



GAIL FARBER, Director

**COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS**

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331

<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

March 29, 2016

The Honorable Board of Supervisors
County of Los Angeles
383 Kenneth Hahn Hall of Administration
500 West Temple Street
Los Angeles, California 90012

Dear Supervisors:

ADOPTED

BOARD OF SUPERVISORS
COUNTY OF LOS ANGELES

34 March 29, 2016

LORI GLASGOW
EXECUTIVE OFFICER

**INTEGRATED COUNTYWIDE STORMWATER
FLOW NETWORK
ACCEPT GRANT FUNDING
FROM THE U.S. GEOLOGICAL SURVEY
(ALL SUPERVISORIAL DISTRICTS)
(3 VOTES)**

SUBJECT

This action is to accept grant funding from the U.S. Geological Survey for the integration of the Los Angeles County Stormwater Drainage Network into the National Hydrography Dataset project.

IT IS RECOMMENDED THAT THE BOARD:

1. Accept a \$50,000 matching grant fund from the U.S. Geological Survey Non-Competitive Assistance Grant Program to assist in funding the integrated Countywide stormwater flow network for Federal Fiscal Year 2015-16 (October 1, 2015, through September 30, 2016).
2. Authorize the Director of Public Works or her designee to collaborate with the U.S. Geological Survey on any and all matters related to this grant, including executing a cooperative grant agreement and signing requests for reimbursement for and on behalf of the Board.
3. Authorize the Director of Public Works or her designee to approve and execute renewals and amendments, if necessary, to this grant, including extensions of time, termination of the grant, minor changes in project scope, and alterations in the project budget or grant amount within the amount of the Director's delegated authority, subject to the approval of such documents by County Counsel.

PURPOSE/JUSTIFICATION OF RECOMMENDED ACTION

The estimated cost of the Countywide stormwater flow network project is \$100,000. Execution of the funding agreement with the U.S. Geological Survey will result in the U.S. Geological Survey funding \$50,000 of the project costs in Federal Fiscal Year 2015-16.

Implementation of Strategic Plan Goals

The Countywide Strategic Plan directs the provision of Operational Effectiveness/Fiscal Sustainability (Goal 1) by utilizing a collaborative effort to implement projects and actively seeking external funding sources.

FISCAL IMPACT/FINANCING

There will be no impact to the County General Fund.

The anticipated cost of the project is \$100,000, and it is estimated to be completed in Federal Fiscal Year 2015-16. Financing for this project is included in the County Fiscal Years 2015-16 and 2016-17 Flood Fund Budgets. The funding from the U.S. Geological Survey for this project will be used to reimburse the Los Angeles County Flood Control District up to \$50,000 in Federal Fiscal Year 2015-16.

FACTS AND PROVISIONS/LEGAL REQUIREMENTS

The enclosed grant agreement has been reviewed and approved by County Counsel as to form. The grant agreement will be executed upon the Board's approval.

ENVIRONMENTAL DOCUMENTATION

In accordance with Section 15378(b), subsections (4) and (5), of the California Environmental Quality Act Guidelines, the proposed action does not constitute a project and, therefore, is not subject to the requirements of the California Environmental Quality Act. This exception provides for the authorization to accept a grant, since it is a fiscal activity and does not involve any commitment to any specific project that may have a potentially significant impact on the environment.

IMPACT ON CURRENT SERVICES (OR PROJECTS)

The recommended actions will have no impact on other County services or projects.

CONCLUSION

Please return two adopted copies of this letter to the Department of Public Works, Survey/Mapping & Property Management Division.

Respectfully submitted,

A handwritten signature in cursive script that reads "Gail Farber".

GAIL FARBBER
Director

GF:SGS:ds

Enclosures

c: Auditor-Controller (Accounting Division–Asset
Management)
Chief Executive Office (Rochelle Goff)
County Counsel
Executive Office

Grant and Cooperative Agreement

CHOOSE ONE:

- COOPERATIVE AGREEMENT
 GRANT

CHOOSE ONE: EDUCATION FACILITIES RESEARCH SDCR TRAINING

1. GRANT/COOPERATIVE AGREEMENT NUMBER G15AC00527		2. SUPPLEMENT NUMBER		3. EFFECTIVE DATE 10/01/2015		4. COMPLETION DATE 09/30/2016	
5. ISSUED TO NAME/ADDRESS OF RECIPIENT (No., Street, City/County, State, Zip) LOS ANGELES, COUNTY OF Attn: Thierno Diallo 900 S FREEMONT AVE ALHAMBRA CA 91803-1331				6. ISSUED BY USGS NATIONAL GRANTS BRANCH Mailing Address: 205 NATIONAL CENTER 12201 SUNRISE VALLEY DRIVE RESTON VA 20192			
7. TAXPAYER IDENTIFICATION NO. (TIN)				9. PRINCIPAL INVESTIGATOR/ORGANIZATION'S PROJECT OR PROGRAM MGR. (Name & Phone) Marianne Jeffers 626-458-7113			
8. COMMERCIAL & GOVERNMENT ENTITY (CAGE) NO.							
10. RESEARCH, PROJECT OR PROGRAM TITLE Integration of Portions of the Los Angeles County Department of Public Works Stormwater Drainage Network into the National Hydrologic Dataset							
11. PURPOSE New Cooperative Agreement							
12. PERIOD OF PERFORMANCE (Approximately) 10/01/2015 through 09/30/2016							
13A.		AWARD HISTORY		13B.		FUNDING HISTORY	
PREVIOUS		\$0.00		PREVIOUS		\$0.00	
THIS ACTION		\$50,000.00		THIS ACTION		\$50,000.00	
CASH SHARE		\$0.00		TOTAL		\$50,000.00	
NON-CASH SHARE		\$0.00					
RECIPIENT SHARE		\$0.00					
TOTAL		\$50,000.00					
14. ACCOUNTING AND APPROPRIATION DATA							
PURCHASE REQUEST NO.		JOB ORDER NO.		AMOUNT		STATUS	
0020075558							
15. POINTS OF CONTACT							
	NAME		MAIL STOP	TELEPHONE		E-MAIL ADDRESS	
TECHNICAL OFFICER	Drew Decker			619-225-6430		ddecke@usgs.gov	
NEGOTIATOR							
ADMINISTRATOR	Desiree Santa			703-648-7382		dsanta@usgs.gov	
PAYMENTS							
16. THIS AWARD IS MADE UNDER THE AUTHORITY OF: 43 USC 36d CFDA: 15.808							
17. APPLICABLE STATEMENT(S), IF CHECKED: <input type="checkbox"/> NO CHANGE IS MADE TO EXISTING PROVISIONS <input type="checkbox"/> FDP TERMS AND CONDITIONS AND THE AGENCY-SPECIFIC REQUIREMENTS APPLY TO THIS GRANT				18. APPLICABLE ENCLOSURE(S), IF CHECKED: <input type="checkbox"/> PROVISIONS <input type="checkbox"/> SPECIAL CONDITIONS <input type="checkbox"/> REQUIRED PUBLICATIONS AND REPORTS			
UNITED STATES OF AMERICA				COOPERATIVE AGREEMENT RECIPIENT			
CONTRACTING/GRANT OFFICER Sherri Bredesen		DATE 09/23/2015		AUTHORIZED REPRESENTATIVE		DATE	

Grant and Cooperative Agreement

ITEM NO. (A)	ITEM OR SERVICE (Include Specifications and Special Instructions) (B)	QUANTITY (C)	UNIT (D)	ESTIMATED COST	
				UNIT PRICE (E)	AMOUNT (F)
00010	<p>CFDA Number: 15.808 DUNS Number: 625211490</p> <p>USGS Project Officer: Drew Decker National Map Liaison U.S. Geological Survey 4165 Spruance Road San Diego, CA 92101 619-225-6430 ddecker@usgs.gov</p> <p>Principal Investigator: Marianne Jeffers Survey Mapping Manager Los Angeles County Department of Public Works 900 S. Fremont Avenue Alhambra, CA 91803 626-458-7113 mjeffers@dpw.lacounty.gov Delivery: 09/30/2016 Delivery Location Code: 0006366931 USGS NGTOC MS 306 1400 Independence Road Rolla MO 65401 US</p> <p>Account Assignment: K G/L Account: 6100.411C0 Business Area: G000 Commitment Item: 411C00 Cost Center: GGHIEF0000 Functional Area: GE0300000.460000 Fund: 156G0804MD Fund Center: GGHIEF0000 Project/WBS: GX.15.EF00.MCP00.00 PR Acct Assign Line: 01 Period of Performance: 10/01/2015 to 09/30/2016</p> <p>Basic award funding Continued ...</p>				50,000.00

Grant and Cooperative Agreement

ITEM NO. (A)	ITEM OR SERVICE (Include Specifications and Special Instructions) (B)	QUANTITY (C)	UNIT (D)	ESTIMATED COST	
				UNIT PRICE (E)	AMOUNT (F)
	<p>Obligated Amount: \$50,000.00</p> <p>Issuing Office: U.S. Geological Survey Office of Acquisition and Grants 12201 Sunrise Valley Drive, MS 205 Reston, VA 20192 Desiree Santa Voice: (703) 648-7382 Fax: (703) 648-7901 E-mail: dsanta@usgs.gov</p> <p>Budget Period: 10/1/2015 through 9/30/2016 Total Project Period: 10/1/2015 through 9/30/2016</p> <p>See Terms and Conditions for Final Technical Report Due Date.</p> <p>The total amount of award: \$50,000.00. The obligation for this award is \$50,000.00.</p>				

PROJECT NARRATIVES

Cooperative Agreement between the U.S. Geological Survey (USGS) and the County of Los Angeles Department of Public Works (Public Works) for Integration of portions of the Stormwater Drainage Network (SDN) into the National Hydrography Dataset

PURPOSE

This cooperative agreement is undertaken to prepare, import, and integrate the major underground stormwater network features (gravity mains) within the County of Los Angeles (County) into the National Hydrography Dataset (NHD) network.

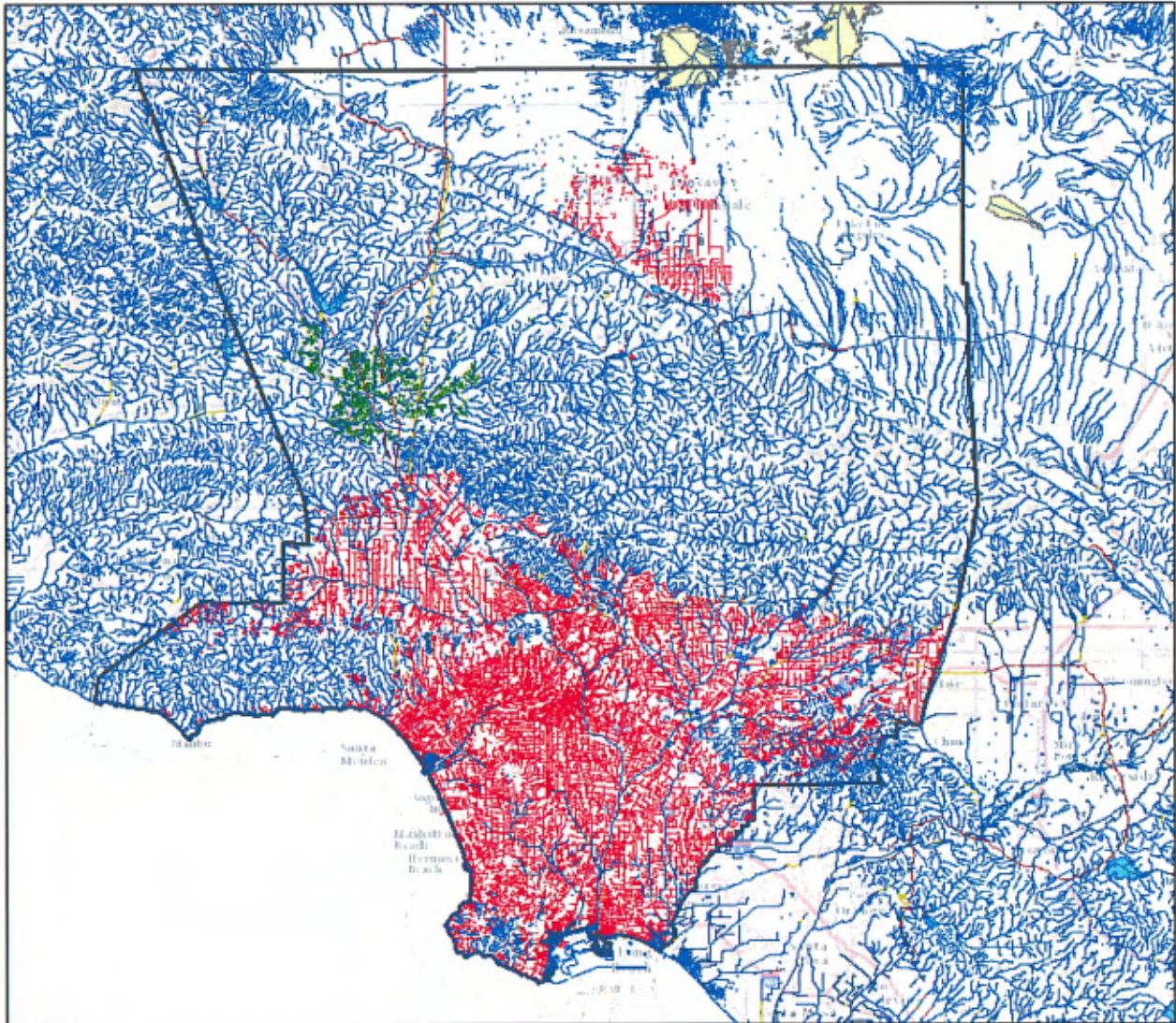
The project will build a comprehensive principal stormwater network by connecting the natural drainage channels currently in NHD with the underground pipe network within County urban areas discharging surface runoff to the ocean. Adding the SDN gravity main features to NHD would fill in much of the "urban desert" now shown in NHD, especially at a 1:24,000-scale.

The project will also improve USGS' NHD database by adding a very substantial and detailed drainage urban network, serve as both a test and as research into the further inclusion of other storm drain features in NHD across the country, and provide maintenance for NHD within the County. Future phases include incorporating stormwater features into NHD, along with additional research to fully integrate the two datasets. These future phases would depend on the goals of USGS and address stormwater drainage in urban areas in the long term.

PROJECT AREA

The project area includes urbanized regions of the County where existing SDN gravity main pipes are located. The illustration below shows the two independent storm drain networks: the NHD network in blue and the SDN gravity main features in red. Additionally, the illustration also shows green SDN gravity mains that were imported into a training NHD database in preparation for the integration of the two datasets.

Public Works is responsible for public infrastructure and municipal services for over ten million residents in the County, including the design, construction, operation, maintenance, and repair of roads, bridges, airports, sewers, water supply, flood control, water quality, and water conservation facilities and the design and construction of capital projects. Public Works maintains a database of stormwater features with data contributed by numerous municipal and special districts, municipalities, and local governments within the County. The SDN database is continually expanding as more stormwater systems are added to the network.



PROJECT DESCRIPTION

The project is a continuation of incorporating portions of the SDN into the high resolution NHD database. The project goal is to incorporate all appropriate SDN elements into the NHD.

This new phase of the project will allow USGS to complete the uploading of gravity mains into the NHD over the entire County area. During this phase, the Public Works team will analyze the SDN's gravity mains and perform the following:

1. Remove all gaps, overlaps, and dangling segments.
2. Eliminate segments less than two meters in length as the NHD's schema does not allow the import/upload of these short segments.
3. Ensure accuracy in the flow directions.
4. Ensure the gravity mains network has proper connectivity.

These operations are expected to affect at least 1,350 line segments although the number may reach several thousand.

PROJECT DELIVERABLES

All 8-digit hydrologic unit code (HUC8) subbasins within the County intersecting the SDN will receive new pipeline data based on the SDN gravity main features. Gravity mains are the principal underground pipeline feature for transporting stormwater. Gravity mains connect smaller collector lines (known as laterals, which connect curbside catch basins to the gravity mains) to settling basins, natural drainage, or a final outflow from SDN. Approximately 185,000 gravity main line segments are within the SDN. These features range from 0.3 feet to 16,000 feet in length, with a mean segment length of 139 feet. Many very short gravity main lengths are the result of line errors along with numerous features less than two meters in length requiring some resolution.

HUC8 subbasins affected by the addition of the gravity mains are 18070102, 18070104, 18070105, 18070106, 18070203, and 18090206. Gravity mains will be imported as fcode 42823 (NHDFlowline >>Pipeline >> Stormwater >> Underground). Public Works will also present the results of their database changes to the SDN and the importation of the gravity main features into the NHD to the NHD Advisory Team.

PROJECT TIMELINE

The project would begin in fall 2015 and be completed in summer 2016. The agreement covers one year to allow flexibility for the various tasks.

USE AND DISTRIBUTION RIGHTS

All deliverable data and documentation will be free from restrictions regarding use and distribution. Data and documentation provided under this agreement shall be freely distributable by government agencies. Input data from both USGS and Public Works are already available for public access.

BUDGET

The National Geospatial Program's (NGP's) dollar amount awarded is \$50,000.

Public Works matches the NGP funds with an equal amount of \$50,000. Total funds are sufficient to pay equivalent to one full-time equivalent (FTE) for one year to work on the database updates. It is anticipated the project will require a team of three employees during an 8- to 12-month period beginning in fall 2015. The NGP grant would be applied to Public Works' labor costs.

USGS NGP SUPPORT

The project will require assistance from NGP in several areas. The project's elements focus on (1) ingesting a large number of hydrographic features, (2) incorporating elements from an engineering-oriented geodatabase, and (3) building in underground connectivity and flow that is rarely done in NHD. This project would require periodic assistance from the NHD Point of Contact (POC) including:

1. Consultation on network issues. Discussion between the POC and Public Works on addressing situations encountered in cleaning up the gravity main network. Network maintenance correcting basic network errors such as gaps, slivers, and overlaps can be addressed by Public Works. Questions arising from line segments under two meters and rectifying certain cases may require assistance from the POC.
2. Connectivity. As the gravity main elements become better connected, Public Works will coordinate with the POC for connecting this network to the NHD. Workflows will include trial fits of the data to determine where the gravity mains touch the NHD and managing gaps (such as using connectors).
3. Common elements. There are some hydro features common to both the NHD and the SDN such as open channels. Decisions have to be made as to which to use and consultation would be needed.
4. Importing the gravity main features. The primary task for the POC would be to import the new features into the NHD database. This would import the gravity mains together and turning them into NHD features (tying them to the NHD model, assigning a common fcode, etc.). No conflation would be needed because the features have no NHD equivalents and would be filling in a blank space in NHD. However, the processing time and attention needed to the process would be significant.
5. Public Works will assist with post import cleanup once the gravity mains become NHD features. The POC would need to provide a two-day online training session on the NHD update toolbar for Public Works.