

PUBLIC WORKS ASSEMBLY UPDATE
WORK COMPLETED THROUGH MARCH 2020

Wastewater Treatment Plant (WWTP) Rehabilitation (CONSTRUCTION PHASE)

Milestones This Period

- Approved Schedule of Values (SOV) from Contractor and received Pay Request #1 for review.
- Hazardous materials abatement completed.
- Began demolition of mechanical & electrical systems.
- Received notice from contractor regarding potential impacts due to the COVID-19 pandemic and prepared and sent a response.

Future Milestones

- Interior demolition in Administration Area to begin (early April).
- Replacement of mechanical and electrical systems to begin April 2020.
- Reconstruction of Administration Area to begin in May or June 2020.
- Exterior siding (doors & windows) and Administration Area perimeter walls demolition, May or June 2020.
- Reconstruction of building siding, doors, and window, Summer 2020.
- Anticipated project Substantial Completion May 20, 2021.

Background

The Wastewater Treatment Plant was built in the early 1980's and many of the building systems, including the building envelope (exterior siding, windows and doors), electrical, plumbing and mechanical, including the HVAC (ventilation air) system, have failed or are past their useful life and require replacement. The air quality within the building is inadequate and corrosive, and as a result the exposed piping and metal within the building have corroded.

Total project cost is currently estimated at \$9,782,000. Funding for this project is provided by the following sources:

\$263,000 – WW Fund Working Capital
(\$218,000) – WW Working Capital moved to the SCADA Control Project
\$9,737,000 – DEC Loans
\$9,782,000 – Total Available Project Funding

Current Contracts: McCool Carlson Green (design)	\$898,284
MCG Constructors, Inc./DCI Joint Venture (w/CO-1)	\$7,432,800

Critical Secondary Water Supply (DESIGN PHASE)

For more information and history on this project, visit the City website at:
www.cityofsitka.com > Public Works Department > Public Works Projects > Critical Secondary Water Supply – or go directly to:

<https://www.cityofsitka.com/government/departments/publicworks/projects.html>

Milestones This Period

- Received engineering submittal from Pall, the company providing our filtration equipment.

Future Milestones

- Award Phase 2 of design contract (final design and assistance during bidding): April 2020.
- Request Assembly approval on April 14 regular meeting to submit grant application to Economic Development Administration to fund CBS-NSRAA water intake in Sawmill Creek: May 2020.
- Facilitate discussion between NSRAA and CBS Administration to establish a project cost sharing structure for potential EDA grant: June 2020.
- Solicit construction bids for intake work: August 2020.
- Solicit construction bids for filter plant work: September 2020.
- Substantial Completion for secondary water source project anticipated in January 2022.

Background

The project is for design and construction of a secondary water source, for when the primary water source – Blue Lake water treated with ultraviolet (UV) radiation – is unavailable. Blue Lake water will not be available when the Electric Department inspects and maintains the penstock providing water from the dam to the power plant. Blue Lake water may also require filtration – not just UV treatment – if turbidity levels continue to exceed regulatory thresholds.

Total project cost is estimated at \$18 million. Funding for the project is provided by:

\$150,000 – Working Capital
\$380,000 – transferred from UV Disinfection project Working Capital
<u>\$17,620,000</u> – Alaska Clean Water Fund loan
\$18,150,000 – Total Available Project Funding

Current Contracts:	CRW Engineering Group (design)	\$362,780
	Jacobs (independent design review)	\$25,000
	Pall Water (supply filtration equipment)	\$2,339,350

Crescent Harbor Float Replacement – Phase I (CONSTRUCTION PHASE)

Milestones This Period

- Float 1 and associated pilings installed. This completes the float and piling installation work that needed to be complete by March 15.
- Gangway from the High-Load Dock installed.
- Cathodic protection (anodes) installed.
- Float-mounted water mains installation complete. Water and fire risers installed and connected to water mains.
- All electrical service wires have been pulled into place. Power pedestal and overhead light fixtures approximately 75 percent erected.
- Received notice from contractor regarding potential impact due to the COVID-19 pandemic and prepared and sent a reply.

Future Milestones

- Mechanical subcontractor to complete installation of water risers and hydrants: May 2020. Schedule subject to supply-chain delays due to COVID-19.

- Electrical subcontractor to pull remaining wire and to install electrical pedestals and substations, June 2020. Schedule subject to supply-chain delays due to COVID-19.
- Project Substantial Completion date is June 12, 2020.

Background

The physical condition of Crescent Harbor had deteriorated to point where in-house repairs are no longer sufficient to adequately maintain the facility. Harbor Department staff and Public Works Department engineers determined the harbor now presents an operational and safety risk due to floats sinking, decay of wooden beams, corrosion of metal fixtures and failure of walk-down ramps to meet ADA accessibility requirements.

The project has an estimated total cost of \$13 million for design and construction. Funding for this project is provided by the following sources:

\$1,000,000 – Harbor Fund Working Capital
 \$5,000,000 – AK DOT Harbor Matching Grant
\$8,025,000 – Harbor Revenue Bonds
 \$14,025,000 – Total Available Project Funding

Current Contracts:	Jacobs (project administrative support)	\$315,905
	PND, Inc (construction inspection support)	\$189,455
	Turnagain Marine Design-Build Contract	\$13,141,812

Thomsen Harbor Anode Replacement (DESIGN PHASE)

Milestones This Period

- All future milestones are in progress.
- Review of 95% plans completed and comments returned to design consultant.

Future Milestones

- Anticipate bid advertisement, May 2020.
- Construction planned for October 2020. Substantial Completion, January 2020.

Background

Old Thomsen Harbor was originally built in 1976. In 2006, the CBS replaced the Old Thomsen Harbor floats with new timber floats as part of a comprehensive capital improvement program. At the time of construction, a cathodic protection system was considered to prevent future corrosion, but not installed due to financial considerations. Some of the existing steel piles are already showing signs of mild corrosion. This project will install cathodic protection on all of the steel pipe piles in Thomsen Harbor in the form of sacrificial anodes welded to the piles. The new anodes are designed to protect the piles for 20 years, thereby extending the life of this important and expensive harbor facility.

The project has an estimated total cost of \$406,000. Funding for this project is provided by the following sources:

\$203,000 – Harbor Fund Working Capital
\$203,000 – AK DOT Harbor Matching Grant
\$406,000 – Total Available Project Funding

Current Contracts: PND Engineers, Inc.

\$17,870

Sitka Seaplane Base (SPB) (PLANNING PHASE)

For more information and history on this project, visit the City website at:

www.cityofsitka.com > Public Works Department > Public Works Projects > New Sitka Seaplane Base – or go directly to:

<https://www.cityofsitka.com/government/departments/publicworks/SitkaSeaplaneBaseSitingStudy.htm>

Milestones This Period

- All future milestones are in progress, but due to the COVID-19 pandemic the schedule for completion of future milestones is subject to change.
- Completion of topographic (land) and bathymetric (ocean floor) surveys.

Future Milestones

- Completion of the Wind & Wave Study, May 2020. This study is underway and is required for developing the preliminary facility layout.
- Completion of field work in Sitka by the consultants for the Intertidal Habitat and Marine Life Surveys, the Wetlands Survey, and the Historical, Architectural, Archaeological, and Cultural Survey, May and June 2020. Subject to consultant travel. The results of these studies will assist in developing the preliminary facility layout.
- Completion of preliminary facility layout alternatives for discussion with Stakeholders, July 2020.
- The facility layout stakeholder meeting is now tentatively planned for July 2020. This meeting may be held electronically once preliminary facility layout options are ready for discussion and user input.
- Permitting: DRAFT NEPA Environmental Assessment (EA) prepared and ready for Public Review: November 2020.
- Planning for land acquisition and business plan: October/November 2020.
- Public Meeting and/or input on drafts EA, facility layout, and business plan: November 2020
- Prepare and submit AIP grant applications to FAA for next phase Design/Land Acquisition: Fall 2021 (depends on federal funding cycle).

Background

The existing Seaplane Base has been operating for 65 years and is at the end of its useful life. The Assembly passed an action plan to construct a new facility just inside the breakwater on Japonski Island (end of Seward Street) making this a top priority to secure Federal Funding, land, and ultimately construction. Federal funding is anticipated to cover 93.75% of the cost of construction and another \$150k per year in operational maintenance. For this reason, it is essential for the project development to follow the required Federal funding process anticipated to span four years.

There are 5 main phases required to complete to be eligible to proceed to the next stage and receive Federal funding:

1. Planning and Environmental Review(current funded stage):
Complete early 2021
2. Layout plan (current funded stage): Complete early 2021
3. Land acquisition (not funded until EA is completed and approved):
Complete Summer 2022
4. Design/Final Permitting (must build or give back FAA funds):
Complete Summer 2022
5. Construction: 2023-2024

We understand there are concerns over the length of the process especially as it relates to these initial grant phases of work for the Environmental Assessment and completed a kickoff meeting to help clarify and brainstorm options in navigating the required federal process as well as to provide an opportunity to give comments and ask questions, before the project proceeds into the permitting phase.

For detailed meeting notes and presentation materials, visit the project web page at the link above.

The preliminary total project cost is estimated at \$16 million. Funding for this project is provided by the following sources:

- \$842,629 – FAA AIP Grant (E/A & Planning Grant)
- \$56,176 – General Fund Working Capital (Req'd CBS Match @ 6.25%)
- \$898,805 – Total Available Project Funding

Current Contracts: DOWL (E/A & Aviation Planning) \$707,079

Sitka Sea Walk Phase 2 (PLANNING & DESIGN PHASE)

Milestones This Period

- All future milestones are in progress.

Future Milestones

- Additional scoping effort to be performed to explore more affordable alternatives, June 2020.
- Design phase to kick off in late 2020 with plans for multiple meetings throughout the process.
- Construction is estimated to begin, Spring 2021.

Background

The project includes extending the Sitka Sea Walk from the Sitka Public Library toward (and under) O'Connell Bridge and terminating at the west end of Lincoln Street at its intersection with Harbor Way. Phase 2 of the Sea Walk, an 8-foot wide handicap accessible multi-use path, will continue the same theme as the first phase of the Sea Walk that extends from Harrigan Centennial Hall East through Crescent Harbor Park toward Sitka National Historical Park. The project is being delivered (managed) by Western Federal Lands (WFL), will be designed in 2020 and construction is expected to

begin Summer 2021. Multiple rounds of public involvement are anticipated throughout the design process. The current funding plan is as follows:

\$ 1,674,713 – Grant from Western Federal Lands
\$158,060 – CBS GF and/or CPET Funds
\$1,832,773 – Total Available Project Funding

Current Contracts: No CBS contracts at this time.

Peterson Storm Sewer Rehabilitation (DESIGN PHASE)

Milestones This Period

- Received extension to National Fish and Wildlife Foundation grant to June 30, 2020. It had been scheduled to expire on April 13, 2020. NFWF could not extend the grant beyond the given date, but said they'll consider another extension request once the CBS FY21 budget is finalized.

Future Milestones

- Project to be bid in Fall 2020 and constructed in Summer 2021 when public schools are not in session. The closure of Peterson Street would cause major school-bus delays.

Background

The project includes replacement of deteriorated 60" corrugated metal culvert crossing under Peterson Street, allowing for fish passage. Peterson Street is a collector street that provides critical access to side streets and local residences as well as to Sitka High School.

Total project cost is estimated at \$1,215,000. Funding for the project is provided by:

\$150,000 – General Fund FY2019 Working Capital
\$220,000 – General Fund FY20 Working Capital
(\$50,000) – transferred to Davidoff Street Sewer Rehab project
\$55,000 – National Fish & Wildlife Foundation design grant
\$60,000 – U.S. Fish and Wildlife Service Fish Passage construction grant
\$80,000 – U.S. Fish & Wildlife Service Fish Passage construction grant
\$515,000 – Total Available Project Funding

Note: Additional project funding required. Up to \$700,000 may be requested with upcoming FY21 General Fund Capital Projects Budget.

Current Contracts: DOWL (design) \$78,072

Channel and Eagle Way Lift Station Rehabilitation (BIDDING PHASE)

Milestones This Period

- All future milestones are in progress.

Future Milestones

- Issue Notice to Proceed to low bidder Marble Construction: April 2020.

- Rehabilitate Channel and Eagle Way lift stations:
 - Substantial Completion: August 28, 2020.
 - Physical Completion: September 28, 2020.

Background

Eagle Way Lift Station is responsible for pumping all sewage east of Eagle Way toward the Wastewater Treatment Plant. Channel Lift Station is responsible for an apartment complex and one private residence on Halibut Point Road. Both lift stations require excess maintenance due to corrosion and/or outdated pumping equipment. Project will rehabilitate lift stations, re-using existing infrastructure to the extent feasible.

The estimated construction cost for the project is approximately \$1.2 million. Funding for the project is provided by:

- \$250,000 – DCCED grant (Eagle Way Lift Station)
- \$530,000 – Wastewater Fund Working Capital (Eagle Way Lift Station)
- \$108,266 – Wastewater Fund Working Capital (Channel Lift Station)
- \$371,109 – ACWF loan (Channel Lift Station)
- \$1,259,375 – Total Available Project Funding

Current Contracts:	DOWL (C-EW portion of bigger design project)	\$91,925
	DXPE (Eagle Way portion of pump supply contract)	\$56,714
	Boreal Control (C-EW portion of control equipment supply contract)	\$97,200
	Marble Construction (contract pending)	\$829,238

Brady Lift Station Rehabilitation (DESIGN PHASE)

Milestones This Period

- All future milestones are in progress.

Future Milestones

- Complete design and bid out project: June 2020.
- Issue Notice to Proceed to low bidder: August 2020.
- Construct Brady Lift Station improvements:
 - Start construction: November 2020.
 - Substantial Completion: February 2021.
 - Physical Completion: March 2021.

Background

Brady Lift Station is responsible for pumping all sewage generated north of Brady Street to the Wastewater Treatment Plant. A plug valve in the lift station has failed, making it impossible to isolate one of the three pumps for maintenance. Equipment is outdated and requires excessive maintenance. Project will rehabilitate lift station, re-using existing infrastructure to the extent feasible. Work is scheduled to minimize impacts to True Value. The project will require use of part of their parking lot.

The estimated construction cost for the project is approximately \$900K. Funding for the project is provided by:

\$217,400 – ACWF loan
\$428,759 – Wastewater Fund Working Capital
\$646,159 – Total Available Project Funding

There is a request in the FY21 budget for \$250K for working capital from the Wastewater Fund to fully fund this project.

Current Contracts:	DOWL (Brady portion of bigger design project)	\$98,980
	DXPE (Brady portion of pump supply contract)	\$53,730
	Boreal Control (Brady portion of control equipment supply contract)	\$97,700

Airport Terminal Improvements (DESIGN PHASE)

Milestones This Period

- All future milestones are in progress.

Future Milestones

- Complete the 35% revisions for the rest of the terminal improvements design and move into the Design Development Phase (65%) where the improvements will be developed and defined in separate phases for construction and funding, Summer 2020.
- Resolve the remaining 30% TSA design submittal issues for the TSA Baggage Screening Area, Summer 2020.
- AK DOT involvement 65%, especially regarding potential FAA AIP funding & Improvement staging Fall 2020.
- Other funding sources for terminal improvements beyond the PFC/Bonding and AIP grant requests are being developed for consideration, including airport terminal user fees and TSA grants for screening/security improvements.
- Phased construction has been delayed to at least 2021 through 2023, due to the Federal Government shutdown at the end of 2018 and the lack of project funding.

Background

The Airport Terminal Improvement Project is intended to remedy some of the existing critical problems identified in the Airport Terminal Master Plan 2008-2011, including working conditions in the baggage make-up area and TSA baggage screening area, as well as problems with congested passenger queuing, screening, baggage, fish boxes, waiting areas and passenger flow. CBS accepted a TSA design grant in the amount of \$158,569.25 to design specific improvements to the TSA Baggage Screening Area. Other areas impacted by these design changes are ineligible for the TSA design funding. The Assembly approved moving forward to the 65% Schematic Design Milestone for the preferred concept plan that was presented in the Assembly work-session August 8, 2017. Passenger Facility Charges (PFC) were applied for and approved by ADOT and FAA. Collection of the PFCs began May 1, 2018. The total anticipated revenue collection over the 20-year period of collection is \$6,840,000.00, which will finance the \$4,025,000 revenue bond along with its fees and debt service.

The estimated cost for the project as identified is approximately \$15 Million. The current funding plan outlines the following components:

• Passenger Facility Charge Revenue	\$4,025,000	Bond Secured
• TSA OTA Grant	\$158,569	Secured
• TSA Funding	\$3,397,500	Unsecured
• Eligible AIP Grant Request	\$10,283,954	Unsecured

Current contracts: MCG Architects (design) \$449,069

Lincoln Street Paving – Harbor Way to Harbor Drive (DESIGN PHASE)

Milestones This Period

- None. Project currently on hold, pending direction from Administrator and Assembly.

Future Milestones

- Project on hold.

Background

The project includes replacing non-ADA-compliant curb ramps, failing storm drain, limited curb, gutter and sidewalk and all asphalt pavement on Lincoln Street from approximately Harbor Way to Harbor Drive. Water and sewer utilities will be installed on Cathedral Way, which will also be re-paved. 95% design is complete but not approved to move forward.

Funding for the project is provided by:

- \$1,760,000 – General Fund
- \$105,000 – CPET Funding
- \$20,000 – Water Fund
- \$20,000 – Sewer Fund
- \$1,905,000 – Total Available Project Funding

Current Contracts: Professional and Technical Services, Inc. \$383,290
(Lincoln portion of Lincoln & Katlian contract)

Nelson Logging Road Upgrades (CONSTRUCTION PHASE)

Milestones This Period

- All future milestones are in progress.

Future Milestones

- Obtain DNR approval of easement drawings, Summer 2020.
- Utilize remaining State grant funds, approximately \$60,000 to complete additional improvements (emergency phone line to shooting range, guardrail at HPR intersection, turnaround area at new bridge), Spring/Summer 2020.
- Final Project Closeout, Summer 2020.

Background

The project includes replacing both inadequate bridges, realignment at HPR intersection to raise the road elevation out of the stream floodplain, upgrading Nelson Logging Road to include drainage improvements, resurfacing, widening, and pedestrian amenities.

Funding for the project is provided entirely by a \$2,343,000 State of Alaska Department of Commerce Community and Economic Development Grant.

Current Contracts:	LEI Engineers & Surveying (design)	\$471,120
	K & E Alaska, Inc. (construction)	\$1,544,280

Maintenance Activities

Streets

- Several days of snow removal.
- Graded gravel roads.
- Filled more potholes, we now have used 10 tons of cold patch material since January.
- Buried Approximately 80 yds of bio solid material.
- Set up barricades on Crescent Harbor.
- Cleaned out sump on Eliason Loop drainage,
- Bought disinfectant materials for COVID-19.
- Disinfected vehicles equipment and spaces. Set up COVID Protocols.
- Demolished boats for Harbors.
- Changing equipment over to Spring Operations.

Central Garage

- Repaired over 33 different items some major some routine maintenance.
- Repaired hydraulic pump in Unit 413 sand and plow truck.
- Cleaned shop for COVID-19.
- Disinfected equipment for COVID-19

Scrapyard

- Processed materials and vehicles filled 9 Gondolas at 152,510 pounds which equals 76.25 Tons and 8.472 Tons per Gondola.
- Shopping for new Scrap Yard.
- Scrap prices dropped 1/3 of what they were last week due to COVID-19.

Grounds Maintenance

Completed

- Preventive maintenance schedule – Normal operations 20 preventative maintenance (PMs)
- Reactive/Requested Work Orders – 15 PMs
- Snow, Ice, and Proper Drainage Control around Building, Parks, and Grounds due to weather.
- Support Streets with snow removal on streets, parking lots, harbors, and schools.

- Disinfecting crescent playground until COVID-19 closure.
- Library down Spout Landscaping along rock garden.
- Several Trees down along cross tail system.
- Swan Lake Brushing along sidewalks.
- Securing Post Caps along Whale park board walk and replacing toe rails.
- Seawall board walk power washing completed.
- Graffiti at Lake and Lincoln Restrooms was removed.
- Sandi Beach Frozen Pipe Repairs – Ceilings Painted - Restroom Reopened.
- Whale Park Restrooms Ceilings Painted.
- Moller Complex Restrooms Ceilings Painted.
- Cleanup of Herring Cove Grounds.
- Abandoned truck towed from Herring Cover beach/landing.
- Closed the Crescent Harbor playground and schools' playgrounds due to COVID-19.

Ongoing

- Providing Support, continuing maintenance, repairs based around necessity pertaining to COVID-19. Security checks of recreations facilities, spot treating public restroom facilities, cleaning up trash and debris from public spaces, etc.
- Disinfecting of skate park due to COVID-19
- Lower Moller East Playground – On hold due to COVID-19.
- Crescent Harbor Playground defective surfacing being replace March/April 2020. Manufacture shipment expected mid/late March. Contractor working for manufacture under warranty should start work shortly after. Playground will be closed during demo and installation. Updates will follow.
- Looking into option for anti-skid surface along sea-walk's board walk areas.
- Working on security cameras for the Moller Complex on hold due to playground project and winter weather work.
- Crescent Harbor – Sea walk sections will be closed due to Harbor Project.
- Mountain Ash and Pine damaged during Harbor project. Contractor removing Ash. Pine will be pruned back once work is completed in that section.
- Winter damage and clean up underway due to snow removal.
- Goddard Hot Springs needs repair to hot water supply line
- Spring prep- falling behind due to COVID-19. No major spring cleanup/bed prep, fertilization of primary downtown and athletic field turf until further notice.

Building Maintenance

Completed

- Preventive maintenance schedule – Normal Operations – 100 PMs.
- Reactive/Requested Work Orders – 46 PMs
- Provide support to occupants, staff, and facilities as it relates to COVID-19.
 - Regular spot checks and disinfecting as needed.
 - Providing stock to sites
 - Working with Janitorial contractors

- Change air filter out in Public Facilities to a MERV-13 due to COVID-19 as well as normal PMs of the systems.
- Continue life safety related work and inspections.
- Snow and ice control around buildings.
- Airport – re-secure HVAC duct main truck in upper ceiling space.
- Airport auto doors trouble shooting
- Library electrical operating windows motors/connectors repaired.
- Library – spring cleanup support library staff.
- City Hall – Double front interior doors – set up for security purposes in-order for deliveries to be made. Plan change so setup has not been used.
- Ordered sanitation/disinfecting supplies, supplied products to City buildings.
- Waste Water Treatment Plant – Removed & recovered Sierra Anti-Freeze/Coolant from Boiler system, draining down all equipment in the system.
- Waste Water Treatment Plant – Recovered boiler burner parts for back up for back stock.
- Marine Service Center Condenser Project is Substantially Complete.

Ongoing

- Delta/TSA emergency Egress Door – working with Delta per TSA requiring another form of egress to handle TSA luggage.
- City/State office complaints on damaged window with cold weather. Provided estimated cost to replace based off other windows. Reached out to contractor for proposal. State would need to pay for replacing.
- State DOT/PF requesting City/State to no longer be part of their infrastructure. Discussion on option to proceed with City/State 1967 Agreement.
- Senior Center Roof leak – cut open ceiling to investigate, found additional wet spots, currently waiting for team to do water testing to investigate while ceiling is open. Temporary plastic installed
- Library Roof leak on 2/10/20- investigating if leak as a warranty item.
- Goddard Hot Springs – Reported problem with bottom tub not getting hot water persons felt there is a clogged line.
- Police Department –two broken windows will be replaced by Contractor prior to June.
- Police Department – Additional funds requested on the capital projects list for FY21 for long term HVAC solution.
- Centennial Hall – Gutter membrane installation, contractor will be complete before June 3, 2020.
- Library – interior LED lighting issues: Working with manufacture on getting replacement spotlights under warranty.

Monitoring

- Harrigan Centennial Hall – tile floor cracking common areas, waiting to see if weather changes creates more issues.
- Harrigan Centennial Hall additional cracks discovered under meeting room 5 carpet tiles. Waiting to see what happens with weather changes and activate on plan for repairs if required.

Water/Wastewater

COVID-19 Update

The Water/Wastewater Division continues to work hard during this pandemic. We have made modifications to our schedules to try to minimize our contact with each other, but a lot of our work requires us to be in close quarters. Several measures have been implemented to help ensure we stay as healthy as possible, such as riding in separate vehicles and sanitizing workspaces multiple times per day. We are short-staffed due to daycares and schools being closed. Because of this our response time may be increased.

Wipes (cleaning wipes, baby wipes, paper towels, shop towels, etc.) continue to be a problem for wastewater utilities around the world and Sitka is no exception. Wipes do not break down in water like toilet paper does, therefore they should not be flushed. This includes wipes that are marketed as flushable.

With the pandemic, wipes are being used now more than ever. These wipes cause blockages in sewer lines and they also get bound in pump impellers. When a pump is overcome with wipes it stops pumping and requires wastewater operators to remove the wipes by hand. This takes staff away from other tasks and also causes unnecessary wear and tear on pumps and motors which means they are not lasting as long as they should.

These are photos, courtesy of Brian Doyle from one of our lift stations.



This photo shows the impeller bound with wipes



This photo is of the bag of wipes that were removed from the impeller



- This photo shows the impeller free of wiper seals