

**Capital Improvement Plan
Fiscal Year 2015-2016 through 2019-2020
Project Description**

I. Requesting Department: Public Works

II. Project Title: Vista Colony Wet Well Installation

III. Project Description:

This requests consists of material purchase, installation and service connection related costs for the installation of a wet well sump that will permit automated operation of the Vista Colony Groundwater Lowering System on Wellfield Rd.

IV. Project Justification: (What need is being met, how does this project address the need?)

This proposal applies to the Vista Colony Groundwater Lowering System as described in the CIP item titled, "Vista Colony Well Pump Replacement."

The existing groundwater lowering system is currently conducted by manual operation through an electrical service panel board sited adjacent to well pumps. Due to this manual operation configuration, staff is required to conduct numerous site visits to turn on/off the system. During wet weather and cold weather periods, it may require up to eight separate site visits during the course of a week to ensure operation of the system, including off hours and weekends. In addition, operation of the system includes monthly water quality testing, as required by NCDENR, which has occurred monthly since the system start-up.

The proposal is to automate system operation through the installation of a wet well and mercury float activated system which will turn on/off the pumps based upon pre-determined groundwater levels. The construction of the wet well will consist of a precast concrete manhole with perforated pipe outlets to permit groundwater to enter the chamber to reflect the existing groundwater elevations. A pressure activated pump controller will relay water levels to the duplex control panel for pump operation. A duplex control panel will serve two pumps each logging pump run hours and alternation of pumps in addition to being expandable for remote telemetry or SCADA functionality.

The system design considers system operating characteristics, water influent quality, cost effectiveness, electrical requirements, availability, expandability, and maintenance and repair considerations.

Budget numbers have been provided to purchase and install the wet well, float tree, three duplex controls panels and establish electrical connections.

V. What Board Goals Does This Project Meet?

- Clean/Green Environment
- Fiscally Responsible
- Livable Neighborhoods
- Supportive Infrastructure
- Choose an item.
- Choose an item.

VI. Project Location: (Attach a map if applicable)

Along Wellfield Rd., directly to the east of the Colony Ridge Nursing Home facility and directly to the west of the Vista Colony West Subdivision

VII. Department Priority: (Choose One) Does the requested project:

- | | | |
|--|---|--|
| a. Correct an unsatisfactory level of service? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |
| b. Maintain a current level of service? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| c. Increase a level of service? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| d. Represent a "vision"? | Yes <input type="checkbox"/> | No <input checked="" type="checkbox"/> |

VIII. Departmental Rank: (Prioritize your request in relation to other departmental project request)

**CAPITAL IMPROVEMENT PROGRAM
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IX. Project Alternatives:

Maintain existing system configuration with manual operation.

X. Project Dependency:

The project is currently dependent on manual operation of the system. The proposed improvements would significantly reduce staff time required to operate the system.

XI. Negative Impacts:

No negative impacts are currently noted

XII. Other Considerations:

Do nothing or defer to next fiscal year.

XIII. Additional Funding Sources:

Are there grants or additional funds which might be used in conjunction with the CIP to fund this project:

Yes No If YES, describe: [Click here to enter text.](#)

XIV. ESTIMATED COSTS

a. Capital/ One Time Costs	Description of Capital/One Time Costs	Cost (Round to Nearest \$)
	Equipment Purchase and Installation	\$ 19,000
	TOTAL Capital (One Time Costs)	\$ 19,000
b. Continuing Annual Operating Costs	Description of Continuing Annual Operating Costs	
	Annual electrical operating costs	\$
	TOTAL Continuing Annual Operating Costs	\$

XV. Fiscal Year Requested:

FY 2015-2016

Priority Recommendation: (By CIP Committee)

**Capital Improvement Plan
Fiscal Year 2015-2016 through 2019-2020
Project Description**

I. Requesting Department: Public Works

II. Project Title: Stormwater-MP 18 Drainage Improvements

III. Project Description:

This request is for consideration of the design and construction of a drainage infrastructure improvements in the proximity of Milepost 18 along S. Old Oregon Inlet Rd. (N.C.S.R. 1243).

IV. Project Justification: (What need is being met, how does this project address the need?)

This project will attempt to mitigate nuisance flooding that is occurring in the proximity of the Mile Post marker 18 along S. Old Oregon Inlet Rd.. A self-contained vegetative swale network currently serves this tributary drainage area with treatment occurring via localized infiltration. No conveyance measures or points of discharge exist for this system. Existing state stormwater rules prohibit new points of stormwater discharge to Class SA waters or an increase in the volume of stormwater flow through conveyances or increase in capacity of conveyances of existing stormwater conveyance systems that drain to Class SA. This regulatory restriction eliminates the potential for connection to the existing drainage outfall ditch located along the northern property line of Fire Station 21, which is tributary to the Roanoke Sound and classified as being SA waters.

This program was previously scheduled for FY 14-15 but has been delayed due to scheduling conflicts for the completion of the project design and permitting. In addition, this delay may assist in obtaining more competitive project pricing, based upon recent bids received by the Town reflecting elevated pricing which is a function of existing contractor commitments.

Improvements will consist of the expansion of existing drainage measures in an effort to provide additional above ground temporary storage volume. It is anticipated that these improvements may not exceed a 1-year level of service. Enhancements are needed to improve safety and reduce the potential for hazards and associated public inconvenience.

Permitting and coordination will be required through NCDOT.

V. What Board Goals Does This Project Meet?

- Clean/Green Environment
- Fiscally Responsible
- Livable Neighborhoods
- Supportive Infrastructure
- Choose an item.
- Choose an item.

VI. Project Location: (Attach a map if applicable)

West side of N.C.S.R. 1243 in the proximity of Milepost 18

VII. Department Priority: (Choose One) Does the requested project:

- | | | |
|--|---|-----------------------------|
| a. Correct an unsatisfactory level of service? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| b. Maintain a current level of service? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| c. Increase a level of service? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| d. Represent a "vision"? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

**CAPITAL IMPROVEMENT PROGRAM
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VIII. Departmental Rank: (Prioritize your request in relation to other departmental project request)

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IX. Project Alternatives:

Do nothing, defer improvements

X. Project Dependency:

S. Old Oregon Inlet Rd. (N.C.S.R. 1243) is dependent on this existing drainage infrastructure to capture and infiltrate rainfall surface runoff

XI. Negative Impacts:

Temporary vehicular access and utility interruptions that may occur during construction

XII. Other Considerations:

Defer to FY 16-17, Pursue assistance from NCDOT

XIII. Additional Funding Sources:

Are there grants or additional funds which might be used in conjunction with the CIP to fund this project:

Yes No If YES, describe: NCDOT funding, depending on availability

XIV. ESTIMATED COSTS

a. Capital/ One Time Costs	Description of Capital/One Time Costs	Cost (Round to Nearest \$)
	Drainage Improvements	\$ 15,000
	TOTAL Capital (One Time Costs)	\$ 15,000
b. Continuing Annual Operating Costs	Description of Continuing Annual Operating Costs	
		\$
	TOTAL Continuing Annual Operating Costs	\$

XV. Fiscal Year Requested:

FY 2015-2016

Priority Recommendation: (By CIP Committee)

**Capital Improvement Plan
Fiscal Year 2015-2016 through 2019-2020
Project Description**

I. Requesting Department: Public Works

II. Project Title: Stormwater-MP 19-21
Maintenance Program

III. Project Description:

This request is for consideration of the implementation of a drainage maintenance program along the length of the west side ditch along S. Old Oregon Inlet Rd. (N.C.S.R. 1243), spanning from Milepost 19 through Milepost 21.

IV. Project Justification: (What need is being met, how does this project address the need?)

This project request is for the initiation of a phased maintenance program spanning the length of the N.C.S.R. 1243 west-side ditch. The existing drainage system consists of a series of open channels and culverts along S. Old Oregon Inlet Road conveying runoff to several discharge points, two sound side outfalls through the National Park Service property and one ocean outfall located at the southern corporate limits. The majority of the culverts along this alignment were installed in conjunction with the development of several west side subdivisions dating back to the 1980's.

This program will address culvert pipe replacements of aging metal drainage pipes that have reached the end of their service life. The result of these pipe deficiencies has been increased headwater conditions, deep depressions in the pavement section, sinkholes, sediment build up, open pipe joints and metal pipe inverts installed at unacceptable levels. Existing storm drain flow conditions are extremely poor, inhibiting flow downstream. Repairs/replacements are needed to improve safety and reduce the potential for hazards and associated public inconvenience. Failure of a storm drain pipe will precipitate emergency repairs at much higher prices.

This proposal accounts for a 2 year phased approach with scheduled pipe replacements beginning from the south and proceeding northward.

Permitting and coordination will be required through NCDOT, National Park Service and the U.S. Army Corps of Engineers. Based upon prior correspondence received from the North Carolina Division of Coastal Management, this agency does not have jurisdiction over these existing drainageway.

V. What Board Goals Does This Project Meet?

- Clean/Green Environment
- Fiscally Responsible
- Livable Neighborhoods
- Supportive Infrastructure
- Choose an item.
- Choose an item.

VI. Project Location: (Attach a map if applicable)

West side of N.C.S.R. 1243 spanning from Milepost 19 through Milepost 21

VII. Department Priority: (Choose One) Does the requested project:

- | | | |
|--|---|-----------------------------|
| a. Correct an unsatisfactory level of service? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| b. Maintain a current level of service? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| c. Increase a level of service? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| d. Represent a "vision"? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

**Capital Improvement Plan
Fiscal Year 2015-2016 through 2019-2020
Project Description**

I. Requesting Department: Public Works

II. Project Title: Stormwater-MP 19-21
Maintenance Program

III. Project Description:

This request is for consideration of the implementation of a drainage maintenance program along the length of the west side ditch along S. Old Oregon Inlet Rd. (N.C.S.R. 1243), spanning from Milepost 19 through Milepost 21.

IV. Project Justification: (What need is being met, how does this project address the need?)

This project request is for the initiation of a phased maintenance program spanning the length of the N.C.S.R. 1243 west-side ditch. The existing drainage system consists of a series of open channels and culverts along S. Old Oregon Inlet Road conveying runoff to several discharge points, two sound side outfalls through the National Park Service property and one ocean outfall located at the southern corporate limits. The majority of the culverts along this alignment were installed in conjunction with the development of several west side subdivisions dating back to the 1980's.

This program will address culvert pipe replacements of aging metal drainage pipes that have reached the end of their service life. The result of these pipe deficiencies has been increased headwater conditions, deep depressions in the pavement section, sinkholes, sediment build up, open pipe joints and metal pipe inverts installed at unacceptable levels. Existing storm drain flow conditions are extremely poor, inhibiting flow downstream. Repairs/replacements are needed to improve safety and reduce the potential for hazards and associated public inconvenience. Failure of a storm drain pipe will precipitate emergency repairs at much higher prices.

This proposal accounts for a 2 year phased approach with scheduled pipe replacements beginning from the south and proceeding northward.

Permitting and coordination will be required through NCDOT, National Park Service and the U.S. Army Corps of Engineers. Based upon prior correspondence received from the North Carolina Division of Coastal Management, this agency does not have jurisdiction over these existing drainageway.

V. What Board Goals Does This Project Meet?

- Clean/Green Environment
- Fiscally Responsible
- Livable Neighborhoods
- Supportive Infrastructure
- Choose an item.
- Choose an item.

VI. Project Location: (Attach a map if applicable)

West side of N.C.S.R. 1243 spanning from Milepost 19 through Milepost 21

VII. Department Priority: (Choose One) Does the requested project:

- | | | |
|--|---|-----------------------------|
| a. Correct an unsatisfactory level of service? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| b. Maintain a current level of service? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |
| c. Increase a level of service? | Yes <input checked="" type="checkbox"/> | No <input type="checkbox"/> |
| d. Represent a "vision"? | Yes <input type="checkbox"/> | No <input type="checkbox"/> |

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VIII. Departmental Rank: (Prioritize your request in relation to other departmental project request)

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IX. Project Alternatives:

Do nothing, defer improvements

X. Project Dependency:

S. Old Oregon Inlet Rd. (N.C.S.R. 1243) is dependent on this existing drainage infrastructure to capture and convey rainfall surface runoff downstream to several discharge points.

XI. Negative Impacts:

If poor water quality conditions exist within the drainageway, improved hydraulic conditions may transmit flow more rapidly downstream to the adjoining surface waters, reducing the potential for pollutant removal.

XII. Other Considerations:

Defer to FY 16-17, pursue assistance from NCDOT.

XIII. Additional Funding Sources:

Are there grants or additional funds which might be used in conjunction with the CIP to fund this project:

Yes No If YES, describe: NCDOT funding, depending on availability

XIV. ESTIMATED COSTS

a. Capital/ One Time Costs	Description of Capital/One Time Costs	Cost (Round to Nearest \$)
	Pipe Replacement-Phase 1	\$ 67,500
	Phase 2	\$ 67,500
	TOTAL Capital (One Time Costs)	\$
b. Continuing Annual Operating Costs	Description of Continuing Annual Operating Costs	
		\$
	TOTAL Continuing Annual Operating Costs	\$

XV. Fiscal Year Requested:

FY 2015-2016

Priority Recommendation: (By CIP Committee)