

## Taos Trail Pond/Drainage Project Questions & Answers

### PROJECT SUMMARY

A flood study was conducted in 2013 by Brown and Gay Engineering. It concluded that the interaction of four watersheds (Timber Creek, Indian Creek, Dudley Branch and the Trinity River) creates a “flood reservoir” that presents a flooding risk in the area, and that the Taos Pond contributes to the flood risk by hindering the efficient movement of floodwater through the area, especially during heavy rainfall events. Flood risks include possible impacts to the levees protecting the Coyote Ridge/Oakwood Springs/Elmwood Trail neighborhoods, flooding of Frankford Road, damage to the Eisenhower Road bridge, and potential flooding of upstream neighborhoods along Indian Creek and within the Indian Springs neighborhood adjacent to the Taos Pond and Dudley Branch.

The flood study recommended:

- Removal of the Taos Pond;
- Channel improvements to Dudley Branch downstream to the DART/DCTA railroad crossing;
- Reconstruction of the Indian Creek Golf Course driveway culvert; and
- Adding a small floodwall along the southeast corner of the Golf Course immediately adjacent to Frankford Road.

In the 2013 bond referendum, Carrollton voters authorized \$4.5 million for this project.

### PROJECT SCOPE

In March 2018 the engineering firm of HDR was hired to design the recommended flood mitigation strategies and improve the ecological, environmental, and aesthetic aspects of the area. HDR developed three project alternatives:

- Remove the pond, install wetlands and improve the channel downstream;
- Remove the pond, install no wetlands and increase the capacity of the channel; or
- Remove the pond, install wetlands and create a dual stream channel in the area occupied by the pond.

Based on HDR’s discussions with the Corps of Engineers, the Corps’ preferred strategy is removal of the pond, install wetlands and improve the channel downstream. Removal of in-channel impoundments to restore stream function has been a recommended strategy by the Corps for stream restoration for several years.

The project consists of removing the pond and creating wetlands in its place; stabilizing the Dudley Branch channel; repairing existing concrete weirs within the channel; and installing larger culverts beneath the Golf Course driveway north of Frankford Road. Taos Pond is an in-channel pond. Dredging it would not provide a flood mitigation benefit.

### PROJECT STATUS/NEXT STEPS

Engineering plans have been completed to a 70% design-complete stage. Citizen comments and feedback from the August 29, 2019 neighborhood meeting have been incorporated into the design process to the extent possible. However, the pond will be removed as part of the project scope. The 70% complete plans have been submitted to the Corps of Engineers and are currently under review. The Corps’ review timeline is typically 4 to 8 months, so their response is expected no earlier than this fall.

Bid award by the City Council is targeted for late 2020, with construction targeted to begin in early 2021. This schedule, however, is dependent upon the timetable of the Corps' permit review and approval process.

*(Indian Springs HOA questions in black; City of Carrollton staff responses in red)*

1. What is the goal of this project?

The project has multiple goals and they are as follows:

- Remove the golf course pond which has not been utilized for irrigation since the 1980's
- Improve the ecological, environmental, and aesthetic characteristics of the area
- Improve drainage/reduce flood risks in areas along Taos Trail and Frankford Road

What alternatives have been explored as it has been clear from the beginning that the project does not have public support?

- Dredging has been researched, however, it will be very costly and will require regular maintenance. Additionally, dredging the pond does not alleviate any of the current flood issues that are present in the area.

2. Lack of Listening/Responsiveness

- Multiple public meetings, letters, appearances at City Council have fallen on deaf ears. This project was presented as "the answer" with no review/presentation of alternatives. Neighborhood concerns have been summarily dismissed.
- Despite the neighborhood concerns, the City has continued to proceed with design and permitting without addressing any of the key issues
- Neighborhood concerns have been addressed in the design process to the extent possible. The chief concern that has been raised throughout the development of the project has been the concern for the wildlife, their ecological habitats, and the overall aesthetics of the area, thus clarifying and reinforcing the need to ensure that as much of the area be retained for wetlands as possible in the design. However, retaining the pond is not an option to address the flood risks.

3. If the goal is to relieve flooding on Frankford, is this due to the pond (which is upstream of Frankford and the ditch parallel to Frankford) or is it due to the capacity of the culverts under the golf course entrance? This needs a detailed explanation as it is key to the rationale for the project. How is the flooding of Frankford linked in any way to the Taos Trail Pond? The most recent flooding event on May 31, 2015 caused flooding of Frankford west of the DCTA tracks (and flooded the DCTA tracks).

- The flooding on Frankford is caused by multiple factors. The pond contributes to flooding by acting like a reservoir in a very complex drainage area. From the related flood study "a significant reduction in water surface elevation and flooding on Frankford Road is possible with excavation and re-grading along the Dudley Branch channel. Removing the berm on the south end of the pond, widening the channel by approximately 100 feet, and re-grading and realigning this channel between the existing pond location and Indian Creek Drive, reduces the peak 100-year water surface elevation enough to prevent the overtopping." (pg. 41 – Brown and Gay Engineering Flood Study; 2013)

4. The presentation showed a high-water event with water almost to the top of the culverts under Eisenhower in 2007. How is this linked in any way to the pond by Taos Trail?
  - The pond exacerbates the backwater towards Eisenhower. This project will ensure that the backwater conditions are not worsened.  
It actually points to a flood risk for the homes upstream of the bridge that appears to match the results of the 2013 study. Does the proposed project improve the hydraulic grade line upstream of Eisenhower?
  - It does not. It only ensures the hydraulic grade line upstream of Eisenhower is not worsened by the improvements.
5. What is being done to reduce the flood risk to the homes in the neighborhood upstream of the pond? Does this project have any impact on or lower the risk to homes?
  - This project only ensures that the flood risk is not increased on any homes or areas.
6. There is a great deal of wildlife and migratory birds at the pond. This is not included in the Corps of Engineers Submission from the City of Carrollton. Many people fish in Dudley Branch.
  - Nationwide Permit 27 (NWP 27) takes wildlife and migratory bird issues into account:
    - Nationwide Permit Application Part I Question 2 (page 3 of application form) indicates that the project will not “substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody”.
    - Nationwide Permit Application Part I Question 3 (page 4 of application form) indicates that “the project will avoid spawning areas during spawning season to the greatest extent practicable” and that the project will not “result in the physical destruction... of an important spawning area”.
    - Nationwide Permit Application Part I Question 4 (page 4 of application form) indicates that the project will avoid water of the U.S. that serve as breeding areas for migratory birds to the greatest extent practicable”.
    - Nationwide Permit Application Part I Question 5 (page 4 of application form) indicates that the area does not contain “areas of concentrated shellfish populations”.
    - Nationwide Permit Application Part I Question 18 (page 6 of application form) indicates that the project will not “directly or indirectly destroy or adversely modify the critical habitat” of federally listed species protected under the Endangered Species Act (ESA).
    - Nationwide Permit Application Part I Question 19 (page 7 of application form) indicates that the project will not have “impacts to nests, nesting sites, or rookeries of migratory birds, bald or golden eagles”.
    - Part III Box 8 (page 16 of application form) indicates that HDR (the city’s design engineer) consulted with the US Fish and Wildlife Service on behalf of the City of Carrollton through the Information, Planning, and Consultation System (IPaC). No designated critical habitat is located within the study area. Additionally, it is HDR’s professional opinion that there will not be any impacts to federally listed threatened or endangered species. For IPaC documentation see Pre-Construction Notification Attachment F.
    - Additionally, the Texas Parks and Wildlife Department has been involved since the early planning phase of the project.

7. Important cost information:

- Estimated cost of Taos Trail Pond project - **\$3.6 Million**
- Estimated cost of improvements to culverts under the Golf Course Entrance – **Approx. \$150,000**
- Estimated cost to dredge the pond? - **\$1.5-2 Million**
- Estimated cost to dredge 50% of the pond? **\$1-1.5 Million**
- Cost to maintain the proposed project?
  - **Unknown, but the goal is for very minimal maintenance to take place once the project is finalized**
- Does this project make financial sense?
  1. **Compared to the periodic activity of dredging and the associated maintenance of that effort, and the additional risks that come from potential damage to public and private property, yes it does make financial sense.**

8. Maintenance Issues – The City has a poor record of maintaining drainage facilities

- Taos Trail Pond over past 30+ years
  - **The pond was originally constructed as an irrigation source for Indian Creek Golf Course. The pond was abandoned in the mid-1980s when the City secured rights to use raw water from the Trinity River to irrigate the golf course.**
- Dudley Branch east of Eisenhower Bridge – Parks mows, but vegetation is overgrown.
  - **Mowing protocols citywide are based upon several factors and can vary by location. Factors that are taken into consideration include proximity to streets and alleys, slope and condition of the streambank areas, proximity to active or passive recreation areas, and whether the streambank is in a natural or armored condition (e.g. rock, rip rap, stone veneer). In areas where a vegetated buffer is maintained within a channel, mowing will occur to the edge of the buffer and the vegetation within the buffer will be allowed to grow naturally without ongoing mowing.**
- Dudley Branch near Creekview High School – Drainage capacity is reduced when full of large trees.
  - **Sufficient capacity exists in the City’s drainage channels to allow riparian vegetation within the channels. Promoting natural vegetation has been a priority for the City and Corps of Engineers regarding channel and stream restoration management since the 1990s. Streambank vegetation provides protection against channel erosion.**
- Much discussion regarding the need to redredge the pond if it is dredged now. This pond collected silt from all of the upstream projects, and it took 30+ years to get to this point. This watershed is almost completely developed. The likelihood of significant siltation should be very low.
  - **Dredging of the pond is neither an economically feasible option nor does it help mitigate flood risks. The estimated cost to dredge the pond is between \$1.5**

million and \$2 million. Dredging would have to be performed on a recurring basis, although the frequency of future dredging is unknown.

- What is the difference between parks and public works maintenance responsibilities? It appears that the slopes are maintained well and the bottoms and toes of slope are not.
  - The Parks Department mows the slopes and areas adjacent to channels to keep vegetation maintained at a certain level based on citywide protocols. The Public Works Department is responsible for ensuring the channel flows adequately and that areas of significant erosion are addressed as needed.
- Any silt that does reach this point will be deposited in another area downstream in Carrollton.
  - Silt deposition is an issue for all drainage channels and is monitored citywide on an as-needed basis to ensure that the channel flows are sustained.

#### 9. Comparison of this pond to an “Amenity” Pond

- Few undeveloped locations in Carrollton for wildlife.
- Widespread support in ISNA for the preservation of the habitat and wetlands
- Wildlife include Blue Herons, Ducks, Hawks, Geese, Turtles, etc. – removal is not a trivial impact.
- It may not have been built as an amenity or a natural preserve, but time has made it one.
  - The term ‘amenity’ has arisen in conversations regarding the pond. Amenities are considered to be elements specifically and deliberately embedded into the fabric of an area or neighborhood for the purpose of public use and access. Examples of amenities where the project developers embedded retention/detention ponds into the neighborhood include Indian Creek Ranch Park (Hunt Drive), San Chester Park (Parkwood Drive) and Oakwood Springs Park (Hamilton Drive). These ponds are off-channel and are part of a designated open space area with trails and other facilities provided for public use, with public streets and lots aligned to open onto the pond/open space areas. When Indian Springs Section 2 was developed in the early 1990s the developer did not incorporate Taos Pond into the neighborhood and designed the neighborhood away from the pond by placing an alley and rear entry homes adjacent to it.

#### 10. Construction Issues

- The ditch west of the pond is proposed for widening. Where will the spoil material go? Will it be used to fill the Taos Trail Pond?
  - That has not yet been determined at this time. If the material is suitable to reuse as fill, it will be utilized to fill in the pond.
- The 2:1 slopes in the proposed pilot channel are likely to fail requiring expensive maintenance (despite the grid material being placed on the surface).
  - The project designer has assured the city that the slopes of the channel will not experience any abnormal erosion requiring expensive maintenance.
- The answers in the Corps of Engineers permit may not be appropriate.
  - The USACE permit application is answered based on the professional experience and opinion of the design engineer.

## 11. Permitting Issues

- Public comment is clearly not in favor of the project – more than six houses, but the majority of the neighborhood.
- The Trinity River Corridor Development Certificate requires no net rise. How is this being addressed in this project?
  - Hydrologic & hydraulic models will be provided in the revision to the Pre-Construction Notification.
- Ecological and migratory bird issues do not appear fully considered.
  - Ecological and wildlife issues have been evaluated to the extent required by USACE and NWP 27. Additionally, the United States Fish and Wildlife Service and the Texas Parks and Wildlife Department have been given the opportunity to comment on the PCN. Coordination with these agencies will take place after the comment period if necessary.
- Where will the habitat be replaced that is being eliminated?
  - The impoundment and associated wetlands are being restored to the natural riverine system that should be present in this area. The current “habitat” is manmade and unnatural. The purpose of a restoration project is to restore “the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource.”

## 12. Water Source for Golf Course

- This pond was originally constructed for irrigation of the golf course. Why is it no longer needed?
- Is it no longer needed because it has not been maintained and it is no longer reliable as a source?
  - The pond was abandoned in the mid-1980s when the City secured rights to use raw water from the Trinity River to irrigate the golf course.

## 13. Linkage to Hike/Bike Trail

- There is clearly a mix of opinions regarding the trail. This is something that must be brought to the neighborhood for review and collaboration.
- Many statements about the projects not being linked, but this does not appear to be the case. This is especially called to question when the same engineering firm is working on both projects.
  - The hike and bike trail is separate from this project, and alignment of the trail is not influencing this project.