

Public Works

Drainage

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Purpose

The purpose of this presentation is to provide the Council with an update of drainage projects from **January 2020 to present**.

We have completed 29 projects, 13 under construction, and 19 in design for a total value of \$106,375,000 (est.).

We will provide details of each subject projects. Furthermore, we will provide a status of on-going maintenance activities.

Background

- LCG uses service requests, historical problem areas, and zones with numerous developments to prioritize areas for project identification.
- During this period:
 - Managed more than 2,000 service requests per year
 - Analyzed hydraulics of more than 90 locations for possible detention
 - Reviewed and considered more than 200 new developments each year

Regional Coordination



- Mayors Meeting monthly meetings with area Mayors
- Parish-wide Stormwater Management meeting bi-monthly meeting for Mayors, PW Directors, City Engineers, Drainage Staff, DOTD, APC, Teche-Vermilion Freshwater District, UL, Floodplain Managers
- Meetings include discussion and coordination of projects, concerns, funding and other related information

Model Development

- Update FEMA model for Coulee Mine Branch effective May 13, 2022
- Region 5 LWI watershed models are in design
- Cumulative Dynamic Model (CDM) is updated at the completion of a project,
 and replicates the impacts on a regional area
- Project-specific (individual) models are used to design projects when CDM is not feasible
- LWI, APC & LCG are installing a gauge network

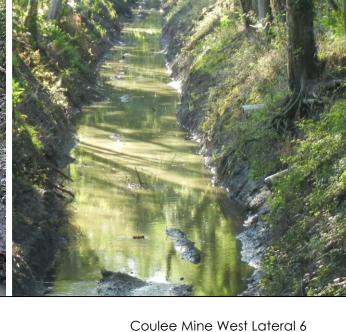
Completed Maintenance Projects

Maintenance of Drainage Systems #6-15



- Regional
- Removing debris & siltation from 23 channels
- Totaling 130,769 linear feet
- Cost: \$3,520,000





Channels Included:

Bayou Carencro Lateral 6 Coulee Mine West Queue de Tortue Lateral 6 Edith Coulee Lateral 3 Ile Des Cannes Lateral 8C Bayou Lasalle A Lateral 1 Bayou Lasalle B Coulee Ile des Cannes Lateral 17 Edith Coulee
Indian Bayou Lateral 7
Coulee Ile Des Cannes
Coulee des Poches
Coulee Ile Des Cannes Lateral 10
Bayou Carencro Lateral 8A
Coulee Ile Des Cannes Lateral 13
Coulee Ile Des Cannes Lateral 19c

Coulee Mine West Lateral 6
Darby Coulee
Bayou Lasalle B
Bayou Parc Perdue Lateral 1 (upper)
Coulee Granges Lateral 1 A
Indian Bayou
Durke Road Outfall

Vermilion Emer. Debris/Subsurface Removal



- Regional
- Removing debris, vegetation & siltation in navigable areas

• Cost: \$750,000





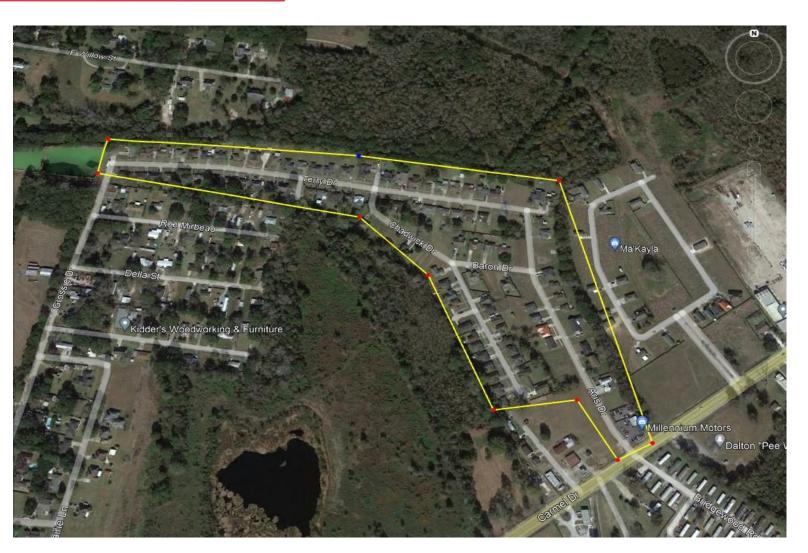


Derby Heights Drainage Improvements



- Local
- Driveway culverts/regrade ditches

• Cost: \$245,000

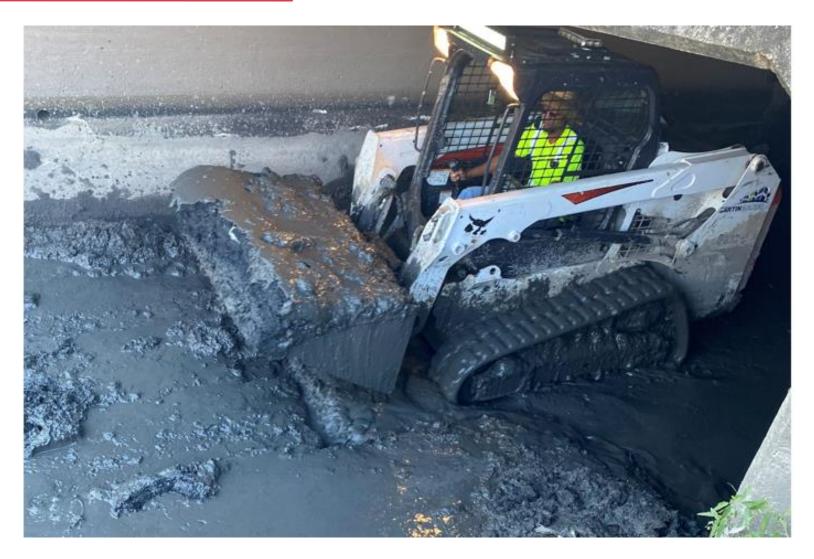


Coulee lle Des Cannes, Lat 7 – Curran/Dulles



- Local
- Remove debris/blockages & regrade channel

• Cost: \$440,000



Completed Detention Projects

Middlebrook Detention Pond



- Regional
- Flood risk reduction to Isaac Verot Coulee L7 drainage basin via detention pond

• Cost: \$617,000



Camellia Blvd Ponds Renovations



- Regional
- Flood risk reduction to Isaac Verot Coulee L7 drainage basin via increasing detention ponds volume

• Cost: \$210,000



Musique Road Detention



- Regional
- Flood risk reduction in Beau Bassin Coulee drainage basin via detention pond

• Cost: \$28,500



PW Stormwater Retrofit Demo Prj (Admin Bldg)



- Local
- Stormwater retrofit demonstration project to enhance water quality

• Cost: \$49,000





Acadiana Park Flood Control Imp, Phase I



- Regional
- Flap gates on existing culverts into Dan Debaillion preventing backflow within the floodplain

• Cost: \$55,000

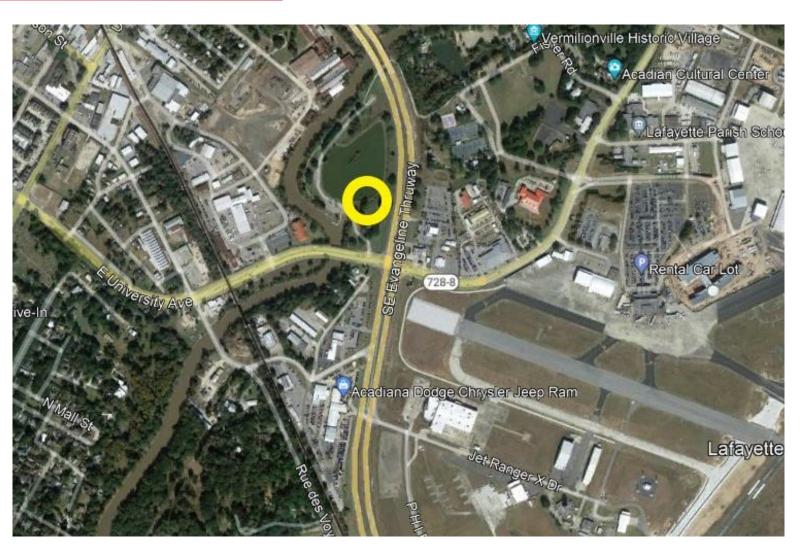


Heymann Park/Spreafico Lake Flood Control



- Local
- Flood risk reduction to Bayou Vermilion drainage basin via detention pond

• Cost: \$35,000



Completed Conveyance Projects

Coulee lle Des Cannes Drainage Improvements (Fenetre to Old Spanish Trail – Gustav/Ike Grant)



- Regional
- Reshape channel to increase volume & reduce water surface elevation

• Cost: \$4,250,000



North Williams Drive Drainage Imp-CDBG



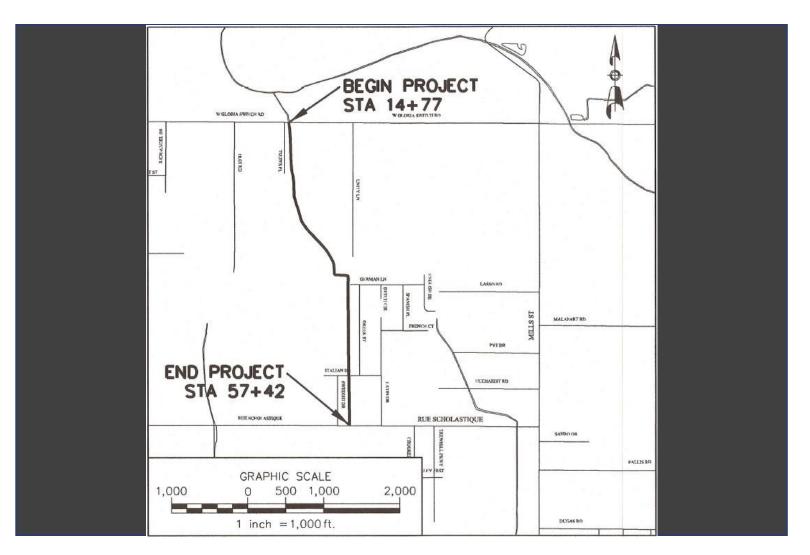
- Local
- Replace culverts/ regrade ditches
- Cost: \$186,000



Bayou Carencro L8-C Drainage Imp-CDBG



- Local
- Increase pipe system & regrade channel
- Cost: \$175,000



2021 Emergency Project – Add Inlet Capacity



- Local
 - Arlette
 - Billie Lou @ Domas
 - 300 Blk Beverly
 - 800 Blk Brentwood

• Cost: \$396,000









2021 Emergency Prj – Stonehenge at Kings



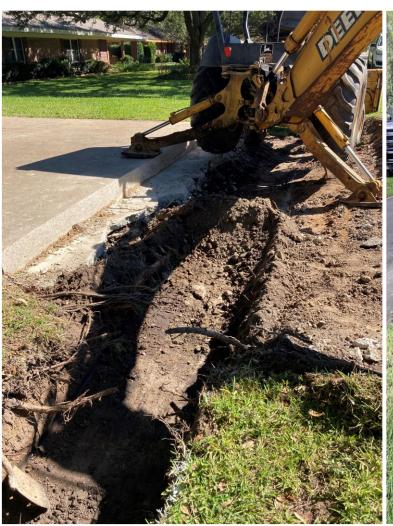
- Local
- Add inlets & outfall
- Cost: \$166,000



2021 Emergency Prj – 300 Blk Brentwood Blvd



- Local
- Increase pipe capacity
- Cost: \$130,000





2021 Emergency Prj Winnipeg Ave Drainage Imp



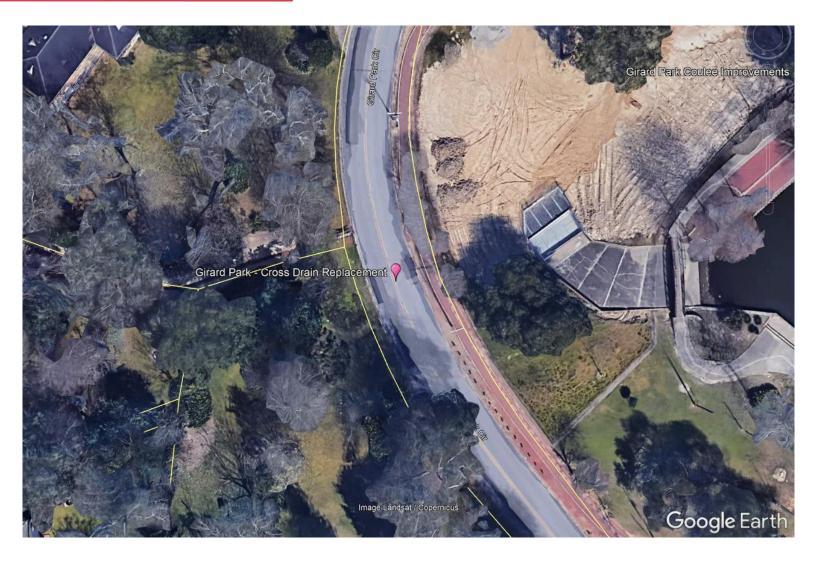
- Local
- Add catch basins along roadway
- Cost: \$275,000



Girard Park Dr. Emer. X Drain Replacement



- Local
- Improve drainage via replacement of collapsed cross drain
- Cost: \$486,000



Sunbeam Coulee, Ph II-A (Bruson-Cameron)



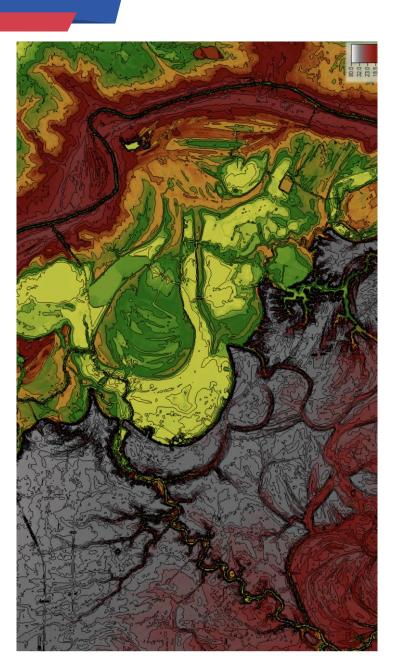
- Local
- Increase channel capacity & efficiency
- Cost: \$1,972,000



Bayou Vermilion Spoil Bank Removal



- Regional
- Remove some of the spoil bank to allow more efficient transfer of flow in and out of Cypress Island Swamp
- Cost: \$3,600,000



Under Construction Maintenance Projects

Maintenance of Drainage Systems Contract #16



- Regional
- Removing debris & siltation from 5 channels
- Cost: \$628,000
- Totaling 17,546 linear feet



Derby Heights Floodwall-CDBG



- Local
- Reduce residential flood risk via floodwall
- Cost: \$997,000



Under Construction Detention Projects

Bayou Vermilion Flood Control (Homewood)



- Regional
- Flood risk reduction to Bayou Vermilion & Coulee Ile Des Cannes drainage basins via 100+ acres of detention ponds
- Cost: \$27,000,000





Bayou Vermilion Flood Control (CIDC)



- Regional
- Flood risk reduction to Coulee Ile des Cannes & Bayou Vermilion drainage basins via 90 acres of detention ponds

• Cost: \$11,000,000



Bayou Vermilion Flood Control (Chappuis) PI/II



Regional

 Detention pond along Bayou Vermilion

• Cost: \$890,000



Coulee lle des Cannes L-17 Detention Pond



- Regional
- Detention pond along Coulee lle des Cannes lateral

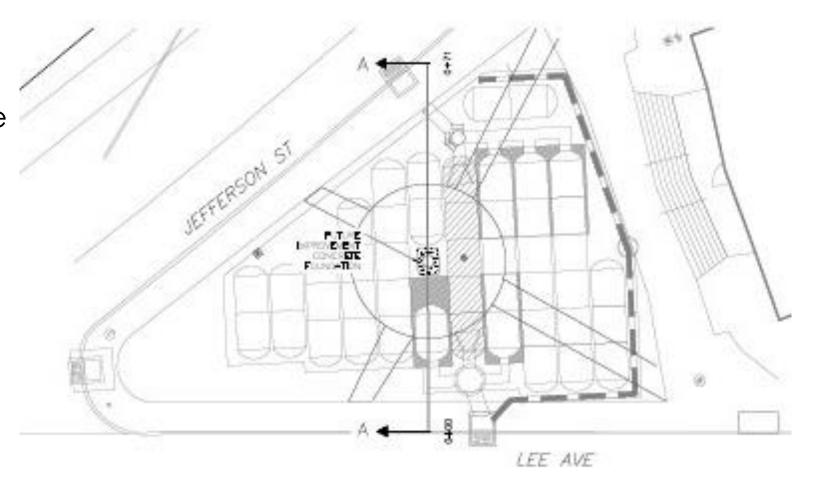
• Cost: \$1,000,000



Downtown Drainage Improvements Phase I



- Local
- Installation of subsurface surge basin
- First of a multi-phase project to address Downtown flooding
- Cost: \$650,000



Under Construction Conveyance Projects

Walker Road Drainage, Phase I (Roadside)



- Local
- Improve drainage via installation of box culverts/concrete vertical wall channel extension
- Extension of project planned with \$1,600,000 from emergency funding

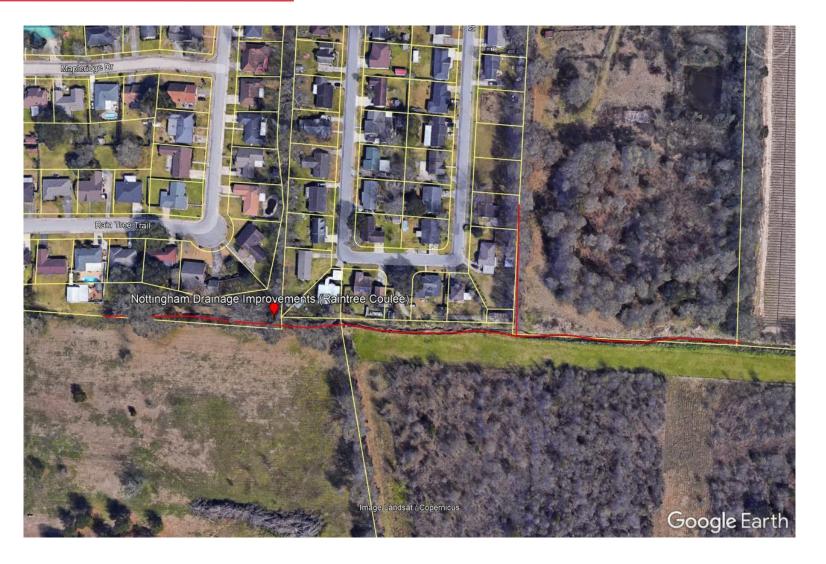
Cost: \$4,400,000



Nottingham Drainage Improvements (Raintree Coulee)



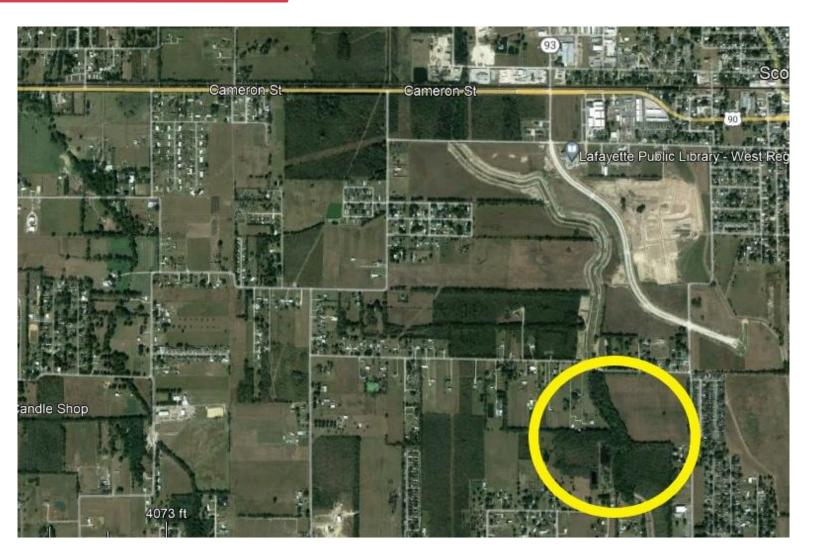
- Local
- Improve channel via subsurface drainage and matting
- Cost: \$1,150,000



Coulee Ile Des Cannes Drainage Improvements (Dulles to Fenetre) (HMGP and State-wide Flood Control Program)



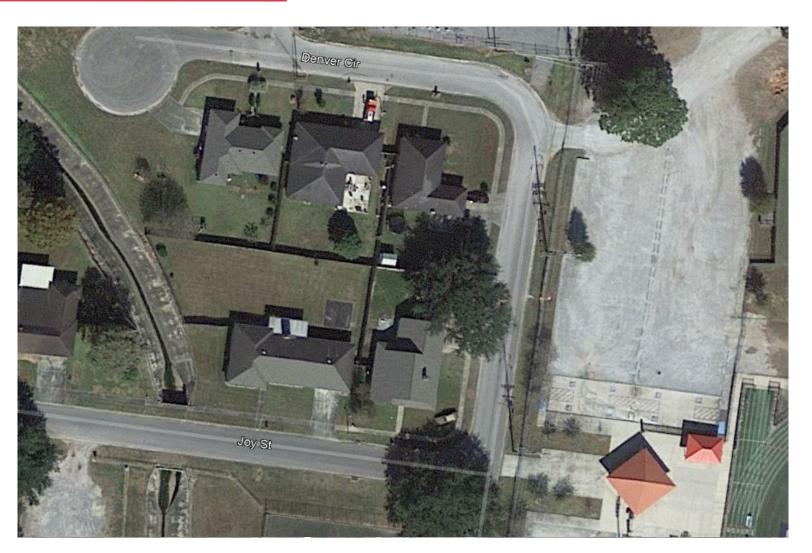
- Regional
- Reshape channel to increase capacity
- Cost: \$3,000,000



2021 Emergency Project – Edna Street



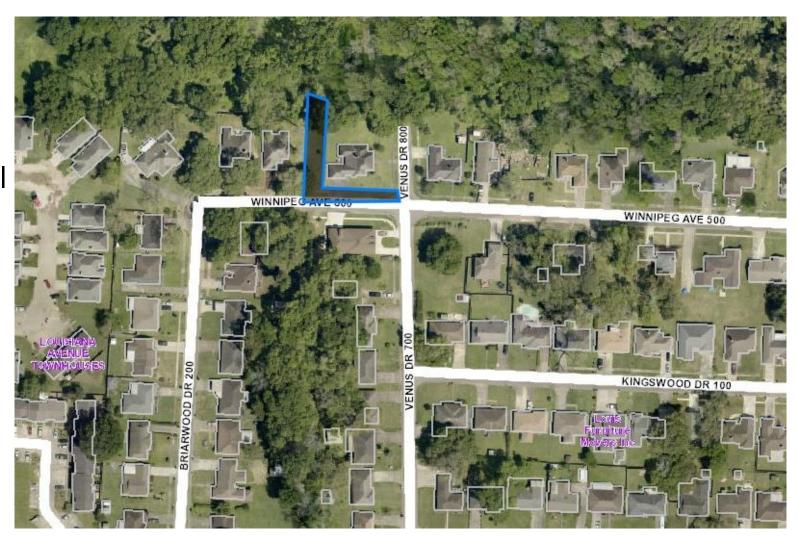
- Local
- Adding inlet capacity
- Cost: \$47,500



2021 Emergency Project - Canadian Heights



- Local
- Improve drainage outfall
- Cost: \$227,000



2021 Emergency Project – Zion Circle



- Local
- Improve drainage outfall
- Cost: \$250,000



Maintenance Projects in Design

Maintenance of Drainage Systems Contract #17



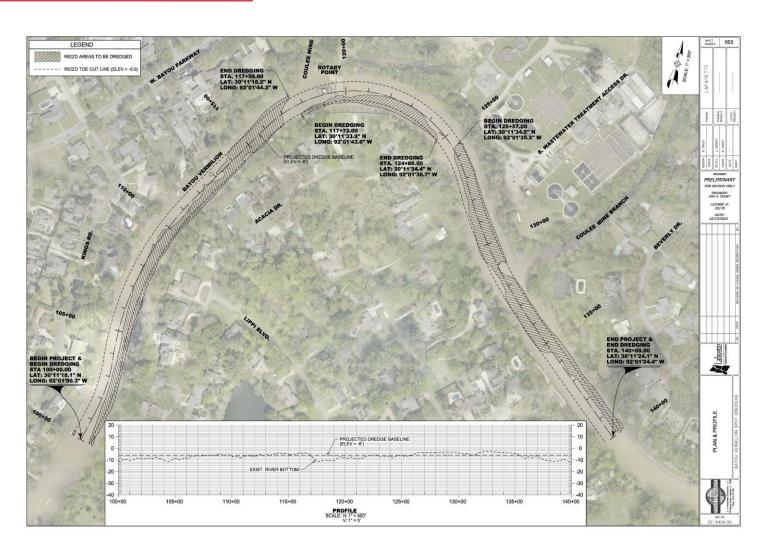
- Regional
- Removing debris & siltation from 7 channels
- Cost: \$1,100,000 (est.)
- Totaling 24,540 linear feet



Bayou Vermilion Spot Dredging



- Regional
- Removing silt & debris from Bayou Vermilion
- Cost: \$1,000,000 (est.)



Detention Projects in Design

Coulee Mine East Flood Control (LWI)



- Regional
- Flood risk reduction to Coulee Mine East via detention ponds
- Cost: \$3,600,000 (est.)



Webb Coulee Detention



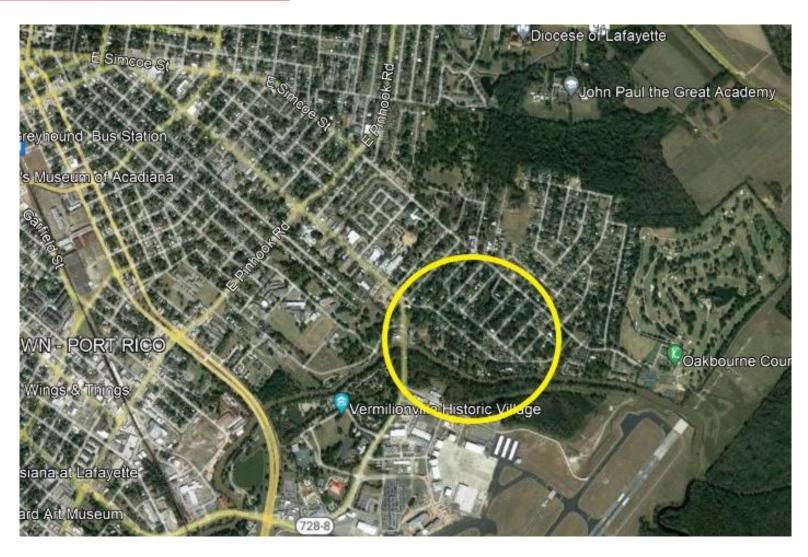
- Regional
- Flood risk reduction to Webb St. & 16th St. Coulees via detention ponds
- Cost: \$2,100,000 (est.)



River Oaks Subdivision Detention Phase 2



- Local
- Flood risk reduction via detention pond
- Cost: \$500,000 (est.)



Acadiana Park Detention, Phase 2



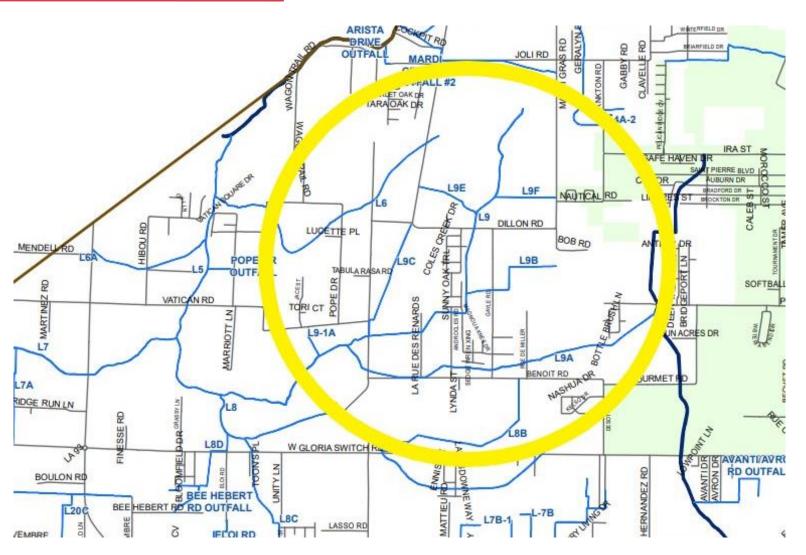
- Regional
- Affect efficiency of stormwater exchange in Vermilion & Dan Deballion drainage basin
- Cost: \$350,000 (est.)



Oak Springs Area Flood Control



- Local/Regional
- Flood risk reduction to Bayou Carencro drainage basin via detention ponds
- Cost: \$7,000,000 (est.)



Lake Farm Road Detention Phase 2



- Regional/Local
- Flood risk reduction to Isaac Verot Coulee L7 drainage basin (Ashland Park, King's Haven, Comeaux HS) by increasing flood storage capacity

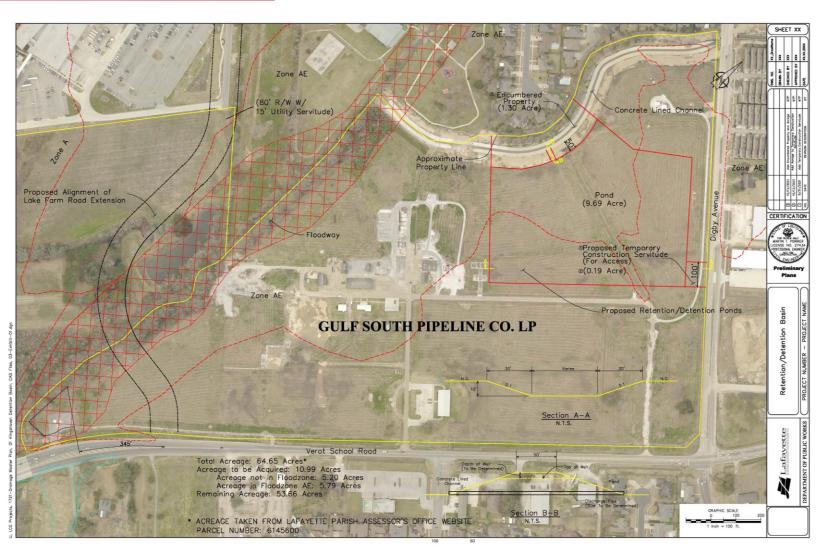
• Cost: \$2,800,000 (est.)



Digby Avenue Retention/Detention Pond



- Regional
- Flood risk reduction to Isaac Verot Coulee L7 drainage basin by increasing flood storage capacity
- Cost: \$2,000,000 (est.)

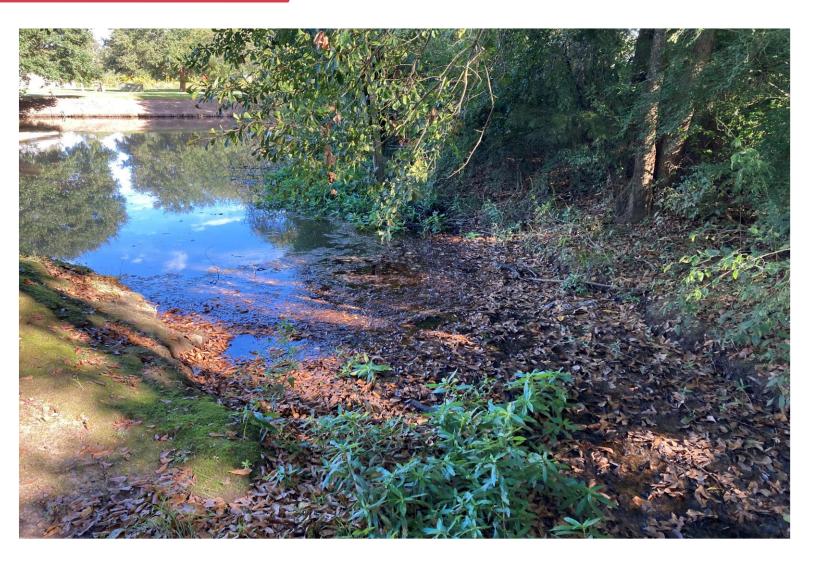


Conveyance Projects in Design

Millcreek Drainage Improvements



- Local
- Improve outfall & pipe system
- Cost: \$1,750,000 (est.)



Peck Villa Subdivision Drainage Improvements



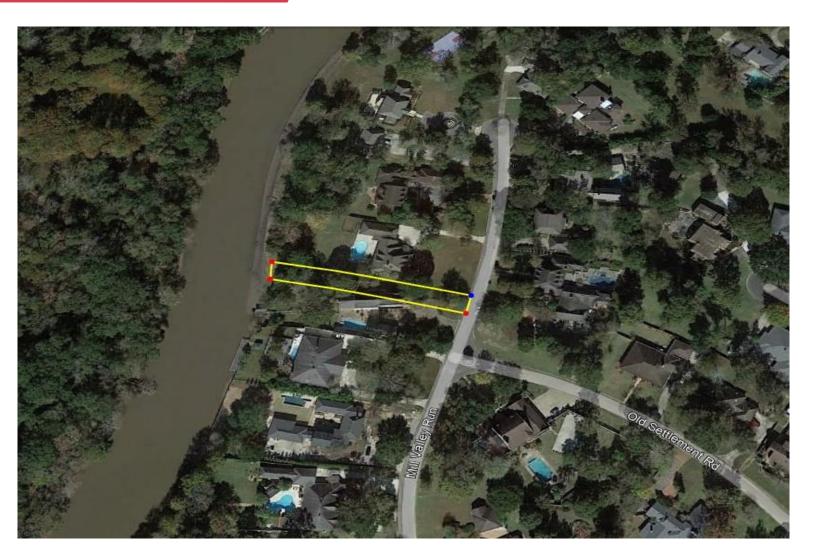
- Local
- Redirect water to alternate outfall via subsurface system
- Cost: \$450,000 (est.)



Mill Valley Run Improvements



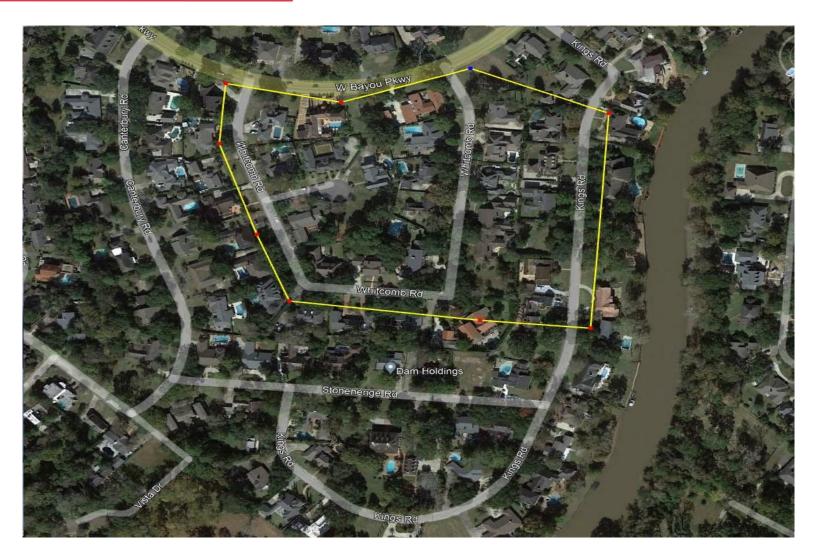
- Local
- Add secondary outfall
- Cost: \$250,000 (est.)



Greenbriar Phase I Drainage Improvements



- Local
- Add inlets and outfall/redirect stormwater
- Cost: \$400,000 (est.)



Timberwood Drainage Improvements



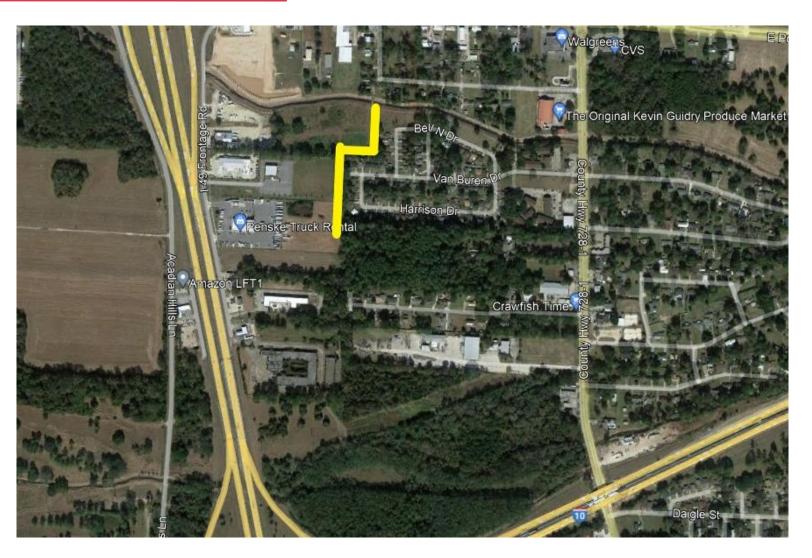
- Local
- Add inlets and outfall/redirect stormwater
- Cost: \$400,000 (est.)



Bell North Heights Drainage Improvements



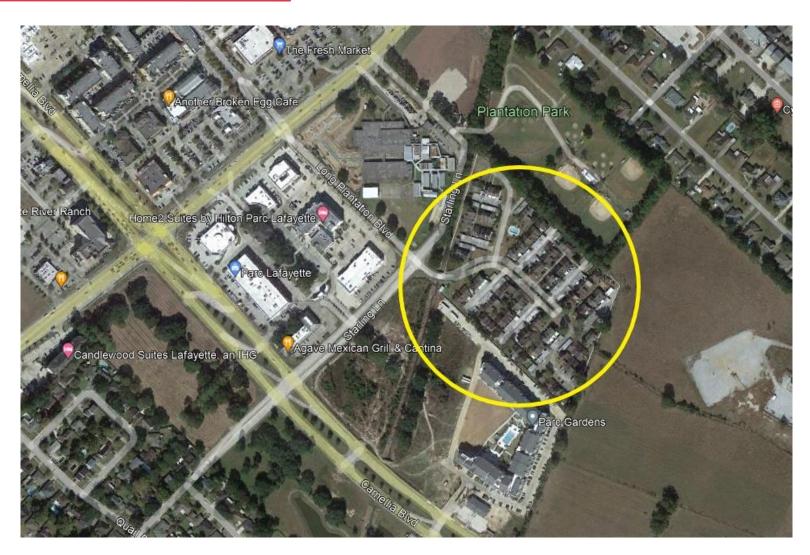
- Local
- Create new outfall for flood risk reduction
- Cost: \$800,000 (est.)



Long Plantation Flood Hazard Mitigation



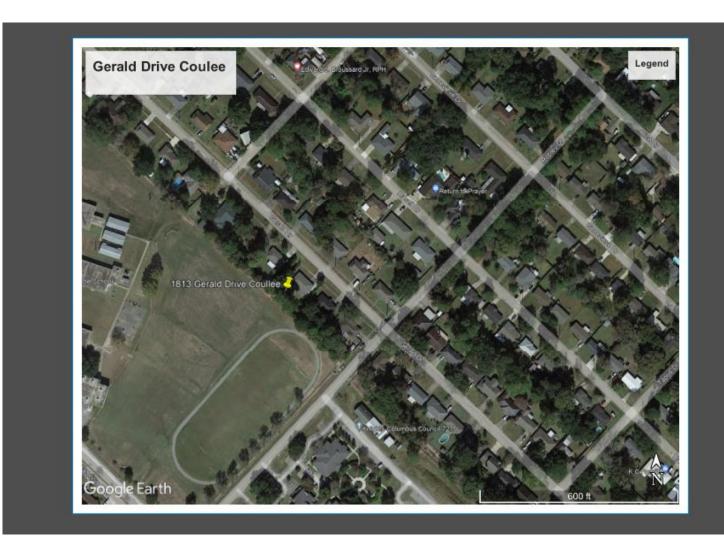
- Local
- Evaluate pump capacity for upgrades
- Cost: \$250,000 (est.)



Gerald Drive Coulee Phase



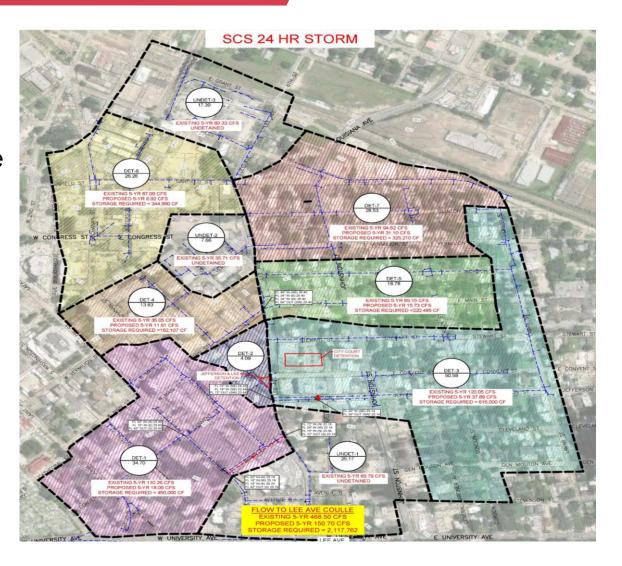
- Local
- Sub-surfacing ditch/lowering cost of maintenance/ increasing conveyance
- Cost: \$500,000 (est.)



Downtown Drainage Improvements Multi-phase



- Local
- Installation of subsurface surge basin
- First of 8-10 phases to address Downtown flooding
- Cost: \$12,000,000 (est.)



Camellia/Verot Sub-Surface System Weir



- Local
- Installation of weir outfall to add detention volume to sub-surface drainage system
- Cost: \$300,000 (est.)



Maintenance

Service Requests via 311

- 2020
 - 1,830 Total service requests
 - 1,624 Closed
- 2021
 - 2,324 Total service requests
 - 1,717 Closed
- 2022 (as of 4/29)
 - 444 Total service requests
 - 231 Closed



Roadside Excavation and Sub-Surface Flushing

LCG Crews:

- 436,450 ft of roadside ditch excavation
- 220,550 ft of culverts flushed
- 5,410 ft of culvert installation
- 4 roadside crews and 4 flusher crews









Roadside Excavation and Sub-Surface Flushing

- Contracted in November 2021
- 79,350 ft of roadside ditch excavation
- 50,700 ft of culverts flushed
- Currently ongoing as part of the Recurring Roadside Maintenance Plan



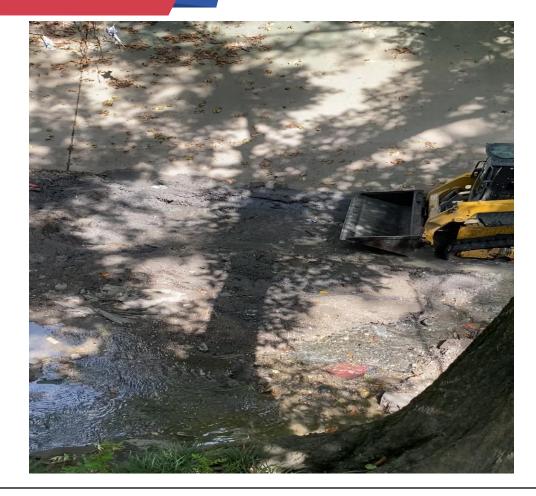


Coulee Maintenance

Concrete Channels

 Removed debris and siltation from 21 channels

• Cost: \$1,155,000



Concrete Coulees
Sixteenth St. Coulee
Webb Coulee
N. University Ave. Coulee
Saint John Coulee
Coulee Mine Branch
Sunbeam Coulee
Bertrand Dr. Coulee No. 3

Crawford St. Coulee Ext. Belle Plaza Coulee No. 2 Arnould Heights Coulee Coulee Mine Belle Plaza Coulee No. 1 Rena Dr. Coulee Grand Ave. Coulee Magnolia Park Coulee Broadmoor Coulee Digby Coulee Lateral 7B Fanny Dr. Outfall Coulee Des Poches Lateral 1 Lozes Ave. Outfall Belle Terre Coulee

Coulee Maintenance

Earthen Channels

- Removed debris & siltation from 19 channels
- Totaling 31,295 ft



Coulee Name

Bristol Dr. Outfall W15 Bayou St. Clair L4/L1B/L1B Kyle St. Outfall W10 Coulee Mine (West) L4 W16 Beau Basin L1 Flanders Garden Outfall Countryview Outfall W2 Anselm Coulee L12 Riverwoods Outfall Durke Rd. Outfall W26 Indian Bayou L7G W5 Coulee lles des Cannes (West) W2 Anselm Coulee L6 W21 Coulee La Salle L2A-1 W6 Isaac Verot L-1 W6 Isaac Verot L-1A W5 Coulee Iles des Cannes L-6

Conclusion



Since January 2020, LCG has completed \$17,585,500 in construction projects.

LCG is currently building \$51,239,500 and designing \$37,550,000 of projects.

The Drainage Dept. has cleaned more than 156 miles of drainage systems.



Questions/Comments