connected to the floodplain and spread out on the floodplain. Given that the outfall invert is a determination of the elevation of the raised bed will likely be below a level to allow for floodplain reconnection as would be the ideal situation, means that the stream will spread out onto the floodplain only in the most extreme events. During those events, the acidic seepage swamp/wetland will also be receiving overland flow from surrounding areas like the uphill (upgradient) area; with the stream being downhill (or downgradient). To be clear, the project team includes RPCA Natural Resources with direct involvement by the division chief. The FAQs were developed in consideration of this project. Technical terms in the document are understood by the design team. Project goals include working to stabilize the stream corridor, enhance and conservethe stream ecology, and protect the public infrastructure whilemeeting Chesapeake Bay cleanup goals. Issues in this stream have been noted back to the 2008 Phase II Stream Assessment, with the Phase III Stream Assessment prioritizing potential projects given that an ancillary benefit of the restoration is meeting the Bay cleanup goals provide funding. As shown in the September 29 presentation and discussed onsite, there is a sanitary sewer easment along the stream bank, and the stream is crossed a number of times by the sanitary sewer line. The project will project sanitary sewer infrastructure to protect from raw sewage entering the stream and rehab storm sewer outfalls discharging to the stream. As stated, the project is consistent with the VDEQ and USEPA Bay Program's approach. Approximately 300 acres drains to this segment of Taylor Run, with over 1/3 of that watershed already containing stormwater management structural best management practices (BMPs) required by the City after 1992 with implementation of the Bay Act. Adding more BMPs upstream will not halt and reverse the continued degradation of the Taylor Run stream channel and corridor. As mentioned, the approach is approved by VDEQ and the Bay Program and includes a mix of onsite data and reference data, per the expert panel. The design team has many years of qualified experience in designing successful stream restoration projects. About 60 along the stream are already dead and others are in jeopardy of falling since bank erosion will acceleratewithout our help. We will replant 2,280 trees and 7,200shrubs (using over 30 native species) to replace these and another 209 trees that will be removed. Also, as discussed in the September 29 public meeting, the nearby wetlands have been identified and are well outside the project boundary. Per your request, city staff and the design consultant met with ECA, Dr. Field and representatives from civic associations on 11/7/2020. We noted your concerns and are addressing those and the comments received otherwise as appropriate. The project team was conducting outreach until it was paused due to the COVID-19 global pandemic, and is not able to perform that outreach with small face-to-face groups like the one on 11/7 that met onsite, but also we must use the same sort of tools that is being used all over the globe to carry out business; which means we have to use tools like Zoom and Survey Monkey to get feedback.</p>
239	<p>Justin and Jesse: Please note that I endorse each of the comments made by Andrew Macdonald. I asked questions at the September Zoom presentation are related to these comments but those questions have not been answered. Until the City addresses upstream storm water there will continue to be excessive water pouring into the daylighted portion of Taylor Run and this project will be ineffective on top of being environmentally destructive. I ask that the City reconsider its stream construction plan and consult with John Field and take the advice of Rod Simmons, the only botanist on City staff.</p>	Jeremy Flachs	<p>Noted. Zoom meeting questions were collected during that meeting, and those that could not be addressed during that meeting were included in the comment / response at the end of the public comment period. In response to your comment and to provide further details to our responses to your multiple emails; approximately 300 acres drains to this segment of Taylor Run, with over 1/3 of that watershed already containing stormwater management structural best management practices (BMPs) required by the City after 1992 with implementation of the Bay Act. Adding more BMPs upstream will not halt and reverse the continued degradation of the Taylor Run stream channel and corridor. As mentioned, the approach is approved by VDEQ and the Bay Program and includes a mix of onsite data and reference data, per the expert panel. The design team has many years of qualified experience in designing successful stream restoration projects. About 60 along the stream are already dead and others are in jeopardy of falling since bank erosion will acceleratewithout our help. While the referenced document lists Dr. Field as a "Stream restoration specialist," it is important to note that it does not appear he is a licensed professional engineer credentialed to perform stream restoration design. The project design consultant includes professional engineers and others with many years experience successfully designing stream restoration projects. RPCA Natural Resources continues to be part of the project team.</p>
240	<p>October 23, 2020 Taylor Run Stream Restoration Project Fact Sheet</p> <ol style="list-style-type: none"> The project will not restore the Taylor Run channel to its natural state. The project will destroy a wide swath of mature forest along Taylor Run in Chinquapin and Forest Parks and damage its rare upland wetlands. The project will destroy critical natural habitat for many native plant and bird species, as well as other fauna. The project has not incorporated the recommendations the City's in-house scientific natural resource experts. The project is not addressing the fact that urban watersheds like Taylor Run are eroding their channels because of excessive storm water runoff caused by poorly planned development. The project will not result in the ecological rehabilitation of this stream valley, or improve the stream's aquatic habitats. This project will not help clean up the Chesapeake Bay. This project will not reduce any potential flooding downstream. The focus should be on slowing peak stormwater runoff in the watershed before it reaches Chinquapin Park. The first Baptist Church should be required to reduce the amount of runoff that flows off their two parking lots. The City should acquire any land that is owned by the First Baptist Church along the Taylor Run stream valley. As a member of the First Baptist Church, Jesse Maines should recuse himself from all involvement in this project. Removing invasive non-native plants from the park should be a priority. Reducing storm water in the park caused by existing land use activity should be a top priority of the City's engineers. Preserving the park's native flora and fauna must be the first priority of the project. The City should halt all storm-water "restoration" projects in the City until they have been reviewed by a group of multi-disciplinary independent experts approved by the community. The final project design must receive final approval by the community. Science must be the basis for all decisions made by the City with regard to all environmental projects. <p>Andrew Macdonald, PhD Geology</p>	Andrew Macdonald for Environmental Council of Alexandria	<ol style="list-style-type: none"> As discussed during the September 29 public meeting that included aerial photography of the stream corridor over time, the current state of Taylor Run is not natural. Without intervention the stream corridor will continue to degrade. This forest has thousands of beautiful trees. About 60 along the stream are already dead and others are in jeopardy of falling since bank erosion will accelerate without our help. We will replant 2,280 trees and 7,200 shrubs (using over 30 native species) to replace these and another 209 trees that will be removed. It is tempting to say: "Do no harm." But this stream is degraded and will get worse if we don't manage it responsibly. Future, upstream efforts may also help but won't replace this needed stream restoration. The project team include RPCA Natural Resource, TES, DPI, and a well-experienced consultant. Approximately 300 acres drains to this segment of Taylor Run, with over 1/3 of that watershed already containing stormwater management structural best management practices (BMPs) required by the City after 1992 with implementation of the Bay Act. Adding more BMPs upstream will not halt and reverse the continued degradation of the Taylor Run stream channel and corridor. The project design consultant includes professional engineers and others with design experience.) Issues in this stream reach were identified as far back as 2008 during the Phase II Stream Assessment prior to Bay pollution reduction goals. The goal is to stabilize the stream corridor, enhance and conserve the stream ecology, and protect the public infrastructure while meeting Chesapeake Bay cleanup goals. The design approach is to provide functional uplift and stability, and is consistent with the approach in the Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects (September 8, 2014) which is the approach approved by the Virginia Department of Environmental Quality (VDEQ) and the US Environmental Protection Agency's (EPA) Chesapeake Bay Program. The source of the pollution is the continual accelerated erosion of stream banks that occur from channelization (which has occurred as shown in the presentation at the September 29 public meeting) and banks continue to erode. Sediment and associated nutrients move down stream and trees along the bank are undermined, fall into the stream, and die; taking away the riparian buffer and removing the benefit of trees in the stream corridor. See #6. The City of Alexandria is in the Bay watershed. Not identified as a goal. Peak stormwater flows are associated with storms above the 100-year storm event. The First Baptist Church has installed four stormwater quality BMPs and a detention system in compliance with the City's redevelopment requirements in the zoning ordinance. The City is working on a permanent easement along the stream project on their property. Mr. Maines is a member of the church and offers this information readily. There is no conflict of interest as this project is for public benefit. Invasive plants are removed through ongoing park maintenance activities. The park is mostly pervious area. It is a priority of the project. The project team is a multi-disciplinary team and has engaged ECA and others at their request.

#	Comment	Name	Response
241	<p>I have interest in the Stormwater Local Assistance Fund grant the Commonwealth of Virginia has given to the City of Alexandria in FY 2019 for Strawberry Run Stream Restoration. Specifically I am interested in the status of the work being performed under this grant for Taylor Run and Timber Branch and would like to know the following information for each project:</p> <ol style="list-style-type: none"> 1. What is the status of the planning, design and engineering? What stage has been completed to date? 2. What is the status of public involvement, including contacts with private property owners, in these projects? 3. What is the status of the review and approval of these projects by the Alexandria City Manager, Commonwealth of Virginia and various federal agencies with jurisdiction over what is being proposed? 4. When do you expect to have the planning, design, engineering and approvals completed? 5. If these projects go forward, when do you expect to go to construction? 	J. Glenn Eugster	<p>(1) Taylor Run Stream Restoration project is currently in the design phase. The project team began outreach on the project all the way back in the Phase III Stream Assessment phase at the end of 2018, when the potential project was ranked against others as the top project to further pursue. The team segued that work into a concept plan to apply for the state SLAF funding and began further design. Early in that design, the project team was performing outreach to get feedback on the project. One of the last meetings occurred during the Seminary Hill Civic Association meeting in February 2020. Then the COVID-19 global pandemic struck. While the project team continued to work on design, with a goal of environmental restoration that required the least impacts to trees and surrounding stream ecology, the team was unable to hold any public engagement meetings. As you can imagine during a pandemic, the message coming from the City government needed to focus on information on the pandemic and resources to assist the community. In September, the project team was able to reboot the public engagement effort for the project. While design continued with the focus on restoration and conservation and continues to mature, we are still engaging the public. Currently the design is mature, but we are still listening and updating the design based on public comments. A formal public comment period for Taylor Run started at September through October. Meeting information and the current engineering plans are posted on the project webpage. The design team is working on revisions to the plans based on public feedback.</p> <p>I assume you meant Strawberry Run and not "Timber Branch". This project has followed much of the same path. The last public meeting was held with the Strawberry Hill Civic Association prior to the onset of COVID-19. A public engagement meeting was held in October. The City has posted the project plans to the website and has reached out to civic associations and working with neighbors for an onsite meeting. We hope to work around and schedule that for very early January.</p> <p>(2) As mentioned above, staff has been having meetings with the public. Some of those meetings included onsite with a small group in addition to virtual meetings. The project was also discussed recently at the Parks and Recreation Commission and the Cameron Station Civic Association, and an upcoming onsite walkthrough is scheduled for December 13 and a follow up presentation on December 14 with the Environmental Policy Commission (EPC). Property owners for Taylor Run includes outreach to the First Baptist Church, as the other property owner is the City of Alexandria given the stream is in a city park.</p> <p>As mentioned above, staff has discussed the project onsite with some property owners as part of the temporary easement process for the Strawberry Run Stream Restoration. There have been emails and phone calls with other property owners and on behalf of the civic associations. We have requested an onsite meeting with representatives and to be on the agenda for Strawberry Hill and Seminary Hill civic association meetings through the chairs.</p> <p>(3) The projects were brought before the Mayor and Council via 1) the Chesapeake Bay Total Maximum Daily Load (TMDL) Action Plan as major strategies and via the 2) application for the Virginia Department of Environmental Quality (VDEQ) Stormwater Local Assistance Fund (SLAF) grant applications considered and approved by Council and are included in the City's Capital Improvement Program (CIP) budget. VDEQ reviewed the concept plans and performed a site visit prior to awarding the SLAF grants, to ensure the proposal was consistent with the approved approach. The US Army Corps of Engineers (USACE) received applications for the projects and granted jurisdictional determination (JD) for both. The projects is consistent with the VDEQ and USEPA Chesapeake Bay Program guidance that must be used to receive SLAF grants and for the water quality portion of the overall project goals.</p> <p>(4) The design is scheduled to be complete Spring 2021.</p> <p>(5) Construction is scheduled to begin Fall/Winter 2021/22 after procurement of a restoration contractor.</p>
242	<p>The following series of questions are in response to the FAQ on the Taylor Run webpage. FAQ Question 1 – Purpose of restoration in Alexandria</p> <p>Many of the stated objectives are incompatible with each other: -How is preventing stream bank erosion consistent with restoring dynamic channel processes when such processes include bank erosion? -Why establish reaches capable of transporting sediment supply if objective is to reduce pollutants that are included as part of the sediments?</p> <p>If these objectives reflect a broad general set of objectives that cover all projects completed by City then a shortened list of objectives must be clearly stated for each project to ensure incompatible objectives are not part of the same project -What are the specific objectives for Taylor Run and how do the various design elements in the plan link to those objectives? (e.g., What objective is met by using log deflectors?)</p> <p>Why is improving/preserving natural aquatic and riparian habitat not listed as an objective? - What benefits does natural vegetation provide in terms of meeting the other listed objectives (e.g., providing bank stability, reducing/slowing runoff and erosion)?</p> <p>Why is reconnecting stream to floodplain important? What can be done to achieve those results when no floodplain is or ever was present along the stream to be restored?</p>	Dr. John Field	<p>(1.a) Preventing accelerated streambank erosion is an essential part of the Taylor Run design. This is due to the fact that the upstream watershed is largely piped and provides very little incoming sediment supply. In an undisturbed natural system upstream sediment supply is routed through the stream channel and the channel is dynamically stable (with deposition/aggradation balancing with erosion/scour.) Sediment transport capacity is not a limiting factor or strongly influencing variable for the Taylor Run project. The reach is deeply incised and channel slope provides stream power sufficient to move large and coarse-grained material. Thus, imported reinforced bed material and rock/log structures are critical to establish long-term channel stability.</p> <p>(1.b) These are a list of Frequency Asked Questions (FAQs) to help citizens understand the project. Not sure what question is asked about a 'log deflector'. The current design plans (which are undergoing minor design adjustments) are on the project website that shows the types of structures being used at www.alexandriava.gov/117629.</p> <p>(1.c) Improving/preserving natural aquatic and riparian habitat is an inherent objective when talking about restoration of a degraded stream system to a healthy stream. Natural vegetation provides stability and reduces erosion. However, vegetation along the banks, within the restoration work, is being undermined and lost due to accelerated erosion. The channel will be stabilized, and native vegetation planted that will withstand the higher flows and not be in jeopardy of falling in the stream like what continues to happen as the stream continues to degrade.</p> <p>(1.d) Connection to the floodplain has the main benefit of reducing in-stream erosion and degradation by spreading high flows out across a broader floodplain where roughness can slow velocities and plants can drive nutrient uptake. Historical aerial imagery dating back to the 20s and 30s indicates that the Taylor Run stream was much smaller and well connected with the surrounding floodplain. As the watershed has developed the stream has eroded both vertically (incision) and now horizontally (bank retreat). Another indicator of past floodplain connectivity is seen by looking at the position of existing sanitary infrastructure, especially the crossing near the sheet pile wall. When installed more than 50 years ago this line would have been buried. The planned stream restoration will recreate past conditions when the site was less degraded, while also accounting for the current/future watershed conditions. This strategy is also likely to reverse the continued deterioration of adjacent wetland areas, enhancing these resources by reestablishing stronger groundwater connectivity which has been lost due to severe channel incision.</p>
243	<p>FAQ Question 2 – Need for restoration on Taylor Run</p> <p>Why is Taylor Run in an "advanced stage of degradation"? -What has caused the degradation and why is the channel responding to those conditions and how? -How will the stream channel evolve if nothing is done? -Is there an eventual "end" to the degradation? -Will the stream eventually reach a stage of stability and what will that look like?</p>	Dr. John Field	<p>The main cause of the current state of degradation has been the development of its drainage area over many decades. Although the stream was likely originally stable, as impervious area increased upstream, the flows in the channel have increased and the stream has entered a stage of downcutting and eroding. The general stream succession is such that a stream experiencing higher flows will begin downcutting as the bed and banks erode, followed by widening as the steep banks beginning to fail. Once this wider channel is created, the stream will begin to form a new bankfull channel and floodplain at a lower elevation. Although this final form will be stable and be able to handle the flows it is currently experiencing, this process takes years to occur. During this time, bank erosion will continue to expand outward from the channel causing mass tree fall and, in the case of Taylor Run, encroachment and potential destruction of the trail and bridges adjacent to the stream. Additionally, further downcutting will continue to undermine utilities (specifically sanitary) within and adjacent to the stream, the failure of which would create large problems. The goal of the restoration is to bypass this timeline and bring the stream to a stable channel size, floodplain connectivity, and pattern based on the current flows, while adding structures and appropriately sized bed mix that will resist further erosion.</p>

#	Comment	Name	Response
244	<p>FAQ Question 3 – Eroding stream banks Does the City view all erosion as a bad thing needing to be addressed? -How is a decision made on which eroding streams need to be addressed? -Should erosion be stopped if there is no infrastructure or public safety at risk? -How will bank protection in one area to protect infrastructure potentially impact other aspects of the project elsewhere? -What impacts can bank stabilization have on adjacent reaches beyond the project limits or the stream’s ability to adjust towards a more stable condition within the project reach?</p> <p>Do fallen trees in the channel represent a bad thing? -Aren’t there many circumstances where leaving a fallen tree in the channel could be beneficial? -Are trees falling in the channel consistent with or working against the proposed restoration? -If trees are viewed as working against the proposed restoration, how will fallen trees be managed after project completion? -What would happen to completed project if fallen trees were left in the channel?</p>	Dr. John Field	<p>(3.a) Erosion is a natural process but can become a problem when the rate is well above natural levels. In some instances, streams can be left to naturally evolve to a new stable endpoint. In Taylor Run this is not an option, as it would result in significant sediment loss, tree loss, and sanitary infrastructure instability. Most significantly, there are two sewer lines that have been exposed by the downcutting of the channel, one of which has been entirely undermined. Additionally, bank erosion has expanded outward to the point that a manhole adjacent to the channel is being exposed as well and will soon be undercut completely. These present an environmental and public safety concern and leaving the stream to naturally evolve is not possible given these existing constraints. Evidence of spot stabilization is seen through the reach, and this band-aid approach has caused issues in other parts of the channel. Restoration seeks to address the concerns more holistically. Downstream reaches will see minimal impacts other than the reduction in sediment inputs. Restoration will create a more stable channel form.</p> <p>(3.b) In some systems fallen trees can help a stream in working toward a new stable form. In Taylor Run tree loss is further exacerbating bank erosion issues and presents a flooding and maintenance issue by blocking the downstream culverts. This is indeed part of the natural progression but given infrastructure and site constraints continuing to allow tree collapse and ongoing erosion is not a viable option. For example, a tagged tree recently fell in the stream and has created a debris jam. This has led to accelerated bank retreat immediately adjacent to the sanitary sewer alignment. Ongoing tree loss is not working for or against the restoration. The trees along the banks which are in imminent danger of failure will be removed as part of the restoration. This will dramatically reduce the likelihood of future debris jams in the near term. There is the possibility that future trees could create problematic blockages, especially during the early post-restoration stage when vegetation is not well established. This may require limited maintenance (debris removal). Once the site is well established forest management can be handled as needed/desired.</p>
245	<p>FAQ Question 7 – Reduce pollution Taylor Run fact sheet provides little detail on how pollution reduction credits calculated If the calculations were completed using the BEHI/BANCS method, then information on the sites from which the erosion rates were determined should be provided -Has any effort been made to monitor erosion rates on site? -What are the potential problems with applying erosion rates from another site with different stream/watershed size, climate, soils, etc.? -For projects taking several years to develop, as most do I assume, direct measurements of erosion at the site by redoing topographic cross sections from the same site represents a more accurate method for determining erosion rates at the site. Why has this not been done or is it being done?</p>	Dr. John Field	<p>(7.a) See the Phase III Stream Assessment: Stream Restoration and Outfall Stabilization Feasibility Study (Wood, February 2019) found online: www.alexandriava.gov/51332</p> <p>(7.b) A BEHI/BANCS assessment report for Taylor Run is available at www.alexandriava.gov/51332. No direct erosion measurements have been undertaken at Taylor Run. Direct monitoring is challenging and expensive and requires a long-time scale to provide statically significant data (e.g. annual weather can factor heavily in erosion rates on short-time scales, without accurately representing the longer term trends). Therefore, industry practice and the established regulatory framework in Virginia rely on a large (and evolving) data set to base restoration outcomes on best available science. Using data from other sites with different conditions presents possible error. The established regulatory framework has been developed with the input of a diverse, multi-disciplinary team of experts. Ongoing adjustments are being made as additional data sets are available for consideration. Periodic resurvey of cross sections to quantify erosion rate has its own set of challenges. How frequently should cross sections be surveyed, and at what spacing? Should cross section locations be located at areas where erosion is most pronounced or at cross sections representing overall site conditions? Even if the entire site topography is remapped there remains the challenge of trying to develop topography with a level of accuracy appropriate for capturing relatively slight (e.g. 6 in to 1-ft difference) surface changes. The complexity of stream systems necessitates some simplification, whether using direct monitoring or empirical models.</p>
246	<p>FAQ Question 8 – Stream restoration success Very little, if any, detail provided on how the listed “measures” of success would be documented -By qualifying “stable banks and channel” as one with “reduced erosion”, begs the FAQ Question how much erosion is acceptable and can be observed to still call the project a success? -How will compliance with pollution reductions be measured? -Will potential impacts to off-site locations be monitored (e.g., increase in erosion rates downstream)?</p> <p>Many of the “measures” listed will be successful until they are not successful – meaning they will appear to be working until the project unravels during a large storm event (e.g., protection of property and infrastructure) as has happened on other similar projects in Alexandria and elsewhere in the Metro region</p>	Dr. John Field	<p>(8.a) The design is consistent with the approach approved by Virginia Department of Environmental Quality (VDEQ) and the USEPA Bay Program’s Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects (September 8, 2014).</p>
247	<p>FAQ Question 9 – More harm than good The assumption appears to be that what the City proposes is good and the current state of the streams is harmful How does the City define/characterize a resilient stream? -Does the City believe resiliency is synonymous with staticness, meaning locked in place and unable to move? If not, how do they differ? -How is the proposed restoration consistent with a resilient stream?</p> <p>Does the City not view “additional erosion” as a prerequisite for the stream to achieve a new stable/resilient condition within the now altered/developed/built out watershed?</p> <p>Does the city view the erosion (a natural stream response to human activities/development in the watershed) only as degrading waterways?</p> <p>How is placing artificial grade controls consistent with “natural” channel design? -How does the city define/characterize “natural channel design”? -What is natural about natural channel design?</p>	Dr. John Field	<p>(9.a) The stream is degraded and will continue to get worse if nothing is done.</p> <p>(9.b) The design is consistent with the approach approved by Virginia Department of Environmental Quality (VDEQ) and the USEPA Bay Program’s Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects (September 8, 2014).</p> <p>(9.c and 9.d) Accelerated erosion (output) with no new source of sediment (input) does not provide for stabilization/resiliency with restoration.</p> <p>(9.e) Natural Channel Design references and approach is found in the approach approved by Virginia Department of Environmental Quality (VDEQ) and the USEPA Bay Program’s Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects (September 8, 2014).</p>
248	<p>FAQ Question 10 – Stream restoration benefits The City claims the streams are “remnants of their former selves” -What was their former self? What did the streams look like in the past? What human activities have altered the “former selves”? How does that relate to the current degradation? -To what degree does this understanding of the “former selves” inform the restoration design and to what degree does data from other streams in other areas/regions inform the design? -Do streams have the “capacity” to recover on their own from degradation? What would that look like on Taylor Run?</p> <p>Which of the listed benefits are specific to Taylor Run?</p>	Dr. John Field	<p>(10.a) Taylor Run has gone through numerous changes as affected by human activity, most specifically urbanization of its watershed. Originally Taylor Run extended much further upstream than the start of this restoration project, however it has since been piped. An increase of flow due to higher impervious area, a higher velocity of water from the storm pipe, and a lack of sediment supply has caused the banks of the channel to experience extensive erosion. Additional proof in more recent years is present in relation to the sanitary assets installed midcentury. The manholes adjacent to the channel and the sewer mains that are currently exposed were not installed in this manner. Even in the past few decades, the erosion and downcutting has been such that these utilities are now fully uncovered.</p> <p>-A combination of both sources of data are taken into consideration during design. A field assessment attempts to determine where an appropriately sized bankfull channel should fall vertically and tie out with the existing stream banks. Ideally this would be at the top of the channel to allow for floodplain connectivity during flows higher than bankfull, however due to the upstream and downstream culvert invert constraints, the proposed channel will still be slightly incised. Additionally, several regional curves are typically assessed for use during design based on the drainage area, stream type, and location of the project in question.</p> <p>-Streams do have the capacity to recover. When a stream begins experiencing higher flows, it will go through a succession of changes - stable, downcutting, bank failure, widening, stabilizing, stable again at a lower elevation. Taylor Run is currently at the downcutting and bank failure stages. Although this succession may happen eventually, it would be at the cost of trail and King Street encroachment, extreme tree fall, and sanitary sewer damage.</p> <p>(10.b) Connection with the floodplain for energy dispersion, channel stability specifically around sanitary assets and trail encroachment, appropriate bed and bank material that will not be easily eroded and add to pollutant runoff, restoration of the stream channel and ecology, replanting well over the current density, monitoring for establish of vegetation, managing invasives, pollutant transport reductions, educational awareness (new signage), among others.</p>

#	Comment	Name	Response
249	<p>FAQ Question 11 – Impacts to trees Removed trees are to be reused in restoration -City appears to acknowledge that trees/wood in streams has benefits -Do trees falling into the stream due to erosion have benefits? -How do the benefits of using trees in restoration differ from a tree naturally falling into the channel? -What is the purpose of the log vanes and how does that relate to the objectives of restoration?</p>	Dr. John Field	<p>Although there is benefit to wood and trees in the stream, allowing them to fall naturally could also cause issues such as large log jams and channel blockages that would create stream flow issues. When using trees removed during construction as wood structures in the stream, they are able to be placed securely within the bed and banks so that they provide habitat and channel stability while still allowing normal smooth flow to occur. A log vane is used to act similarly as a rock cross vane in that it provides stability and grade control, however its use of felled trees is cost effective, more aesthetic, and a better potential habitat provider.</p>
250	<p>FAQ Question 12 – Trees and erosion The City acknowledges live trees can provide bank stability to a point -Can fallen trees in the channel also provide bank stability?</p>	Dr. John Field	<p>Similar to question 11, naturally fallen trees, especially their root balls, may provide stability, however they can quickly create log jam and flow pattern issues. A meditated placement of a log structure can have similar benefit to a natural tree fall, yet is unlikely to cause the same problems.</p>
251	<p>FAQ Question 13 – Disturbing pristine area Useful information on changes along Taylor Run -Can the City describe how this history of land use has led to the degradation of Taylor Run? -Why has the stream responded in this way? -Does the proposed restoration further this natural response or work counter to this response?</p>	Dr. John Field	<p>The main factor in the degradation of Taylor Run is the increase in flow rates it has experienced as the watershed moves towards being fully developed. Water is no longer absorbed and infiltrated, but instead runs off the impervious surfaces driving significantly higher storm flows - a process referred to as Urban Stream Syndrome. Because of the bed material currently present and the straightened channel (due to proximity to King Street on the left bank and the elevation rise behind the right bank) the stream has not been able to dissipate energy from the higher flows leading to increased degradation. Although the planform geometry of the channel cannot be changed much due to the constraints listed previously, utilizing larger more stable bed material, grade control structures, and extensive bank planting will serve to prevent future downcutting/widening. Additionally, raising the stream will reduce in-stream stresses and allow energy dissipation as higher flows access the surrounding floodplain. The restoration design sizes the system appropriately to the current and future watershed conditions, mimicking the natural evolutionary process. Leaving the stream to evolve naturally is not an option due to local site constraints and infrastructure conflicts.</p>
252	<p>FAQ Question 14 – Natural channel design position The City appears to appreciate that criticisms have been leveled at Natural Channel Design that is presumably the backbone of their restoration program in the City. Traditional Natural Channel Design practices are a form-based approach whereas the City states Natural Channel Design is both a form-based and process-based approach. The City needs to explain this and provide examples of what elements of their restoration proposal are form-based and which they consider process-based. This is not clear from the Taylor Run Frequently Asked Questions document. The differences between form-based and process-based approaches are significant and clarification is critical to understanding what the restoration proposal is. The questions and comments below are intended to provide the City an opportunity to better explain the differences and build confidence that the City is developing a restoration plan consistent with best practices, not merely approved practices</p> <p>Does the City believe Natural Channel Design is both a form-based and process-based approach? -Are form-based and process-based approaches not incompatible with each other? -What is (and what is the intent of) form-based restoration? -What is (and what is the intent of) process-based restoration? -Which approach is more sustainable? -Which approach causes less construction disturbance? -Provide some examples of process-based restoration, especially those that are being employed in Taylor Run project</p> <p>What specific objectives are being met with each of the form-based and process-based practices being employed during the restoration?</p> <p>What problems arise when establishing a channel expected to form under undisturbed natural watershed conditions – the intent of Natural Channel Design – is applied to a disturbed and urbanized watershed?</p>	Dr. John Field	<p>Yes, both. The City believes effective restoration must consider processes (sediment transport, nutrient processing, habitat enhancement, etc.) and appropriate form (stream type, structure use and location, construction materials, etc.). We do not feel that form based and process based design approaches are incompatible. We do not consider the Taylor Run design to be purely form-based (channel size, structures, grading) or purely processes-based (focused on the processes and functions provided by natural stream systems). In an urban environment restoration must strike a balance between ideal natural channel restoration goals and the realities of working in a disturbed urban system. In the case of Taylor Run, the contributing drainage area is almost entirely piped and little to no sediment supply is entering the system. This significantly effects both the form and processes inherent in the restoration. In situations where no sediment supply is available designs must use form-based elements to limit post-restoration erosion due to the inability of the system to replace lost material. The most sustainable restorations consider both form and process-based components. Both approaches can result in a spectrum of possible design solutions, so it is not appropriate to say one approach creates more disturbance than another. An example of blended form/process-based design in Taylor Run would be the use of a carefully sized reinforced bed material. This material includes a larger rock fraction design to limit ongoing erosion (due to the limited supply available), but also includes gravel, sand, and topsoil. This allows for the natural process of sorting of fine-grained sediments to allow the formation of bars and bed variability while creating overall system stability. The fine-grained elements also allow planted materials to interface with channel flow, encouraging the process of nutrient uptake and carbon sequestration. Strong vegetative establishment also helps stabilize channel banks through the development of root mass.</p>
253	<p>FAQ Question 15 – Restoration alternatives The City states “A major goal or objective for Stream Restoration in Alexandria is to meet state mandated pollution reduction requirements by reducing stream bank erosion, using Natural Channel Design (NCD) techniques” -Explicit mention that Natural Channel Design – with all its problems that even the City has acknowledged – is the approach being used -Please describe what is meant by Natural Channel Design and explain what is natural about it -What specific techniques are being used in design and do they include the form-based techniques (e.g., log vanes) that the City has acknowledged have faced criticism?</p> <p>The City explicitly states that they prefer stream restoration as opposed to upland retention approaches (biofilters they mention) as they earn more credits at a lower price</p> <p>-This assumes the restoration projects are sustainable and require no maintenance or less than upland alternatives -Also assumes the calculation of pollution reductions using BEHI/BANCS are accurate -How sustainable are Natural Channel Design approaches to be used on Taylor Run? -What maintenance issues will arise due to not addressing the upland issues causing the degradation? -How are the assumptions about pollution reductions verified/documented after restoration is completed?</p>	Dr. John Field	<p>(15.a) We are working to stabilize the stream corridor, enhance and conserve the stream ecology, and protect the public infrastructure while meeting Chesapeake Bay cleanup goals. Once we have incorporated public comment, we expect work to begin in late 2021. We are also making trail enhancements in Chinguapin Park and Forest Park. The design is consistent with the approach approved by Virginia Department of Environmental Quality (VDEQ) and the USEPA Bay Program’s Recommendations of the Expert Panel to Define Removal Rates for Individual Stream Restoration Projects (September 8, 2014).</p> <p>(15.b) That characterization does not tell the whole picture. Stream restoration provided more cost-benefit from a water quality perspective. That’s even before taking into consideration the co-benefits of the project to include restoration of a degraded stream ecology and the protection of the sanitary infrastructure. The area draining to this segment of Taylor Run is 300 acres. There are currently 82 stormwater quality structural best management practices (BMPs) that treats about 136 acres in this drainage basin. Treating well over 1/3 of the drainage basin provides a great deal of BMP coverage in the drainage area. These are largely situated on non-residential properties, leaving on mostly single family residential and the right-of-way (ROW) for additional BMPs. Retrofit BMPs in the right-of-way are very costly given feasibility conflicts, like those posed from existing utilities, that would treat the ROW. But no matter how many BMPs could be shoe-horned into the ROW at great cost and minor benefit, the stream will continue to degrade if not restoration is done.</p>
254	<p>FAQ Question 19 – Do no harm Doing nothing may create short-term harm but will those problems subside over the long-term if nothing is done? Do no harm does not mean do nothing -What harm/problems might be expected to result if the restoration project unravels given that the City has acknowledged that problems with Natural Channel Design have occurred and are known to have occurred in the City (e.g., lower Strawberry Run) and elsewhere in the Metro Region (e.g., Donaldson Run in Arlington)?</p>	Dr. John Field	<p>(19.a) If nothing is done, the stream will continue to degrade, trees will continue to be lost, the stream will widen and expose more of the sanitary infrastructure and potentially undermine King Street, and the co-benefits of the restoration will never be realized.</p> <p>(19.b) Given the existing site constraints (e.g. culvert elevations) and severe downcutting and incision of the Taylor Run system there will continue to be higher than normal stresses. This means vegetation establishment will be critical to long-term success. There is the potential for spot erosional issues, especially while vegetation is getting established. During the first year post-restoration the contractor will be responsible for repairs. In subsequent years the City will closely monitor the project area to ensure long-term success. The design team has a strong history of successful project implementations throughout the region (over 250,000 linear feet) dating back more than a decade, including projects that have remained stable even after being subjected to 500-yr flood events. Significant improvements in understanding and design have occurred over the last 15 years (since Donaldson Run was originally constructed).</p>