ENVIRONMENTAL ASSESSMENT
AND
FINDING OF NO SIGNIFICANT IMPACT

CITIZENS WATER AUTHORITY
DIGINDY TUNNEL SYSTEM
White River and Lower Pogues Run Tunnel
SRF PROJECT WW 16 27 49 02

DATE: December 21, 2016

TARGET PROJECT APPROVAL DATE: January 23, 2016

I. INTRODUCTION

The above entity has applied to the Wastewater State Revolving Fund (SRF) Loan Program for a loan to finance all or part of the wastewater project described in the accompanying Environmental Assessment (EA). As part of facilities planning requirements, an environmental review has been completed which addresses the project's impacts on the natural and human environment. This review is summarized in the attached EA, which can also be viewed in color at http://www.in.gov/ifa/srf/.

II. PRELIMINARY FINDING OF NO SIGNIFICANT IMPACT (FNSI)

The SRF Wastewater Program has evaluated all pertinent environmental information regarding the proposed project and determined that an Environmental Impact Statement is not necessary. Subject to responses received during the 30-day public comment period, and pursuant to Indiana Code 4-4-11, it is our preliminary finding that the construction and operation of the proposed facilities will result in no significant adverse environmental impact. In the absence of significant comments, the attached EA shall serve as the final environmental document.

III. COMMENTS

All interested parties may comment upon the EA/FNSI. Comments must be received at the address below by the target approval date above. Significant comments may prompt a reevaluation of the preliminary FNSI; if appropriate, a new FNSI will be issued for another 30-day public comment period. A final decision to proceed, or not to proceed, with the proposed project shall be effected by finalizing, or not finalizing, the FNSI as appropriate. Comments regarding this document should be sent within 30 days to:

April Douglas
Senior Environmental Manager
State Revolving Fund
100 N. Senate Ave. IGCM 1275
Indianapolis, IN 46204
317-234-7294
adouglas@ifa.in.gov
I. PROJECT IDENTIFICATION

Project Name and Address: DigIndy Tunnel System
White River and Lower Pogues Run Tunnel
Citizens Water Authority
2020 N. Meridian Street
Indianapolis, IN 46202

SRF Project Number: WW 16 27 49 02

Authorized Representative: Jeff Harrison, President and CEO
John Brehm, Senior Vice President and CFO

II. PROJECT LOCATION

White River Tunnel is located in Marion County, Center Township, Indianapolis West Quadrangle, Township 15 North, Range 3 East, Sections 2, 3, 11, 26, 34, and 35.

Lower Pogues Run Tunnel is located in Marion County, Center Township, Indianapolis West Quadrangle, Township 15 North, Range 3 East, Sections 1 and 11.

III. PROJECT NEED AND PURPOSE

Citizens Water Authority is implementing the DigIndy project as part of the City of Indianapolis' Long Term Control Plan. The project need was established as part of a federally-mandated Consent Decree intended to help the City of Indianapolis meet water quality regulatory requirements.

The DigIndy project is a nearly 28-mile long network of 18-foot finished diameter deep rock tunnel built 200 to 250 feet beneath the City of Indianapolis that will convey, capture, and store Combined Sewer Overflows (CSOs) during rainfall events. After a storm event, the tunnel will be dewatered using a deep tunnel pump station, sending the CSOs to the Southport Advanced Wastewater Treatment Plant for treatment.

The deep rock tunnel system consists of five segments: Eagle Creek, White River, Lower Pogues Run, Fall Creek, and Pleasant Run. This environmental assessment covers the White River and Lower Pogues Run Tunnel segments.

IV. PROJECT DESCRIPTION

The White River Deep Rock Tunnel includes the construction of approximately 6 miles of 18-foot finished diameter tunnel located 200 to 250 feet underground; approximately 8 each of: drop shafts, vent shafts, deaeration chambers, adits, approach channels, screen and gate structures, and
diversion structures; and approximately 5,000 feet of 42-inch to 108-inch diameter consolidation sewers, manholes and appurtenances.

The Lower Pogues Run Deep Rock Tunnel includes the construction of approximately 2 miles of 18-foot finished diameter tunnel located 200 to 250 feet underground; approximately 2 each of: drop shafts, vent shafts, deaeration chambers, adits, approach channels, screen and gate structures, and diversion structures; and approximately 1,500 feet of 72-inch to 144-inch diameter consolidation sewers, manholes and appurtenances.

V. ESTIMATED PROJECT COSTS, AFFORDABILITY AND FUNDING

The total contract amount for the White River and Lower Pogues Run Tunnel Projects is $198,514,450. Citizens Water Authority will finance the project with a loan from the State Revolving Fund Loan Program for a 20-year term at an annual fixed interest rate to be determined at loan closing.

VI. DESCRIPTION OF EVALUATED ALTERNATIVES

The “No Action” alternative is not an acceptable alternative because it is hazardous to public and environmental health and safety, as well as it violates the signed Consent Decree.

Storage and Remote Treatment: This alternative calls for three deep tunnels (along White River, Pogues Run, and Fall Creek) with remote treatment facilities at the downstream end of the Pogues Run and Fall Creek tunnels to treat wet weather flows that exceed the tunnel’s capacity. This alternative is not recommended because the project would yield higher costs and lower quality water treatment.

Sewer Separation: This alternative would require completely separating combined sewers in all areas to eliminate raw sewage overflows, sending all wastewater to treatment plants and all stormwater to waterways. This alternative is not recommended because it is not cost-effective and would increase urban stormwater pollution in waterways.

Storage and Conveyance: This is the selected alternative. The DigIndy Tunnel System will capture combined sewage and convey to the treatment plant for treatment. It was selected because it causes the least amount of construction impacts on neighborhoods, provides the most environmental benefit, and provides the most cost-effective solution.

VII. ENVIRONMENTAL IMPACTS OF THE FEASIBLE ALTERNATIVES

A. Direct Impacts of Construction and Operation

Disturbed/Undisturbed Land: The majority of construction work occurs 200 to 250 feet underground. Work related to the installation of storm and sanitary sewers will occur in disturbed rights-of-way, adjacent to and within roadways, alleys and existing utility trenches.

On December 2, 2016, a memo with Historic and Archaeological resources reviews of the proposed project areas was submitted to the Indiana Department of Natural Resources Division of Historic Preservation and Archaeology (DHPA). On December 12, 2016 stated “Archaeological investigations do appear necessary for any areas not previously disturbed by modern and substantial (and deep) activities. There is the possibility of multiple layers or buried archaeological deposits (alluvial deposition because of the river) and because of the urban context (long history of use). We concur with the archaeological review that field investigations and archival research would be necessary.” Further coordination and field
investigations will occur in areas required by DHPA before ground disturbing activities occur.

**Structural Resources** (Figures 1-7): On December 2, 2016, a memo with Historic and Archaeological resources reviews of the proposed project areas was submitted to the Indiana Department of Natural Resources Division of Historic Preservation and Archaeology (DHPA). DHPA needs to complete their review of historic resources before they can make a statement regarding the presence, absence, or potential impact on historic resources.

**Surface Waters**: All stream crossings are subsurface with no work being done in the streams themselves. The project will not adversely affect outstanding state resource waters listed in 327 IAC 2-1.3-3(d), exceptional use streams listed in 327 IAC 2-1-11(b), Natural, Scenic and Recreational Rivers and Streams listed in 312 IAC 7-(2), or Salmonid Streams listed in (327 IAC 2-1.5-5(a)(3) or streams on the Outstanding River List for Indiana.

**Wetlands** (Figures 8-20): Mitigation measures to lessen and compensate for wetland impacts cited in comment letters about the project from the Indiana Department of Natural Resources and the U.S. Fish and Wildlife Service will be implemented.

**Floodplain** (Figures 8-20): The project will not include dredge or fill in the floodway without a permit from IDNR Division of Water. No change in grade will occur within the floodplain.

**Groundwater**: The preconstruction and post-construction groundwater impacts are monitored as part of the DigIndy tunnel program. The project will not impact a drinking water supply or sole source aquifer.

**Plants and Animals**: The construction and operation of the project will not negatively impact state or federal-listed endangered species or their habitat. The project will be implemented to minimize impact to non-endangered species and their habitat.

**Prime Farmland**: The project will not convert prime farmland.

**Air Quality**: Construction activities may generate some noise, fumes and dust, but should not significantly affect air quality.

**Open Space and Recreational Opportunities**: The project will neither create nor destroy open space or recreational opportunities.

**Lake Michigan Coastal Program**: The project will not affect the Lake Michigan Coastal Zone.

**National Natural Landmarks**: Construction and operation of the proposed project will not affect National Natural Landmarks.

**B. Indirect Impacts**

Citizen's Preliminary Engineering Report (PER) states: *The proposed project will not adversely impact archaeological/historical/structural resources, wetlands, wooded areas, or other sensitive environmental resources. The City of Indianapolis will require new development and treatment works projects to be constructed within the guidelines of the U.S. Fish and Wildlife Service, IDNR, Indiana Department of Environmental Management (IDEM), and other environmental review authorities.*
C. Comments from Environmental Review Authorities

This document is the first notice to the U.S. Fish and Wildlife Service and the Indiana Department of Natural Resources (IDNR) Environmental Unit.

The Indiana Department of Natural Resources Division of Historic Preservation and Archaeology was notified of the project on December 2, 2016. Comments are pending a complete review of Historic and Archaeological resources that were submitted. Further coordination and field investigations will occur in areas required by DHPA before ground disturbing activities occur.

In a letter dated December 5, 2016 the Natural Resources Conservation Service determined that the project will not affect prime/unique farmland.

VIII. Mitigation Measures

Citizen’s PER states:

*Any mitigation measures cited in comment letters from the Department of Natural resources and the U.S. Fish and Wildlife Service will be implemented. The project will be implemented to minimize impact to non-endangered species and their habitat.*

*Existing topsoil will be reused during the restoration process, if applicable. The amount of dust may be mitigated by periodic wetting of the exposed soil to reduce the suspension of particles. Normal daytime hours will be used for work activities to reduce noise impacts.*

IX. Public Participation

A properly noticed public hearing was held on September 14, 2016, at 1:00 pm at 2020 North Meridian Street, Indianapolis, In 46202 to discuss the PER. No written comments were received during the 5-day comment period following the hearing.
Map #18
Sites #1461-1471

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<td>1461</td>
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<td>John McCormick School No. 30, 40 N. Miley Avenue; Neoclassical, 1924 (Elmer E. Dunlap, architect; John Schumacher, builder); Architecture, Education (296)</td>
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<td>Oscar Deitch School No. 16, 1402 W. Market Street; Romanesque Revival, 1892/1901; Architecture, Education (296)</td>
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<td>Ball Residence, 1300 W. Michigan Street; Georgian Revival, 1928 (Robert F. Daggett, architect); Architecture, Health/Medicine, Education (296)</td>
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<td>William Coleman Hall, Coleman Circle; Georgian Revival, 1927 (Robert F. Daggett, architect); Architecture, Education, Health/Medicine (296)</td>
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<td>Long Hospital, 1100 W. Michigan Street; Neoclassical, 1914 (Robert F. Daggett, architect); Architecture, Health/Medicine (296)</td>
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<td>Emerson Hall, 1003 W. Michigan Street; Neoclassical, 1919 (Robert F. Daggett, architect); Architecture, Education, Health/Medicine (296)</td>
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Legend
- Ventilation Shaft
- Consolidation Sewer
- White River Tunnel
- Disturbed Area
- Drop Shaft
- Tunnel Adits
- 2 ac. Buffer

Figure 2
Figure 3

Legend
- Ventilation Shaft
- Tunnel Adits
- Consolidation Sewer
- Lower Pogues Run Tunnel
- Disturbed Area
- Drop Shaft
- White River Tunnel
- 2 ac. Buffer

Map #17
Sites #1472-1530

No.   RIG. Description
1472   0 Madame C.J. Walker Building, 601-625 Indiana Avenue; Art Deco, 1927
(Bushsh & Planner, architect; Wm. P. Jungclaus, builder); Architecture, Commerce, Ethnic Heritage, Industry, Performing Arts (296) NR
1475   0 Beithel African Methodist Episcopal Cathedral, 414 W. Vermont Street; Romanesque Revival, 1894; Architecture, Ethnic Heritage, Religion (296) NR
1476   0 Military Park, Between West, New York, Canal, and Blackford Streets; 1821/ c.1900; Architecture, Community Planning, Landscape Architecture, Military (296) NR
1477   N Acme-Ennis Goal Company Superintendent's Office, 710 W. Washington Street; Nineteenth Century Industrial/Romanesque Revival, c.1870-1930; Architecture, Industry (296)
1479   0 John McCormick Cabin Site Market, West Washington Street and 100 N. Blake Street; 1820/1834; Exploration/ Settlement (296) NR
1480   0 West Washington Street Pumping Station, 801 W. Washington Street; Italianate, 1871; Architecture (296) NR
1484   N Indianapolis Power and Light Company, 300 Block of Kentucky Avenue; Twentieth Century Industrial/ Art Deco, c.1930; Architecture, Industry (296)
1485   0 Diamond Chain Company Complex, 402 Kentucky Avenue; Twentieth Century Industrial, 1918/1926/1929/1940/ 1948; Architecture, Industry (296)
Map #16
Sites #1531-1661

Figure 4
Map #8
Sites #1397-1441

No. | Rig. | Description
--- | --- | ---
1397 N | Wallace Foster School No. 32, 2110 N. Illinois Street; Romanesque Revival, 1890 (G. C. Pierson, builder)/1899 (Clarence Marsiedale, architect; W. P. Jungclaus, builder)/1958; Architecture, Education (296)

1404 O | Minor House (Indiana State Federation of Colored Women's Clubs) 2034 N. Capitol Avenue; Free Classic, 1897; Architecture, Ethic heritage, Social History (296) NR

1408 O | Byram-Middleton House, 1828 N. Illinois Street; Italianate, 1870; Architecture, Ethic Heritage (296) NR

1409 N | Nurses' Home, Methodist Episcopal Hospital, 1830 N. Capitol Avenue; Renaissance Revival, 1927; Architecture, Health/Medicine (296)

1410 O | The Seville, 1701 N. Illinois Street; Renaissance Revival, 1921 (Georges & MacLucas, architect); Architecture (296) NR

1412 N | Pandell Florist, 1901-09 N. Capitol Avenue; Neoclassical, c.1930 (Pierre & Wright, architect); Architecture, Commerce (296)

Legend

- Ventilation Shafts
- White River Tunnel
- Lower Pogues Run Tunnel
- Disturbed Area
- Drop Shaft
- Tunnel Adits
- Consolidation Sewer
- 2 ac. Buffer

Figure 5
Map #7
Sites #1448-1453

Legend
- Ventilation Shafts
- Tunnel Adits
- White River Tunnel
- Disturbed Area
- Drop Shaft
- Lower Pogues Run Tunnel
- Consolidation Sewer

No. Rtg. Description
1448 N Riverside School No. 44, 2033 Sugar Grove; Jacobethan Revival, 1908 (Henry C. Brubaker, architect)/1921 (McGuire and Shook, architect)/1936 (Herbert Feltz, architect); Architecture, Education (296)
1449 N Ott and Bryce Buildings, Wishard Hospital, 960 Locke Street; Neoclassical, Ott: 1926 (Adolf Scherrer, architect); Charles Ammerman, engineer); Bryce: 1925 (Adolf Scherrer, architect); Architecture, Health/Medicine (296)
1450 O Indianapolis Flower Mission Memorial Hospital, 1001 W. 10th Street; Art Deco, 1925-1927/1933 (McGuire & Shook Corp., architect; J.C. Ripberger, builder)/1981; Architecture, Health/Medicine (296)
1451 O Riverside Pumping Station, 1201 Waterway Boulevard; Beaux Arts, c.1920 (Lewis X. Davis, architect); Architecture, Community Planning, Engineering (296)
1452 O Railroad Bridge, White River Parkway over White River; Pratt through truss, 1886; Engineering: Transportation (296)
Figure 7

Map #5
Sites #0301-0318, 0483-0609

Legend
- Ventilation Shafts
- Tunnel Adits
- White River Tunnel
- Disturbed Area
- Drop Shaft
- Lower Pogues Run Tunnel
- Consolidation Sewer
- 2 ac. Buffer

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<td>0304</td>
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<td>Ritz Theater, 3440 N. Illinois Street; Italian Renaissance Revival, 1927 (George Redell, architect); Architecture, Commerce, Entertainment/Recreation (296)</td>
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<td>0318</td>
<td>O</td>
<td>Crown Hill Cemetery, 3402 Boulevard Place; 1863-present; Architecture, Art, Landscape Architecture (296) NR, HABS</td>
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0318, Waiting Station
0318, Gothic Chapel

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Date Saved: 9/27/2016
Figure 8
DigIndy Tunnel Program Floodplains Map: Lower Pogues Run Tunnel

- Lower Pogues Run Drop Shals
- Consolidation Sewer
- Other Tunnel
- Deep Tunnel Adits
- Lower Pogues Run Tunnel
- Bore/Receiving Pits (Typically 20' x 40')
- Floodplain Streams

Scale bar is accurate for distances only
Revised 9/27/2016
Figure 10
DigIndy Tunnel Program Floodplain and Wetland Map: Lower Pogues Run Tunnel (LP-DS-01)

LP-DS-01 (7 ft. Diameter)

Scale bar is accurate for distances only
Revised 9/27/2016
Figure 11
DigIndy Tunnel Program Floodplain and Wetlands Map: Lower Pogues Run (LP-DS-02)
Figure 12
DigIndy Tunnel Program Floodplain Map: White River Tunnel

*Scale bar is accurate for distances only
Revised 9/27/2016

White River Retrieval

WR-DS-06

WR-DS-05

FC-DS-01

WR-DS-04

WR-DS-03

WR-DS-02

WR-DS-01

White River Drop Shafts

Consolidation Sewer

Other Tunnel

Deep Tunnel Adits

White River Tunnel

Bore/Receiving Pits (Typically 20' x 40')

Floodplain

Streams
Figure 13
DigIndy Tunnel Program Wetlands Map:
White River Tunnel

*Scale bar is accurate for distances only
Revised 9/27/2016
Figure 15
DigIndy Tunnel Program Floodplain and Wetlands Map: White River Tunnel (WR-DS-02)
Figure 16
DigIndy Tunnel Program Floodplain and Wetlands Map: White River Tunnel (FC-DS-01)

-Scale bar is accurate for distances only
Revised 9/27/2016
Figure 17
DigIndy Tunnel Program Floodplain and Wetlands Map: White River Tunnel (WR-DS-03)
Figure 18
DigIndy Tunnel Program Floodplain and Wetlands Map: White River Tunnel (WR-DS-04)
Figure 19
DigIndy Tunnel Program Floodplain and Wetlands Map: White River Tunnel (WR-DS-05 and WR-DS-06)

*Scale bar is accurate for distances only Revised 9/27/2016
Figure 20
DigIndy Tunnel Program Floodplain and Wetlands Map: White River Tunnel (White River Retrieval Shaft)

*Scale bar is accurate for distances only Revised 9/27/2016

White River Retrieval (35 ft. Diameter)