

**PROPOSITION 1E STORMWATER FLOOD MANAGEMENT GRANT APPLICATION  
CITY OF PALM SPRINGS  
TAHQUITZ CREEK LEVEE RECONSTRUCTION  
EXHIBIT A  
WORK PLAN**

**Introduction**

FEMA is currently undertaking Map Modernization to transform the format of the nation's existing flood hazard mapping inventory from a paper based product to a digital product. In conjunction with this effort FEMA is also striving to improve the quality of flood hazard information. One specific focus for FEMA are areas shown to be protected by levees on effective Flood Insurance Rate Maps (FIRMs). In the process of developing new digital FIRMs (DFIRMs), FEMA is requesting that communities provide evidence to demonstrate that levees meet the minimum requirements established in federal law at 44 CFR 65.10. Areas shown on effective FIRMs as protected from flooding by levees for which the required information is not provided will be remapped and designated as special flood hazard areas (SFHA). Significant impacts will result from instances in which areas behind levees that are shown to be protected on the effective FIRMs are revised to be designated as SFHA. If these areas are designated as SFHA there will be new limitations for construction and requirements for flood insurance.

Tahquitz Creek is located in Palm Springs, California approximately 0.7 miles south of East Ramon Road and 0.7 miles north of East Palm Canyon Drive (see Figure 1 Site Map). The levee is located on the north side of Tahquitz Creek and provides protection for Demuth Park and a wastewater treatment plant, both owned by the City. The downstream end of the levee begins at the Gene Autry Bridge crossing (Highway 111) and the levee terminates approximately 0.75 miles upstream from Highway 111, adjacent to Demuth Park. Levee ID 16 is located on FIRM Panels 06065C1567G and 06065C1586G. Behind levee mapping on the Effective FIRMs (for Demuth Park and the wastewater treatment plant) is a shaded Zone X. Shaded Zone X is defined as areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than one foot or with drainage areas less than one square miles; and areas protected by levees from 1% annual chance flood.

The concrete lined levee was originally constructed in approximately 1984. In 1994 the Tahquitz Creek Golf Course was constructed within Tahquitz Creek and built on top of the existing levee structure. Construction of the golf course raised the elevation of the channel and the golf course was built on top of the levee's concrete lining. The top of the levee is a concrete golf cart path and the channel side slopes are part of the golf course. Tahquitz Creek discharges to the southeast where it confluences with Palm Canyon Wash, approximately 800 feet upstream from Highway 111.

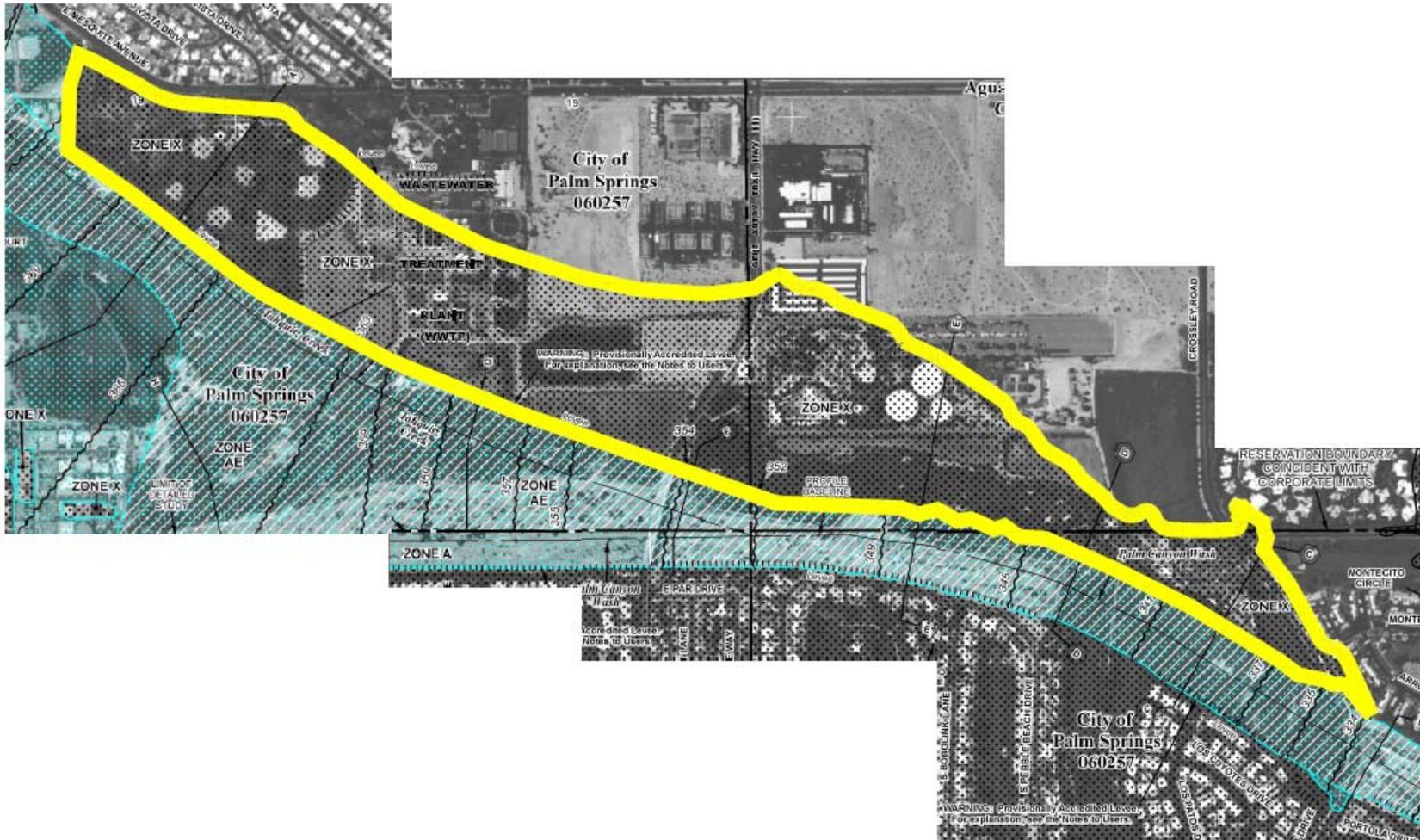
The Tahquitz Creek levee provides flood control protection to the City's wastewater treatment plant ("WWTP"). The WWTP has a peak treatment capacity of 10.9 million gallons per day of sewage, which is treated and discharged to ground in several percolation ponds located on the landside (interior) of the levee system.

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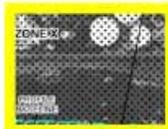
The City previously contracted with Nolte Associates, Inc., (“Nolte”) to review the Tahquitz Creek levee to determine if its construction meets the requirements established in 44 CFR 65.10. Nolte completed an analysis of the Tahquitz Creek levee in August 2009, and determined the levee does not meet federal requirements for levees established in 44 CFR 65.10 and, in accordance with FEMA’s guidelines, had the potential to fail in a 100-year storm exposing the City’s WWTP to flooding from the adjacent Tahquitz Creek. Failure of the Tahquitz Creek levee, which results in flooding of the City’s WWTP, has the potential to release millions of gallons of untreated sewage into Tahquitz Creek, which would cause significant pollution of stormwater runoff and groundwater within Tahquitz Creek.

An exhibit showing the area behind the levee provided with flood control protection by the Tahquitz Creek levee is shown on the following page, and is the area that would be subject to flooding in the event the levee failed during a 100-year storm.

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**CITY CERTIFIED LEVEE SOUTH OF WWTTP**



AREA TO BE PROTECTED FROM 100-YEAR FLOOD  
PENDING CERTIFICATION OF TAHQUITZ CREEK LEVEE

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**Goals and Objectives**

The Goals and Objectives of this Proposal is to allow for the repair and reconstruction of an existing flood control levee along the Tahquitz Creek within Palm Springs, CA, from its confluence with the Palm Canyon Wash extending upstream approximately 0.75 miles adjacent to the City's WWTP. The repair and reconstruction of the levee would ensure the levee satisfies federal requirements for levee construction established in 44 CFR 65.10, and that the levee would withstand the effects of a 100-year storm in Tahquitz Creek and provide flood control protection to the adjacent WWTP.

**Purpose and Need**

FEMA completed digital Flood Insurance Rate Maps (DFIRM's) for Riverside County, which were adopted August 28, 2008. As part of this process, FEMA required that communities provide evidence to demonstrate that levees meet the minimum requirements established in Title 44, Chapter 1 of the Code of Federal Regulations, Section 65.10. The Tahquitz Creek Levee has been identified as a "Provisionally Accredited Levee" ("PAL"), Levee ID 16, as the City has been unable to demonstrate that this levee meets all of the requirements set forth in 44 CFR 65.10. The levee does not meet freeboard and other requirements, and must be repaired and reconstructed in order to satisfy FEMA's requirements and ensure the levee continues to provide flood control protection to properties behind it, including the City's WWTP. The failure of the Tahquitz Creek levee during a 100-year storm represents a risk of releasing millions of gallons of untreated wastewater into the Tahquitz Creek, resulting in significant pollution of stormwater runoff and groundwater within Tahquitz Creek.

This Proposal addresses the adopted Coachella Valley IRWM Plan's goals and objectives in the following ways:

Satisfies Objective A: "Provide reliable water supply for residential and commercial, agricultural community, and tourism needs". Failure of the Tahquitz Creek levee during a 100-year storm has the potential to cause release of wastewater effluent from the City's WWTP into Tahquitz Creek, causing significant pollution of stormwater runoff and groundwater within Tahquitz Creek.

Satisfies Objective E: "Protect groundwater quality and improve, where feasible." Failure of the Tahquitz Creek levee during a 100-year storm has the potential to cause release of wastewater effluent from the City's WWTP into Tahquitz Creek, causing significant pollution of stormwater runoff and groundwater within Tahquitz Creek.

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Satisfies Objective F: “Preserve and improve surface water quality by maintaining integrity of agricultural drainage systems, protecting the quality of natural runoff used for potable supply, and reducing pollution in stormwater runoff.” Failure of the Tahquitz Creek levee during a 100-year storm has the potential to cause release of wastewater effluent from the City’s WWTP into Tahquitz Creek, causing significant pollution of stormwater runoff and groundwater within Tahquitz Creek.

Satisfies Objective G: “Preserve local environment and restore, where feasible.” Failure of the Tahquitz Creek levee during a 100-year storm has the potential to cause release of wastewater effluent from the City’s WWTP into Tahquitz Creek, causing significant pollution of stormwater runoff and groundwater within Tahquitz Creek.

Satisfies Objective H: “Manage flood risks, including current acute needs and needs for future development.” The existing Tahquitz Creek levee adjacent to the City’s WWTP does not meet minimum levee requirements set forth in 44 CFR 65.10 and must be repaired to satisfy those requirements in order to provide flood control protection to properties behind it. Failure of the levee in a 100-year storm represents a flood risk to the City’s WWTP, which has the potential to cause release of wastewater effluent from the City’s WWTP into Tahquitz Creek, causing significant pollution of stormwater runoff and groundwater within Tahquitz Creek.

**Project List**

This Proposal includes one project – Tahquitz Creek Levee Reconstruction

**Abstract:** Repair and reconstruction of the Tahquitz Creek levee to comply with federal standards identified in 44 CFR 65.10 to ensure failure of levee in 100-year storm does not inundate adjacent City-owned wastewater treatment plant, which would have the potential to release millions of gallons of untreated sewage into Tahquitz Creek.

**Current Status:** The City previously entered into a contract with Nolte Associates, Inc., (“Nolte”) to prepare plans, specifications and estimates (“PS&E”) necessary to repair and reconstruct the Tahquitz Creek levee to satisfy requirements established in 44 CFR 65.10. Nolte is currently finalizing the PS&E which will be completed by July 1, 2011.

**Implementing Agency:** City of Palm Springs

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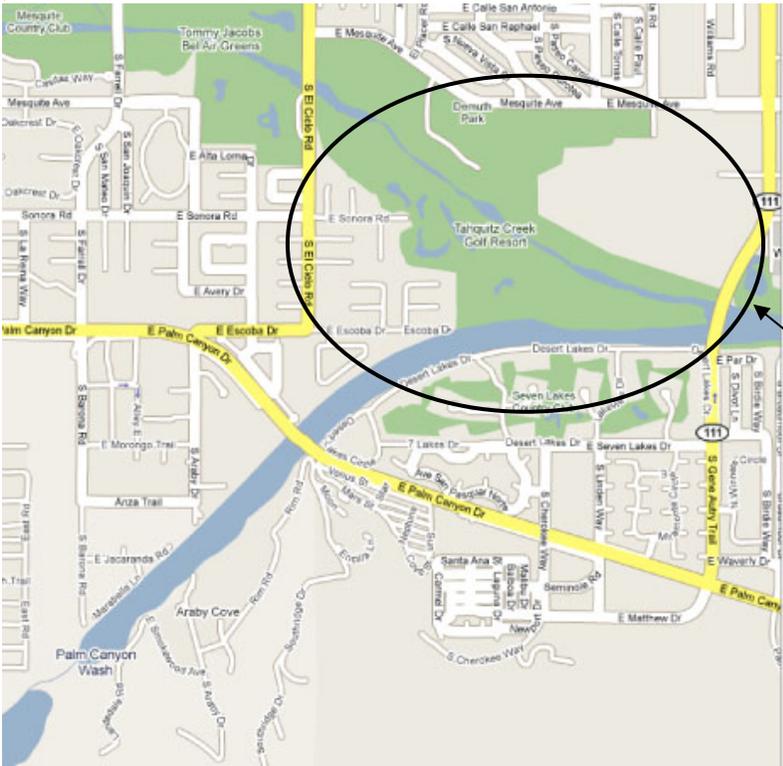
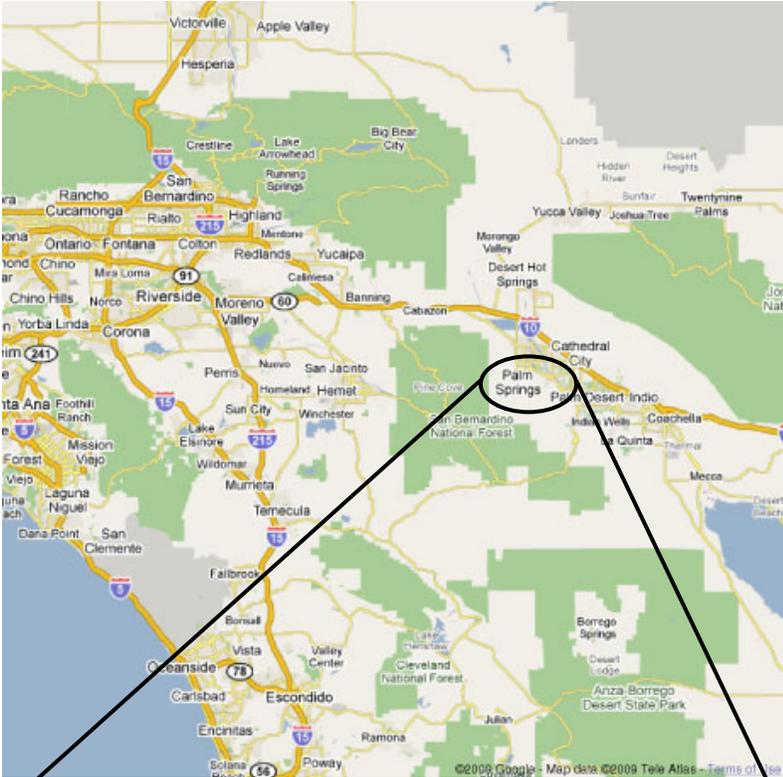
**Integrated Elements of Projects**

This Proposal includes one project – Tahquitz Creek Levee Reconstruction. As a single project, the Proposal has independent utility and provides a complete synergy and linkage of the Purpose and Need and Goals and Objectives of the Proposal. There are no complications associated with coordinating implementation or operation of various projects, and the City is the only implementing agency associated with this project.

**Regional Map**

The Tahquitz Creek Levee Reconstruction project is located in Palm Springs, California. Palm Springs is located in the Coachella Valley, in Riverside County. A regional map of the area is provided on the next page.

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**Project Location**

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Section 9110(f) of the California Water Code (CWC) defines the State Plan of Flood Control SPFC as follows:

*“State Plan of Flood Control” means the state and federal flood control works, lands, programs, plans, policies, conditions, and mode of maintenance and operations of the Sacramento River Flood Control Project described in Section 8350, and of flood control projects in the Sacramento River and San Joaquin River watersheds authorized pursuant to Article 2 (commencing with Section 12648) of Chapter 2 of Part 6 of Division 6 for which the board or the department has provided the assurances of nonfederal cooperation to the United States, and those facilities identified in Section 8361.*

The proposed Project is located along the Tahquitz Creek in Palm Springs, Riverside County, California, and therefore, is not located within or is a part of the SPFC.

### **Completed Work**

Preparation of plans, specifications and estimates (“PS&E”) necessary to repair and reconstruct the Tahquitz Creek levee to satisfy requirements established in 44 CFR 65.10 is underway. Completion of PS&E is scheduled by July 1, 2011.

The City is the lead agency for this project, and has preliminarily identified a Categorical Exemption (Section 15301, Existing Facilities – Class 1) as the appropriate CEQA documentation for the project which ensures compliance with the California Environmental Quality Act (CEQA). The City will prepare and file a Categorical Exemption with the County Clerk prior to construction of the project.

### **Existing Data and Studies**

The City previously contracted with Nolte Associates, Inc., (“Nolte”) to review the Tahquitz Creek levee to determine if its construction meets the requirements established in 44 CFR 65.10. Nolte’s analysis was completed in August 2009, and included the following data and studies:

#### Topographic Map

- 1995 New Golf Course As-Built Topographic Survey

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- Palm Canyon Wash topographic data, obtained from Riverside County Flood Control and Water Conservation. The topographic data was created in 2007 at 1-foot contour intervals.
- Tahquitz Creek topographic data, obtained from Riverside County Flood Control and Water Conservation. The topographic data has 4-foot contour intervals and the date when the data was created is unknown.

Drainage Studies

- Application/Certification Forms to Obtain a CLOMR for the City of Palm Springs Municipal Golf Course Project Tahquitz Creek (John M. Tettemer & Associates 2/98)
- Bogie Road Hydrology Report 9/27/79

Levee As-Built Plans

- Palm Springs Golf Course North Levee Plan & Profile, 8/3/1993
- Bogie Road Levee Construction As-Built Plans (S&T Western, Inc. 3/21/81 – Certified As-Built on 5/4/84)

HEC-2 Analysis

- Palm Canyon Wash & Tahquitz Creek HEC-2 Cross Sections
- Bogie Road Palm Canyon Wash (Excavated) HEC-2 output

Improvement Plans

- Line 22 Storm Drain Improvements - Phase II Final Storm Drain Report (DMC Design Group 7/18/08)

Hydraulic Analysis

- Hydraulic Analysis of the Proposed Expansion of the City of Palm Springs Municipal Golf Course (John M. Tettemer & Associates 9/18/91)
- Palm Canyon Wash Hydraulic Analysis (Simons & Associates, Inc 2/97)

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Geotechnical Reports

- Data Review & Levee Evaluation Palm Canyon Wash at Bogie Road North (left) Bank Levee (Joe Sciandrone 3/13/81)
- Bogie Road Bridge Project North Levee, Palm Springs, CA (Leighton & Associates 9/21/81)
- Geotechnical/Geological Investigation South Levee, Palm Canyon Wash (CHJ Incorporated 8/29/1993)
- Limited Geotechnical Investigation Proposed Palm Canyon Wash Floodwalls (CHJ Incorporated 6/21/05)

Operation and Maintenance Plans

- Tahquitz Creek & Palm Canyon Channel - Vicinity of the Tahquitz Canyon Golf Course within The City of Palm Springs Maintenance Plan (John M. Tettemer & Associates Nov 1999)

Operation and Maintenance Inspection Records

- Concrete Cylinder Compression Test Report on Bogie Road Bridge (11/10/81 Leighton & Associates)
- Bogie Road Bridge - North Channel Lining Coring (Leighton & Assoc. 4/15/83)

Miscellaneous

- Aerial Photograph of a portion of City of Palm Springs (showing the concrete lined Tahquitz Creek Levee) in 1983
- 1989 Aerial Photograph of wastewater treatment plant
- Palm Springs Golf Course Mechanical, Electrical & Communication Cable Plans (Gordons Irrigation Consulting 6/4/93)
- City of Palm Springs Plans for Construction of Palm Springs Golf Course Tahquitz Erosion Protection As-Built (John M. Tettemer & Associates 4/5/94)
- Palm Canyon Wash Floodwall North & South Levees (John M. Tettemer & Associates 4/12/93)

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- Palm Springs Golf Course Gene Autry Trail & Tahquitz Creek Construction Drawings (Theodore G. Robinson Golf Course Architect 4/12/93)
- Palm Canyon Wash Floodwall Design Project (John M. Tettermer & Associates November 2004)

The finished work product prepared by Nolte in August 2009, titled *Tahquitz Creek – Levee ID 16, Provisionally Accredited Levee Analysis* was submitted to FEMA on September 14, 2009. The City's findings with regard to the Tahquitz Creek Levee were summarized to FEMA as follows:

*Section 65.10 (b) (1) Freeboard*

It has been determined that freeboard requirements are satisfied along the entire length of the Tahquitz Creek levee, except for a segment of approximately 1,200 feet in length (Nolte Sections 130 to 160) immediately adjacent to the City's wastewater treatment plant. Alternatives are proposed for the City's consideration that would address the reduced freeboard along that segment of the Tahquitz Creek levee, to bring the levee in compliance with Section 65.10. The City intends to pursue one of these alternatives in the future, and will continue to coordinate with FEMA to ensure the levee is appropriately certified.

*Section 65.10 (b) (2) Closures*

It has been determined that the Tahquitz Creek levee has no closures devices, therefore, a closure analysis was not required and Section 65.10 (b) (2) does not apply.

*Section 65.10 (b) (3) Embankment Protection*

It has been determined that the Tahquitz Creek levee meets the requirements of Section 65.10 (b) (3).

*Section 65.10 (b) (4) Embankment and Foundation Stability*

It has been determined that the Tahquitz Creek levee meets the requirements of Section 65.10 (b) (4) with regard to the foundation stability requirements.

It has been determined that embankment stability requirements are satisfied along the entire length of the Tahquitz Creek levee, except for two sections analyzed for long-term static condition with steady state seepage immediately adjacent to the City's wastewater treatment plant.

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Alternatives are proposed for the City's consideration that would address embankment stability along that segment of the Tahquitz Creek levee, to bring the levee in compliance with Section 65.10. The City intends to pursue one of these alternatives in the future, and will continue to coordinate with FEMA to ensure the levee is appropriately certified.

*Section 65.10 (b) (5) Settlement*

It has been determined that the Tahquitz Creek levee meets the requirements of Section 65.10 (b) (5).

*Section 65.10 (b) (6) Interior Drainage*

It has been determined that the Tahquitz Creek levee meets the requirements of Section 65.10 (b) (6).

*Section 65.10 (c) Operation Plans*

It has been determined that the Tahquitz Creek levee meets the requirements of Section 65.10 (c).

*Section 65.10 (d) Maintenance Plans*

It has been determined that the Tahquitz Creek levee meets the requirements of Section 65.10 (d).

A copy of Nolte's finished report *Tahquitz Creek – Levee ID 16, Provisionally Accredited Levee Analysis* is included with this application.

Included with Nolte's finished report submitted to FEMA was the following study:

*Geotechnical Investigation Report – Tahquitz Creek Levee System*, dated August 24, 2009, prepared by AMEC Geomatrix, Inc. The salient objectives of this investigation were to: (1) evaluate the nature and engineering properties of the levee embankment and underlying foundation materials; (2) evaluate potential seismic hazards; (3) evaluate groundwater and seepage conditions during the base flood event; (4) perform static and seismic slope stability analyses; (5) identify potential deficiencies that might exist in the levee and if necessary, provide recommendations for remediation measures for each deficiency; and (6) provide recommendations for maintenance tasks.

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The geotechnical investigation made the following findings with regard to the Tahquitz Creek Levee System:

Based on the results of our geotechnical investigation, it is our opinion that the Tahquitz Creek Levee does not meet the geotechnical criteria set forth in 44 CFR Section 65.10 of the National Flood Insurance Program for the loading conditions described in USACE Design Manual EM 1110-2-1913. A discussion of each of the geotechnical criteria is provided below.

*Erosion of Levee Embankment During Base Flood*

The surface soils along the levee are highly erodible. As described in Section 4.2, evidence of significant erosion and animal burrows was observed at various locations along the levee during our inspections. We expect that existing areas will continue to erode over time, and other sections of the levee, which are currently unaffected, could erode if mitigation measures are not implemented. Existing and future erosion will reduce the integrity, and thus, increase the potential for slope instability.

*Revetment Protection*

Several deficiencies in the original concrete liner thickness were noted in the Leighton coring study (1983), and most of the concrete liner has since been buried from the construction of the golf course. In the exposed sections of the liner, we observed cracking and even separation at one location. Furthermore, the existing revetment does not provide slope protection to the fill buttress on the riverside slopes that was placed during construction of the Tahquitz Creek Golf Course. Hence, based on the results of our review and observations during the inspections, the existing revetment is judged to be inadequate to provide protection for the riverside slopes during the base flood.

*Levee Embankment Stability*

Detailed analyses were performed to evaluate the embankment stability for various loading conditions. The loading conditions considered during this study included: (1) steady-state seepage from the base flood event, (2) rapid drawdown, and (3) earthquake loading from a 475-year event. For the static loading conditions on the landside, the calculated minimum Factors of Safety for Sections C-C and D-D did not meet the stability criteria outlined in the USACE Manual EM 1110-2-1913 Design and Construction of Levees and also set forth in 44 CFR Section 65.10 of the National Flood Insurance Program (NFIP). For the rapid drawdown condition, Section D-D did not meet the adopted stability criteria. Additionally, the flood loading elevation levels by Nolte

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indicate several sections of the levee do not have adequate freeboard (Appendix D). The lack of adequate freeboard may result in floodwater overtopping the embankment, which in turn will cause instability of the embankment.

*Levee Foundation Stability*

We expect that the vast majority of any static settlement has already likely occurred. In addition, we estimate approximately 1.5 inches of seismic compression could occur during a 475-year earthquake event. During our field inspections, we did not observe any evidence of settlement. Therefore, it is our opinion that the levee foundations are stable and potential future settlement will not create a significant loss of freeboard.

*Encroachments/Unwanted Vegetation/Maintenance*

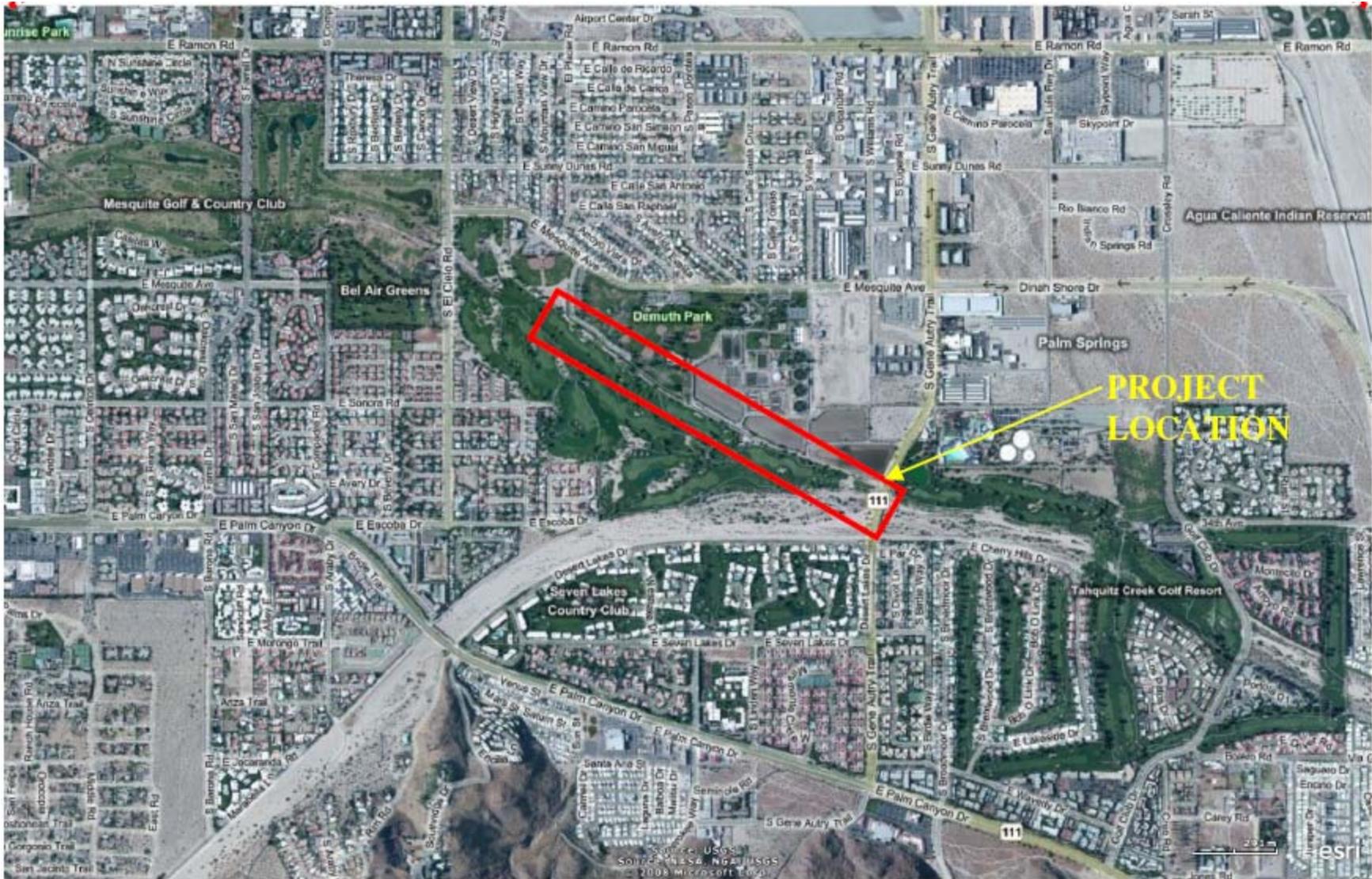
During our field inspections, we observed several encroachments associated with the landscaping and irrigation system of the golf course. We observed grading activities along the landside slopes in the east section of the levee at the WWTP, and areas of thick vegetation along the landside slopes. Erosion may be accelerated if irrigation is not properly controlled and/or if an irrigation line ruptures. The grading activities along the landside slopes could increase the potential for instability if the slopes are not properly restored. Furthermore, the thick vegetation could inhibit maintenance and/or emergency operations as well as reduce the integrity of the levee from decaying root systems and/or other organic matter.

A copy of *Geotechnical Investigation Report – Tahquitz Creek Levee System*, dated August 24, 2009, prepared by AMEC Geomatrix, Inc., is included with this application.

**Project Map**

Detailed maps showing the location of the Tahquitz Creek levee are shown on the next 2 pages.

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**NOLTE**  
 BYROND ENGINEERING  
DRINK WATER OF THERMAL WATE ARE  
 NOT RECOMMEND FOR DRINKING WATER USE

**TAHQUITZ CREEK LEVEE  
PROJECT LIMITS**

SHEET NUMBER  
**1**  
OF 1 SHEET  
JOB NUMBER:  
999551403

PREPARED FOR: THE CITY OF PALM SPRINGS  
 DATE SUBMITTED: 04/2011

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**Project Specifics**

This Proposal includes one project – Tahquitz Creek Levee Reconstruction.

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The proposed Project is located along the Tahquitz Creek in Palm Springs, Riverside County, California, and therefore, is not located within or is a part of the SPFC.

**Project Timing and Phasing**

As a single project, the Proposal has independent utility and provides a complete synergy and linkage of the Purpose and Need and Goals and Objectives of the Proposal. There are no complications associated with coordinating implementation or operation of various projects, and the City is the only implementing agency associated with this project. The Tahquitz Creek Levee Reconstruction can operate on a standalone basis, and can be fully functional without implementation of any other projects.

**Tasks**

***Task 1 – Administration***

- Coordinate and attend meetings with the City’s Project Manager and other required representatives from affected agencies at least once per month, or as deemed necessary by the City’s Project Manager.
- Prepare minutes for each meeting and distribute them to the City’s Project Manager and other attendees at each succeeding meeting.
- Perform all project management coordination necessary to maintain the Project Schedule, which shall include, but not be limited to the following:

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- + Budgeting – Prepare budgets for each task and milestone of the project to be used as a basis for cost monitoring and control.
- + Cost Accounting – Prepare monthly reports of expenditures for the project by task and milestone.
- + Scheduling – Prepare a detailed project schedule; indicate all tasks, milestones and project activities, deliverables, and reflect necessary review time by affected agencies. Adjust the project schedule as necessary throughout the duration of the project, and provide updated schedules at each monthly progress meeting.

Deliverables: Monthly meeting agendas and minutes, action item lists, progress reports, project schedule. Preparation of invoices and other deliverables as required.

***Task 2 – Labor Compliance Program***

- Prepare a Labor Compliance Program in accordance with state and federal requirements as applicable to the Project.
- Monitor compliance with the approved Labor Compliance Program throughout the duration of the Project.

Deliverable: Submission of Labor Compliance Program. Monitoring and enforcement of Labor Compliance Program.

***Task 3 – Reporting***

- Prepare quarterly, annual and final reports required by the Proposition 1E Grant Agreement.

Deliverables: Submission of quarterly, annual and final reports required by the Proposition 1E Grant Agreement.

***Task 4 – Assessment and Evaluation***

- Prepare Biological Resources Technical Study – Conduct a general biological reconnaissance survey of the project area to inventory existing biological resources and create a baseline biological resources map with vegetation communities and conspicuous sensitive species locations. Identify any lands within the project area that may be under the jurisdiction of the ACOE, CDFG, and Regional Water Quality Control Board (RWQCB) as waters of the U.S., including wetlands.

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- Prepare Hydraulic Report – Prepare one set of hydraulic calculations, to verify the water surface elevation of the channel does not cause any freeboard deficiencies with the levee. Perform scour calculations to determine the possible scour depths caused by the 100-year storm event in Tahquitz Creek. Equations from the Hydraulic Engineering Circular No. 18 (May 2001) published by the Federal Highway Administration will be the basis of the scour analysis.
- Prepare Final Geotechnical Report – Revise the geotechnical analyses performed as part of the levee certification project to incorporate the final design of the levee improvements. The goal of these revised analyses is to show that the levee meets FEMA's requirements outlined in 44 CFR 65.10.

Deliverables: Biological Resources Technical Study, Hydraulic Report, Final Geotechnical Report.

***Task 5 – Final Design***

- 60% Design Plans – Prepare 60% design plans and supplemental specifications for the project. Prepare an Engineer's estimate of probable construction cost that will be submitted in tabular form and on a unit cost basis. Pay items of work shall conform to CALTRANS standards as applicable.
- 90% Design Plans – Prepare 90% design plans and supplemental specifications for the project based on review comments from the City for the 60% design plans. Revise the Engineer's estimate of probable construction cost. Pay items of work shall conform to CALTRANS standards as applicable.
- Final Design Plans – Meet with the City to finalize responses to review comments and resolve all outstanding issues. Prepare final design plans and supplemental specifications for the project based on review comments from the City for the 90% design plans. Revise the Engineer's estimate of probable construction cost. Pay items of work shall conform to CALTRANS standards as applicable. Revise the hydraulic calculations to account for changes made during the final design.
- Letter of Map Revision (LOMR) – Prepare a formal Letter of Map Revision (LOMR) package to be submitted to and approved by FEMA to accredit the levee system.

Deliverables: Completion of project plans and specifications. Preparation of CLOMR/LOMR submittal packages for FEMA review and approval.

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***Task 6 – Environmental Documentation***

- CEQA Evaluation – Review project in accordance with CEQA guidelines, completion Initial Study Checklist as appropriate. Determine mitigation measures, if any, or application of Categorical Exclusions as appropriate.
- Categorical Exemption – Prepare CEQA Categorical Exemption as allowed by CEQA; file with County Clerk.

Deliverables: CEQA Categorical Exemption.

***Task 7 – Permitting***

- Wetlands Permitting – Evaluation the project for application of required wetlands permitting due to direct impacts to waters of the U.S., including wetlands. During the permit processing period, coordinate with the wetlands regulatory agencies including attending meetings with any combination of regulatory agencies and/or project team members.
- Section 404 Nationwide Permit (Pre-Construction Notification) – Prepare necessary permit applications under the Nationwide Permit Program, which requires impacts to waters of the U.S. to be less than 0.5 acre. The Nationwide Permit (NWP) is assumed to be most appropriate for the project is (NWP) 14, with a required pre-construction notification (PCN). Among other thresholds, authorization under this permit allows for impacts for modifications or improvements to existing linear transportation facilities including trails, paths, and walkways of up to 0.50 acre of jurisdictional waters or wetlands.
- Section 401 Water Quality Certification Application – Complete and submit an application for a Section 401 Water Quality Certification to RWQCB. The application will include the project location and existing conditions, a project description and impact analysis, existing functions and values of the affected drainages, a conceptual wetlands mitigation and monitoring plan, a discussion of beneficial uses, proposed measures to prevent impacts to water quality, measures to maintain and improve water quality, all associated figures (vicinity maps, project site map, construction/ grading cross sections, mitigation area, etc.), and copies of the wetlands permit application submitted to the USACE and CDFG. Coordinate with RWQCB staff following the submission of the application, including attending meetings and providing as needed correspondence during the permit processing period.
- Section 1602 Streambed Alteration Agreement – Prepare and submit to the CDFG an application for a Section 1602 Streambed Alteration Agreement. The application will include a project description, a statement of purpose and need, an impacts analysis, a discussion of avoidance and minimization of impacts, the wetland delineation report, a draft mitigation plan, all associated figures (vicinity maps, project site map, construction/grading cross-

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sections, mitigation area, etc.) and copies of the wetland permit applications submitted to the RWQCB and USACE. Contractor shall coordinate with RWQCB staff following the submission of the application, including attending meetings and providing as needed correspondence during the permit processing period.

Deliverables: Environmental permits as applicable to the project.

***Task 8 – Construction Contracting***

- Project Advertising and Bidding – Assemble bid packages, advertise Notice Inviting Bids, review Requests for Information (RFIs), prepare and release Addenda, conduct Pre-Construction Conference, conduct Bid Opening, review and tabulate Bids, evaluate responsiveness of bids, award contract.

Deliverables: Advertisement for bids, pre-bid contractors meeting, evaluation of bids, award contract.

***Task 9 – Construction***

- Mobilization – Initiate all construction mobilization necessary to begin project; secure all permits, order all materials, establish temporary staging and work areas.
- Pollution Control – Implement and maintain all required NPDES measures, prepare and implement SWPPP, install and maintain BMPs, ensure compliance with all applicable state and federal laws.
- Construction – Reconstruct and repair Tahquitz Creek Levee as necessary to meet FEMA requirements; perform necessary levee stabilization work. Complete all work in accordance with approved plans and specifications.
- Performance Testing/Demobilization – Review all work for consistency with approved plans and specifications; perform Quality Assurance / Quality Conformance with required specifications.

***Task 10 – Environmental Compliance/Mitigation/Enhancement***

- Implement all required mitigation measures from CEQA environmental document (as applicable to the project); monitor compliance with mitigation measures; review environment permit requirements, implement and maintain all project records.

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***Task 11 – Construction Administration***

- Baseline Schedule – Review the baseline CPM schedule submitted by the Contractor and work closely with the Contractor until it is acceptable. Review monthly Baseline Schedule updates and verify accuracy.
- Daily Inspection and Diaries – Perform daily inspection of all Contractors' activities (as needed). All information shall be recorded on a daily diary form. This information will include but not be limited to job stamp, date, weather, item of work performed, hours of work performed, measurement of items installed, workers names and classifications, equipment numbers, subcontractor's personnel, conversations, conflicts and resolutions, and non-compliance (if necessary).
- Submittal Review – Receive, stamp with date received, and track all Contractors', subcontractors', and independent party submittals. A log will be set up identifying submittal name, responsible party, review party and whether date was met.
- Labor Compliance/Equal Employment Opportunity – Enforce the contract requirements as they pertain to Labor Compliance, Equal Employment Opportunity, Prevailing Wage, and Disadvantaged Business Enterprise according to established Procedures. This shall include preparing daily diaries (as needed) and recording workers names, classifications, work performed and hours worked on each task; receiving Contractors', Subcontractors', and equipment rental companies' certified payrolls on a weekly basis; and tracking work performed by DBE Subcontractors, hours of work performed and monthly progress payments that include work by DBE Subcontractors.
- Storm Water Pollution Prevention Plan (SWPPP) Compliance – Inspect the project site and monitor Contractor's compliance with Best Management Practices (BMP's) in accordance with Caltrans Storm Water Quality Handbooks. Monitor the weather forecast during the storm season and ensure Contractor's compliance for pre-storm, storm event, and post storm requirements. Proper handling and storage of non-visible pollutants shall be enforced.
- Request For Information (RFI) – Receive, record, review, and respond to all Contractor's Request For Information. Response times will be determined and adhered to.
- Change Requests/Contract Change Orders (CCO)/Transmittal Letters – Receive, record, and review all Contractors' Requests for Changes. All requests will be reviewed for merit. If change is warranted, prepare Contract Change Order and Transmittal Letter according to Caltrans Contract Change Order Manual. Receive agency approval prior to submittal to Contractor. Track all extra work on separate daily diaries. Monthly progress payments shall reflect all CCO worked performed in the previous month.
- Coordinate Materials Testing and Inspection/Surveying Services – Coordinate and monitor all materials testing services and construction surveying. Perform quality assurance

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surveying as needed. Materials testing reports will be reviewed and maintained in the project files.

- Ensure Compliance to Safety Regulations, Building Codes, City Ordinances – Verify Contractor’s compliance to applicable Construction Safety Orders. Violations will be recorded and Contractor shall be requested to correct unsafe condition. A safety diary shall be written for each violation and maintained in the Construction Files. In appropriate situations the project shall be shut down until Contractor corrects safety violation(s).
- Track Construction Quantities Daily/Weekly/Monthly – Track construction quantities during each operation of work and record the amount and type of material placed. Certificates of Compliance or Release Tags shall be received for material used in construction to justify payment.
- Prepare Monthly Progress Estimates – Prepare Monthly Progress Estimates to summarize payment to the Contractor for work performed. Resident Engineer and Inspector shall prepare supporting documents for each item of work to be paid. These documents shall include at a minimum, item to be paid, amount of item to be paid, calculation of material placed, Certificates of Compliance or Release Tags, name of individual creating document, name of individual verifying document, and date. A comprehensive Monthly Progress Estimate shall be submitted to the City for review, approval, and processing. Monthly Progress Estimates shall include Contract Change Order Work.
- Monitor Construction Costs – Track construction costs on a monthly basis. Excel spreadsheets shall be created to monitor payment on each item of work. Spreadsheets shall be updated on a monthly basis. Contingency balance will be monitored and updated after each CCO or after each Monthly Progress Estimate.
- Notice of Potential Claims (NOPC)/Claims Resolution – Review any Notice of Potential Claims submitted by the Contractor for merit and conformance to the requirements in the Special Provisions. Follow the guidelines and procedures established by the City and the Caltrans Construction Manual in responding to, resolving, and fighting protests, potential claims, and claims. Proper documentation will be created to establish a chain of events in the claims process.
- Create and Ensure Compliance to Punchlists – Create punchlists throughout the construction process after each item of work is complete. Punchlists shall include items that need to be corrected or amended. Meet with Contractor’s personnel regularly to monitor completion of punchlist items. Completion of punchlist items shall be a topic at the Weekly Construction Progress Meetings.