PROJECT GENERAL INFORMATION

Note: All projects are expected to comply with the County’s Los Angeles River Master Plan (LARMP) (See: http://lacounty.org/wmd/Watershed/LA/LA_River_Plan.cfm) and the City’s Los Angeles River Revitalization Master Plan (LARRMP) (See: www.lariver.org) to the maximum extent feasible.

Project Name: Los Angeles River Waterwheel Project

Project Location: Metropolitan Transit Authority’s Midway Yard on West Bank of River immediately south of the N. Broadway Bridge

Project Proponent: Lauren Bon and the Metabolic Studio represented by Geosyntec Consultants and Kindel Gagan

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Council District: 1 – Councilman Ed Reyes

Thomas Guide Page: 634 H-1 and J-1

DESCRIPTION

The Waterwheel Project is an artwork of significant proportion conceived and developed by Lauren Bon and the Metabolic Studio. As proposed, the Waterwheel will deliver water from the Los Angeles River for use by the City and potentially at the Los Angeles State Historic Park. The artwork is meant to complement the Los Angeles River Master Plan, the Los Angeles River Revitalization Master Plan, as well as other City and County efforts such as the City of Los Angeles’ Water Supply Action Plan and the Water Quality Compliance Master Plan, among others.

Once completed, Los Angeles River water will be diverted through the channel walls of the Los Angeles River to a subterranean side-channel built from a large diameter (~66”) tunnel bored 30 feet below ground surface. This side-channel will deliver water to a 60 foot tall Water Wheel, half above ground and half below, located on Metropolitan Transportation Authority property just south of the North Broadway Bridge. Of special significance, the artwork location is near the site of the historic water wheel that operated in the mid 19th century to deliver water to the Pueblo de Los Angeles. Stylistically, the Water Wheel will be modeled after its predecessor from the 1860's to evoke a sense of the history from this site.
During normal operations the wheel will be powered by the flow through the side-channel to lift the water, deliver it to a natural treatment system, then disinfect it for non-potable uses to the State Park, enhancing wetland habitat and supplying irrigation demands. Water treatment includes prescreening and aeration before entering the natural wetland treatment system. The three acre wetland will aesthetically enhance the Park and provide wildlife habitat while wetland plants and microorganisms remove urban pollutants from the River water. After undergoing treatment and nourishing the wetlands, the water will be disinfected and used to off-set the nearly 80 acre-feet of irrigation water demand at the LA State Historic Park. In addition to conserving water, this alternative source of irrigation water will save the Park over $100,000 each year in water costs.

**PROJECT SKETCH:** Please attach a site-plan for your proposed project

**PLEASE SEE ATTACHED IMAGERY**

**EVALUATION CHECKLIST**

**FLOOD PROTECTION:**

1. Will the proposed project incorporate channel modifications or the inclusion of structures in the channel that may impact the flow or capacity of the LA River?
   
   Yes X No

   Comment:
   A large diameter tunnel will divert low flows from the River through the channel wall to the base of the Water & Power Wheel 30 feet below the ground surface. A downstream tunnel will allow excess flows to be returned to the River channel.

2. Will the proposed project introduce additional water into the LA River? If so, please indicate type and source of water, and expected quantity?

   Yes X No

   Comment:
   This artwork will remove flows from the River.

**WATER QUALITY:**

3. Does the proposed project help to improve the overall water quality of the Los Angeles River? If so, please describe any processes, practices, or Best Management Practices (BMPs) (See:.www.casqa.org or www.lastormwater.org ) that will be implemented?

   Yes X No

   Comment:
   Dry weather flows and a portion of the wet weather flows will be diverted out of the River and will undergo some pretreatment. A small portion of the flow will be removed from the River, treated, and made available to offset non-potable water demands.
4. Will any activity associated with the proposed project generate pollutants such as trash, pet waste or chemicals in the vicinity of the River? If so, please specify type and source of pollutant, and indicate what mitigation measures (if any) are included in your project?

   Yes ___  No ___

Comment:

ECOSYSTEM RESTORATION

5. Does the proposed project create habitat or ecosystem opportunities? If so, please describe.

   Yes ___  No ___

Comment:

   The Waterwheel will pump River water potentially creating approximately 3.1 acres of natural treatment wetlands, a small riparian zone and upland buffer located within the Los Angeles State Historic Park.

6. Does the proposed project include planned vegetation with native and historic Los Angeles River riparian/wetland species? If yes, please describe.

   Yes ___  No ___

Comment:

   The potential treatment wetlands will include locally native vegetation consistent with Los Angeles River Landscaping Guidelines and Plant Palettes.

7. Does the proposed project include planned vegetation improvements that would support threatened or endangered species? If so, please describe.

   Yes ___  No ___

Comment:

   The proposed artwork creates the ability to provide enhanced wetlands and upland habitat areas which could sustain the southwestern willow flycatcher and bank swallow.

8. Does the proposed project consider habitat connectivity to upstream, downstream and upland natural areas? If so, please describe.

   Yes ___  No ___

Comment:

   The proposed artwork creates the ability to provide enhanced wetlands and upland habitat areas.

9. Does the proposed project include creation, restoration, or enhancement of more natural hydrologic processes? If yes, please describe.

   Yes ___  No ___

Comment:
The artwork will return a portion of the flow to its historic floodplain reconnecting it with the landscape in this portion of the City. The 3 acres of the potential treatment wetlands ecosystem will act as a natural pollutant filter to increase water quality.

LOS ANGELES RIVER MASTER PLAN (LARMP) AND LOS ANGELES RIVER REVITALIZATION MASTER PLAN (LARRMP):

10. List the design features of your project that are consistent with the LARMP and LARRMP.

Comment:
Water conservation will offset local irrigation demand, improve water quality and increase native ecosystem functionality through potential treatment wetlands. The artwork also includes both historical and environmental educational opportunities and will become an iconic feature in the Cornfield/Arroyo Seco Specific Plan area. The potential treatment wetlands and the Water & Power Wheel will create aesthetic focal points for the Park and surrounding neighborhood, generating interest while providing that critical link between the Park and the River.

11. Will the proposed project create new or expand existing recreational opportunities? If yes, please describe.

Yes  X                No____

Comment:
The artwork’s proximity to the State Park will expand the parks educational and recreational opportunities by creating and visible connection to the Los Angeles River.

12. Does the proposed project include aesthetic enhancements? If yes, please describe.

Yes  X                  No____

Comment:
Stylistically, the Waterwheel will be modeled after its predecessor from the 1860’s that was located very near the proposed location to evoke a sense of the history of this site.

13. Will the project provide or facilitate public access to the River? If yes, please describe.

Yes  X                No____

Comment:
The artwork will divert River water to the Waterwheel which will be accessible for public viewing.

14. Will the proposed project result in community revitalization (such as economic development, educational, artistic, cultural and/or other benefits and improvements)? If yes, please describe.

Yes  X                No____

Comment:
The Waterwheel includes both historical and environmental educational opportunities and will become an iconic feature in the Cornfield/Arroyo Seco Specific Plan area. The artwork will create
aesthetic focal points for the Park and surrounding neighborhood, generating interest while providing that critical link between the Park and the River.

15. Who is the project intended to serve (i.e. youth, cyclists, artists, bird watchers)?
   Yes   X                  No
Comment:
   The Waterwheel will serve the surrounding Cornfield/Arroyo Seco community as well as those attracted to significant historical points of interest.

16. Does your project implement BMPs for maximizing on-site capture, retention and/or infiltration of stormwater? If yes, please describe.
   Yes   X                  No
Comment:
   The potential natural treatment wetlands will capture and clean stormwater from the impervious surfaces of the State Historic Park.

17. Does your project implement water conservation practices and/or technologies (e.g. smart or weather-based irrigation devices, California friendly plants, water efficient fixtures) (See: www.ladwp.com or www.mwdh2o.com)? If yes, please describe.
   Yes   X                  No
Comment:
   The Waterwheel itself is a water conservation technology and the potential treatment wetlands designed to be incorporated in the LA State Historic Park will utilize locally native vegetation. The Historic Park is currently undergoing revitalization and with landscape and irrigation designs being implemented in accordance with the California Model Water Efficient Landscape Ordinance.

18. Does your project implement water reuse practices/technologies such as graywater or recycled water systems (See: www.ladbs.org/LADBSWeb/green-bldg.jsf or www.ladwp.com/ladwp/cms/ladwp001294.jsp)? If yes, please describe.
   Yes   X                  No
Comment:
   The Waterwheel and treatment wetlands will draw, clean and reuse dry weather and wet weather flows from the River for non-potable uses, potentially offsetting nearly 38,000 HCF (hundred cubic feet) of irrigation demands for the LA State Historic Park.

OPERATION AND MAINTENANCE:

19. Who will be responsible for the operation and maintenance of the project after construction?
   LA County Flood Control District _____  City of LA _____
   U.S. Army Corps of Engineers _____  Other (Specify under comment) _____
Comment:
Presently the operations and maintenance of the Waterwheel and its associated facilities have yet to be determined; however a funding plan is under development to completely support a public and/or private entity for the life of the artwork.

20. Does your proposed project provide adequate access for LACFCD, City of LA, LADWP, and/or Corps maintenance activities? If yes, please describe.
   Yes  X  No  

Comment:
Yes, the plans will be reviewed to ensure that maintenance access is incorporated into the design of the project.

SECURITY, SAFETY AND LIABILITY:

21. How will safety and security be addressed within the project limits?

Comment:
Signage, lighting, and guardrails will be included as part of this project to assist with safety and security issues.

22. How will general liability for accidents/incidents occurring within the project limits be addressed?

Comment:
Presently general liability for accidents/incidents occurring within the site limits of the Water & Power Wheel and its associated facilities have yet to be determined.
Figure 2
MTA Long Term Lease

Water & Power -- Sustainable Water Resource Development for the Los Angeles State Historic Park

March 7, 2012

Legend

- Long-Term Footprint

Note:
- Placement of electrical conduit is unknown and not shown on this figure.
- Trenching location for water delivery to state park has not yet been determined.