



CLACKAMAS

**WATER
ENVIRONMENT
SERVICES**

GREGORY L. GEIST | DIRECTOR

Water Quality Protection
Surface Water Management
Wastewater Collection & Treatment

July 26, 2022

TO: Nancy Bush, County Operations Officer
FROM: Greg Geist, Director Clackamas Water Environment Services

RE: Infrastructure Implementation Team – July 2022

Dear Nancy,

One of the Performance Clackamas objectives is to ensure by 2026, 100% of County residents and businesses-where served-have access to safe and affordable infrastructure: multimodal transportation include roads, sewer and broadband services. Since the adoption of this goal, a team comprised of representatives from Clackamas Water Environment Services, Department of Transportation and Development and Clackamas County Technology Services has been meeting regularly as the Infrastructure MFR Implementation Team to coordinate efforts to meet the Board of County objectives.

On behalf of the Infrastructure MFR Implementation Team, we are pleased to present the attached comprehensive update. The following is a general summary of the comprehensive update to highlight the efforts to date.

KEY STRATEGIES HIGHLIGHTS

- Sewer: Complete Tri-City Water Resource Recovery Facility Solids Handling Improvements Project to support growth
- Sewer: Complete 20 year Capital Improvement Plan
- Sewer: Pursue financial strategies and modeling to ensure long-term rate projections meet criteria for affordability
- Roads: Develop 5 – yr. coordinated improvement plan (Capital/Maintenance/Safety)
- Roads: Leverage Community Road Fund revenues
- Roads: Update Transportation System Plan
- Roads: Pursue regional, state and federal funding for transportation projects
- TS: Business Plan - Complete and get approval for new CBX Business Plan to define business model and role with ISP services
- TS: Underserved Access - Based on current definition of underserved, continue to expand infrastructure, in partnership with ISPs, to serve underserved areas
- TS: Funding Resources - Identify, apply and utilize other resources to expand the CBX infrastructure, serve underserved areas and assist in affordable access
- TS: Affordable Access - Develop and implement plan to identify, fund and expand program to assist in subsidizing affordable access as resources permit

KEY ACTIVITIES 2022

Clackamas Water Environment Services

- WES Financial Strategies
- TC Solids Handling Project
- 20 year Sewer Capital Improvement Plan

Transportation and Development

- Risk-based Asset Management Plan
- Sunrise Gateway Visioning Project
- 2022 CRF Congestion Relief
- 2022 Paving Package
- 2022 CRF Safety Projects
- Bike/Walk Plan (Updates to the pedestrian and bikeway plans)
- Secure additional funding for future transportation projects
- Transportation System Plan - Update

Technology Services

- Hired CTC Technology & Energy to provide federal and state grant support for FY 21/22
- In 2021 added 18 fiber miles, in 1st half of 2022 added 6 additional miles
- Ordering network to upgrade CBX to allow Open ISP Access and promote affordability
- Designed initial 2 phases of ARPA Build, 1st phase in construction with some homes on

PARTNERS AND OPPORTUNITIES

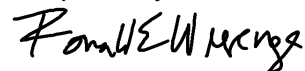
- Local Coordination - Evolving relationships with partners like Happy Valley through joint participation in the Clackamas to Columbia Corridor Plan
- Partnership between H3S – Social Services and DTD on the coordination, planning and implementation of transit
- Community Advisory Groups
- Have SandyNet as ISP Partner, negotiating with at least 5 additional ISPs

BARRIERS AND CHALLENGES

- Changes in ADA requirements
- Need clarity around “affordability”
- Limited control over funding or available funding in several improvement areas
- New Federal Guidelines on definition of under-served to qualify for additional grants

We look forward to presenting this update to the Board.

Respectfully,



for

Greg Geist

Director, Clackamas Water Environment Services

BCC Strategic Results

Strategic Result(s)

By 2026, 100% of County residents and businesses - where served - have access to safe and affordable infrastructure: multimodal transportation including roads, sewer and broadband services.

Team Members/Department (*Chair)

Water Environment Services	Greg Geist *	Erin Blue	
Department of Transportation and Development	Dan Johnson	Mike Bezner	Karen Buehrig
Clackamas County Tech Services	Dave DeVore	Duke Dexter	Ron Sandner
Clackamas County Administration	Tracy Moreland		

Key Strategies

- Sewer: Complete Tri-City Water Resource Recovery Facility Solids Handling Improvements Project to support growth
- Sewer: Complete 20 year Capital Improvement Plan
- Sewer: Implement Risk-based Asset Management Plan
- Sewer: Pursue financial strategies and modeling to ensure long-term rate projections meet criteria for affordability
- Sewer: Complete asset inventories, implement Risk-based Asset Management Plan, identify critical assets and develop plans for mitigating risk at each plant
- Roads: Develop 5 – yr coordinated improvement plan (Capital/Maintenance/Safety)
- Roads: Leverage Community Road Fund revenues
- Roads: Update Transportation System Plan
- Roads: Update Walk Bike Clackamas Plan (which is updating the pedestrian and bikeway plans)
- Roads: Pursue regional, state and federal funding for transportation projects
- Transit: Coordinate with transit providers to increase transit service in Clackamas County
- TS: Business Plan - Complete and get approval for new CBX Business Plan to define business model and role with ISP services
- TS: Fiber Plant Expansion - Develop process to define requirements and implement annual expansion goals of the dark fiber infrastructure
- TS: Underserved Access - Based on current definition of underserved, continue to expand infrastructure, in partnership with ISPs, to serve underserved areas
- TS: ISP Partnerships - Develop and maintain partnerships with ISPs to provide internet services to underserved areas as resources permit
- TS: Funding Resources - Identify, apply and utilize other resources to expand the CBX infrastructure, serve underserved areas and assist in affordable access
- TS: Affordable Access - Develop and implement plan to identify, fund and expand program to assist in subsidizing affordable access as resources permit
- TS: Other Potential Services - Identify, analyze and develop other potential services and funding sources to assist in the funding of CBX and related initiatives

Related Metrics

Department	Program	Metric	Metric Type	Relation
County (Sunrise Implementation Team)	Performance Clackamas	By 2024, funding for the next phase (from 122 nd -172 nd) of the Sunrise Gateway multimodal corridor improvements will be committed from federal, state, regional and local funding sources.	Initiative	Road – Safety (reliability) and Affordability
WES	Asset Management	WES will utilize a Risk-based Asset Management Plan so that asset renewal and replacement decisions for assets will be made based on a risk-to-cost decision matrix.	Initiative	Sewer – Safety (reliability) and Affordability
WES	Capital Delivery	By June 30, 2020, develop a 20 year Capital Improvement Plan that will estimate cost and schedule for all major investments necessary for that time period.	Initiative	Sewer – Access and Affordability
WES	Capital Delivery	By January 2021, WES will have completed the TC WRRF Solids Handling Improvements Project to support the expected 20-year growth horizon.	Initiative	Sewer – Access
WES	Plant Operations and Maintenance	By June 30, 2020, WES will identify critical assets and developed plans for mitigating risk at each plant.	Initiative	Sewer – Safety (reliability)
WES	Financial Management	Rates will not increase more than 10% in any year nor less than the adopted index stating the current rate of inflation.	Result	Sewer – Affordability
DTD	Traffic Safety	By 2035, reduce the number of fatalities resulting from crashes on roads in Clackamas County to zero.	Initiative	Road – Safety
DTD	Transportation Maintenance	Maintain the average condition of paved county roads at 70 PCI (Pavement Condition Index) or higher.	Initiative	Road - Safety
DTD	Transportation Maintenance	By 2025, improve the average condition of urban local county roads to a PCI (Pavement Condition Index) of 65 or higher.	Initiative	Road – Safety (reliability)
DTD	Community Road Fund	By 2020, the CRF Advisory Committee will develop a recommended 5-year project plan benefitting local roads, safety and congestion relief across the county.	Initiative	Road – Safety (reliability)
DTD	Community Road Fund	By 2020, begin design of our first two congestion relief projects funded by the CRF	Initiative	Road – Safety (reliability)
DTD	Community Road Fund	By 2022, begin construction of the first congestion relief project funded by CRF.	Initiative	Road – Safety (reliability)

DTD	Community Road Fund	By 2021, complete the first road safety project using CRF.	Initiative	Road - Safety
DTD	Community Road Fund	By 2020, complete the first local road paving package using CRF.	Initiative	Road - Affordable
TS	CBX	91% of Clackamas County residential Sites have broadband access based on current Federal Communication Commission 25/3 broadband specifications. Based on 161,295 residential sites per the American Community Survey of 2019, 14,526 residential sites qualify as Unserved or Underserved.	Result	Broadband Access
TS	CBX	By Q4 2022, CBX will determine TBD % of Clackamas County Sites, with access, have affordable access based on current estimated rates of ~ \$64.95 / month for 100/100 Mbps. Based on 161,295 residential sites with the TBD sites qualifying as affordable rates for given service	Result	Broadband Affordable
TS	CBX	By Q3 2021, CBX will develop and propose a Business Plan that addresses the business model, goals and ISP Role. Includes approval of plan by BCC.	Initiative	Broadband Access
TS	CBX	By Q1 2022, CBX will develop a rolling 3 year plan for the prioritization of infrastructure builds as resources allow and requirements maintain.	Initiative	Broadband Access
TS	CBX	By Q1 2023, CBX will develop partnerships with Internet Service Providers to cover all un/underserved regions of the County as infrastructure builds make accessible	Initiative	Broadband Access
TS	CBX	By Q4 2022, CBX will have ongoing annual plan for applying for / develop sources of additional funds such as grants, fees, services, LIDs etc to assist funding CBX growth, support and initiatives.	Result	Broadband Access
TS	CBX	By Q4 2022, CBX will develop metrics to identify levels of affordability. Will include initial opportunities for affordable access to Internet services. Will include the identification of initial potential resources and methodologies to meet the affordability goal.	Initiative	Broadband Affordable

TS	CBX	CBX will coordinate a process to develop resources / method to reduce annually the ISP costs by TBD% of the goal for affordable rates – process to be determined	Result	Broadband Affordable
TS	CBX	By Q4 2022, CBX will develop an annual plan to supplement CBX funding by use of other funding opportunities and / or services. Metric includes subsidy of funding by TBD%	Result	Broadband Access

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Activities Status to Date

	Status
<p>September 2020 - TC WRRF Solids Handling Improvements Project In September 2020, the new digestion and dewatering systems were put into operation.</p>	COMPLETE
<p>February 2021 – Sewer Rate Affordability In February 2021, WES staff presented to the WES Advisory Committee a financial strategy to use system development charge (SDC) funds to repay debt to the extent eligible, thereby reducing pressure for rate increases. The strategy was recommended by the WES Advisory Committee and incorporated into the FY 2021-22 budget, enabling WES to present FY 2021-22 rate increases averaging just 0.68%, well below the previously-forecasted 5% annual increase required to meet WES’ capital financing needs.</p>	COMPLETE
<p>June 2021 – 20 Year Sewer Capital Improvement Plan A Hoodland Master Plan was completed in 2017. The Sanitary System Master Plan provided a 20 year capital plan for our collection and conveyance system and was completed in Jan 2019. The Boring Facilities Plan was completed in 2020. The Willamette Facilities Plan will provide a 20-year capital plan for the Kellogg Creek and Tri-City WRRFs is scheduled to be complete in Summer 2022.</p>	ONGOING
<p>June 2021 – Sewer Risk-based Asset Management Plan WES initiated the Willamette Facility Planning project Fall of 2019 that supports filling asset attribute data gaps to successfully build the risk-to-cost decision matrix. We have acquired missing equipment age and established baseline condition data for our assets at the Tri-City and Kellogg Water Resource Recovery Facilities (WRRF). We have updated our business exposure risk evaluation metrics that assess the likelihood and consequence of an asset failure. The enhancement of our data, coupled with capital budget estimates, supports rigorous data-driven asset management plans.</p>	ONGOING
<p>June 2021 – Sewer Rate Affordability The Board of County Commissioners adopted sewer rate increases for FY 2021-22 of approximately 1.5% by rate component (the impact of a decrease in the legacy debt service fee for Rate Zone 2 reduced the increase for all service categories and areas to an overall average of 0.68%).</p>	COMPLETE

<p>October 2019– 5 yr Community Road Fund Plan The CRF Advisory Committee developed a recommended 5-yr project plan benefitting local roads, safety and congestion relief across the county.</p>	
<p>June 2020 – PCI Assessment Average PCI (non-urban local) was measured at 69 while urban local roads were estimated at 55.</p>	
<p>March 2020 – CRF Congestion Relief Projects Began design of our first congestion relief project funded by the CRF. Currently there are 3 in the design phase. First construction project scheduled for 2022.</p>	
<p>June 2021 (Confirm) CRF Safety Project Completed the first road safety project using CRF.</p>	
<p>June 2020 (Confirm) – CRF Local Road Paving Completed the first local road paving package using CRF.</p>	
<p>Completion of Transit Development Plan (May 2021)</p>	
<p>Implementation of the Last Mile Shuttles in Oregon City and Clackamas Industrial Area</p>	
<p>Successful pilot project funding for Jobs Connector Shuttle between Oregon City / West Linn and Tualatin</p>	
<p>Business Plan – CBX Business Plan completed and presented to BCC. Approved to proceed as recommended by the plan. CBX will continue to build and lease dark fiber infrastructure. CBX will not provide direct ISP services but will partner with local ISP companies where CBX provides the fiber plant and ISPs the Internet service and support.</p>	COMPLETE
<p>Fiber Plant Expansion – In 2021, CBX has added an additional 18 miles of primary infrastructure fiber. In 1st half of 2022, an additional 6 miles has been added. The direct fiber connection to Denver for backup Internet connectivity is 100% complete. Additional fiber expansion for new and current customers add additional sites for connectivity as requested.</p>	IN-PROGRESS Denver Build – COMPLETE
<p>Underserved Access – Produced list of proposed projects to resolve the “less expensive, greater impact” areas. Construction started on phase 1 and approved expansion into phase 2 of ARPA projects. This will reach an expected total 1,536 homes. Finalizing proposals, starting fiber & design procurement and providing public communications.</p>	IN-PROGRESS
<p>ISP Partnerships - SandyNet current partner, expanding to ARPA sites. Talking to Government Camp Cable, Wave Broadband, Reliance Connects, City of Sherwood and Comcast as additional partners on ARPA. Outreach continues. Assuming ~2,694 homes passed with completion of ARPA project, 1.67% of total County would be covered.</p>	IN-PROGRESS 2.03% of County Covered by completion of ARPA
<p>Funding Resources – Reviewed several potential sources such as NTIA BIP Grant – Clackamas County does not have enough qualifying areas. Current ARPA funding set for \$10.1M. Currently reviewing BEAD funding as part of the IJA for additional funding to reach unserved areas of Clackamas County. Will continue to review all potential funding sources. Will utilize professional services to assist.</p>	IN-PROGRESS ARPA - \$10.1M Researching BEAD Other – In-progress
<p>Affordable Access – No definition set for affordable internet, working on the definition and logistics. Working with professional contractor to determine standard for affordability. Also need funding models, specifications for affordability, metrics and on-going resources. Working on some potential program with partner ISPs to provide affordable rates as part of program.</p>	ANALYSIS STARTED

Other Potential Services – Resale of Denver Internet Hub Connections in-progress. Initial discussion around other potential services in-progress. Reviewing potential use of CBX fleet and engineers to support other non-CBX construction and service project. Further resource and finance analysis required.	IN-PROGRESS
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Activities Planned for FY 22

Activity	Q1: July-September	Q2: October-December	Q3: January-March	Q4: April-June
WES Financial Strategies	Meet with WESAC to further present strategies around rates, reserves, and capital project funding.		WESAC indicates support for proposed financial strategies.	Present to BCC
TC Solids Handling Project	Project completion is scheduled for August – September.	Project completed		
20 year Sewer Capital Improvement Plan	The plan will be finished with the completion of the Willamette Facilities Plan.			Present to BCC
Risk-based Asset Management Plan	Our risk model and asset renewal/replacement plan has been developed. We have identified critical assets and will be working with operational staff later this summer to advance prioritized scheduled maintenance programs and resiliency planning.	Completed		
Updated 5-year CIP for 2021 - 2026	Document development		Alignment with Financial Plan	Present to BCC
Sunrise Gateway Visioning Project	Scope of work development	Scope of work / procurement	Project initiation	Initial community engagement
2022 Paving Package	Design of the 2022 paving package	Design of the 2022 paving package	Bid the 2022 package	Begin construction

2022 CRF Congestion Relief	3 projects in design phase through the fiscal year.	3 projects in design phase through the fiscal year.	3 projects in design phase through the fiscal year.	Canby Marquam / Lone Elder intersection improvements scheduled for 2022 construction.
2022 Paving Package	Design of the 2022 paving package	Design of the 2022 paving package	Bid the 2022 package	Begin construction
2022 CRF Safety Projects	Design	Design	Bid	Begin construction
Bike/Walk Plan (Updates to the pedestrian and bikeway plans)	Scope of work development with consultant	Project initiation and existing conditions	Community engagement and project identification	Community engagement and project development
Secure additional funding for future transportation projects		Submit applications for Federal Lands Access Program	Identify other funding opportunities	
Transportation System Plan - Update				Initiate Scope of Work development for Update of the Transportation System Plan
Hired CTC Technology & Energy to provide federal and state grant support for FY 21/22	Finalize initial ARPA project proposals, affordability research	Finalize the ARPA projects and partnerships with ISPs to provide internet service		
Purchase fiber cable for all ARPA projects	Procure contractor / Fiber for ARPA projects' designs	Procure contractor / Fiber for ARPA projects' designs	Start Construction	Construction Continues
Begin Community Outreach for the ARPA projects	Market Denver Internet connectivity	Initial community outreach and proposal review	Project Surveys to determine utilization, affordability options plan	

Overall Status/Progress

What's Working Well	Barriers/Challenges
Local Coordination - Evolving relationships with partners like Happy Valley through joint participation in the Clackamas to Columbia Corridor Plan	Changes to ADA requirements have made sidewalk projects more expensive.
New funding source (CRF) gives us tools to improve more roads to make them better and safer.	Need clarity around "affordability"

Partnership between H3S – Social Services and DTD on the coordination, planning and implementation of transit	There are multiple transit service providers, with the County having limited control over funding
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Working with community advisory groups to assist in prioritizing multi-modal infrastructure investments	The need for transportation infrastructure improvements for all modes far exceeds the resources that will be available to pay for them.
Initial partnerships with most ISP as partners going well	Meeting requirements of most funding sources based on current requirements, specifications may change over time
CBX has own vehicle fleet and staff to reduce costs and maintain availability	Lack of additional funding to cover under-served areas as well as increasing costs for more remote areas
Support from the County BCC and Administration	Need to order fiber to prevent lack of availability impacted projects
Partnerships with other agencies to utilize / expand fiber infrastructure	Lack of qualifying areas for federal grants based on current specifications
	Lack of definition / resources / measurement for “Affordability”

Changes recommended due to COVID or other factors

Recommended Change	Reason
N/A	