

Lewis County Dig-Once Pilot Project Review Recommendations for Statewide Policy



Pursuant to the 2022 State Capital Budget, Laws of 2022, Chapter 296 (SB 5651, Section 1050)

LOCAL GOVERNMENT DIVISION

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Report to the Legislature

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Acknowledgments

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Executive Summary

Overview

Lewis County Dig-Once Pilot

The [2022 Supplemental Capital Budget, Section 1050](#) asked the Department of Commerce, in coordination with the SYNC System Improvement Team, state Department of Transportation and the Economic Alliance of Lewis County, to implement and assess the potential cost savings of Lewis County's regional dig-once approach. The proviso language for the Dig-Once Pilot Program in Lewis County covered fish passages, broadband, water, sewers, roads and transportation. Unanticipated benefits emerged during the pilot project, including the benefit of attracting housing projects and the ability to prepare for upcoming economic development that will support and host new technologies including proposed hydrogen facilities.

This report offers an overview of the regional approach taken by Lewis County Economic Alliance, as the lead coordinator, to collect information from multiple jurisdictions using GIS mapping in order to collectively visualize opportunities for regional project planning and dig-once project delivery. The report includes the budget estimates needed to complete implementation of Lewis County's regional Dig-Once Pilot.

Recommendations for implementation of a statewide dig-once policy

The second directive of the budget proviso was to report recommendations to implement a statewide dig-once policy to the Office of Financial Management (OFM) and fiscal committees of the Legislature. During this time when substantial infrastructure funding for roads and various utilities is becoming available, it is important that local governments, state agencies and various local partners begin to build funding strategies that can help strengthen local capacity for project management and delivery. Recommendations set forth in this report aim to make it easier for local jurisdictions to minimize local disruption and maximize efficiencies.

Highlights

The concept of dig once is not new to infrastructure funding or construction, and now is a good time to put these strategies into practice to help maximize benefits and efficiencies. Dig once can work, and it can save local and state governments capital infrastructure dollars that reduce long-term debt and free up resources for additional projects. Dig once requires local engagement to access funding and coordinate planning, design, permitting, and construction of multiple projects at the same time. There are small, rural and distressed communities with infrastructure beginning to show signs of failure across the state, yet they have neither the ability to take on additional debt nor the technical or managerial capacity to implement a cost-effective regional dig-once approach. This is an opportunity for the state to build equity and support small, rural, underserved, and financially challenged communities facing the need to invest in critical infrastructure.

Recommendations

1. Establish funding mechanism to support flexible financing for regional dig-once projects.
2. Harmonize the program policies and applications of state infrastructure funders participating at SYNC to sequence timing of funding and construction projects with a dig-once approach.
3. Support local leadership to develop regional dig-once approaches.
4. Encourage local leaders to coordinate with broadband action teams (BATs) and broadband service providers to identify areas to accelerate planned broadband expansion and lay conduit for future use.
5. Support efforts to publish maps illustrating state and local transportation and other infrastructure projects to enhance awareness of dig-once opportunities.

Introduction

The [2022 State Supplemental Capital Budget \(Section 1050\)](#), directed the Department of Commerce (Commerce) in coordination with SYNC, the Washington State Infrastructure System Improvement Team, to implement a Dig-Once Pilot Program to:

Identify opportunities to dig once and bury fiber optic cables and conduits, repair water or sewer pipes, and repair roads, bridges, and sidewalks at the same time. The goals of the pilot program include minimizing local disruption, maximizing efficiencies, and demonstrating the ability to achieve cost savings to state and local governments. The pilot program must be implemented in Lewis County in collaboration with the department of transportation and the economic alliance of Lewis County.

(1) The department of transportation and local governments must collaborate with the department to identify and coordinate projects in Lewis county that require excavation work on public property, such as projects improving fish passage barriers, roads, broadband, water, wastewater, or stormwater infrastructure.

(2) The department must report to the office of financial management and fiscal committees of the legislature by December 1, 2022, regarding the implementation and potential cost savings of the dig-once pilot program and any recommendations related to implementation of a statewide dig-once policy.

Commerce worked directly with local and state partners identified in the proviso, including the [Economic Alliance of Lewis County](#), participating local governments, required state agencies, and other stakeholders, to assess and support implementation of proposed infrastructure projects in Lewis County. Commerce explored state-wide improvements and strategies with SYNC partner agencies to meaningfully incentivize and support regional dig-once approaches across the state. The main incentive is to ensure reliable funding for projects that are doing the hard work to get projects planned and constructed within similar time frames to create cost savings for the community at large.

Outreach and interviews for this report included:

- Association of Washington Cities
- Washington Public Utility District Association
- Washington Association of Sewer and Water Districts
- Washington State Association of Counties
- Economic Alliance of Lewis County
- Lewis County - Infrastructure and Housing Specialist
- Department of Ecology - Clean Water State Revolving Fund
- Department of Health - Drinking Water State Revolving Fund
- Transportation Improvement Board
- Washington State Department of Transportation
- Department of Commerce
- Public Works Board
- U.S. Environmental Protection Agency
- USDA Rural Development

Why dig once?

According to a 2012 study by the US Government Accountability Office (GAO), coordinated timing of transportation and broadband projects can create taxpayer savings on labor, equipment and materials up to 16% per mile in rural areas and up to 33% per mile in urban areas¹. Local governments are facing increased demand to address aging infrastructure, relocate utilities, provide access to broadband and meet legal obligations to address improved fish passage through culvert replacement projects. Unprecedented federal investment for all things infrastructure (broadband, water, sewer, stormwater, fish passages, transit, roads, bridges and energy) presents an opportunity to pursue a statewide dig-once approach that incentivizes coordination of project delivery and removes barriers for local jurisdictions to proactively align multiple projects where excavation work is required.

This report thereby considers a dig-once approach that goes beyond broadband implementation to encourage local and state transportation project proponents to communicate upcoming opportunities to other infrastructure providers so that they can coordinate the installation or repair of other systems during ground disturbance in the Right of Way (ROW) and meet these increasing demands in an efficient and cost effective manner.

Lewis County Dig-Once Pilot

Strengthening communities and growing Washington's economy starts with building relationships and partnerships. The budget proviso directed Commerce to engage local partners, leverage state infrastructure expertise, and offer project support to Lewis County to implement and then assess the cost savings from a dig-once approach. The concept of a locally driven regional infrastructure coordination effort began when the Economic Alliance of Lewis County utilized American Rescue Plan Act (ARPA) funds to develop an [interactive GIS map](#).

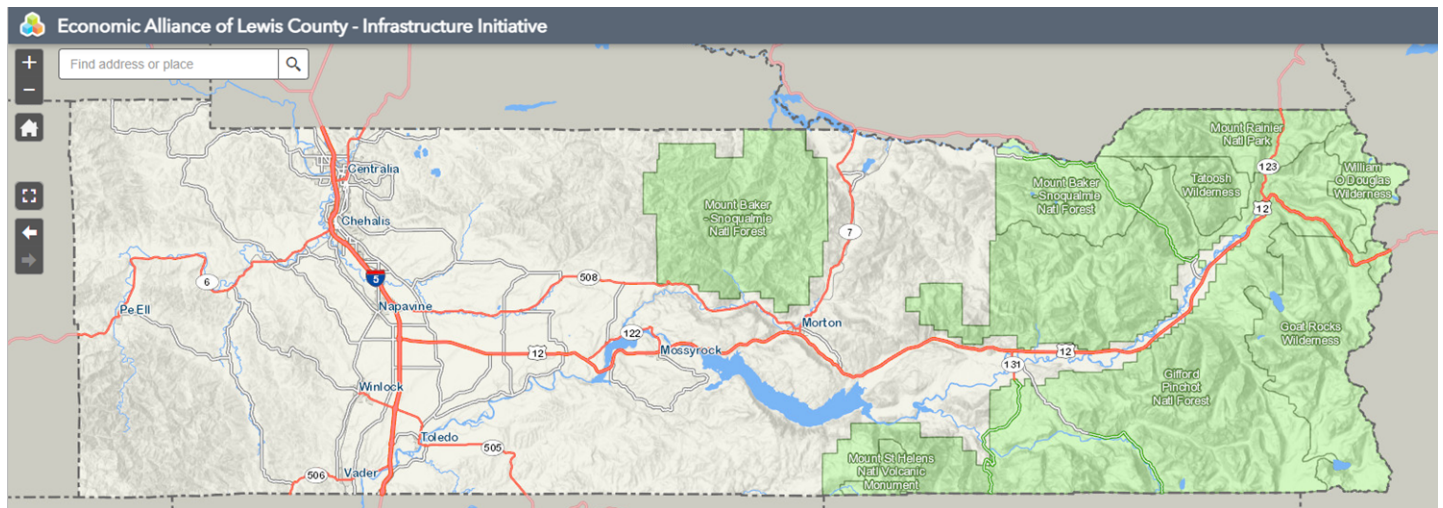
The map enabled local, county and state agencies, as well as private organizations, to visualize all planned infrastructure projects and proposed development throughout the county on a single map to spur dig-once coordination. This mapping effort highlighted two critical projects for dig-once coordination, but neither was fully funded. To support implementation of the pilot project and cost savings analysis, Commerce and the Alliance estimated the funding deficits preventing full implementation of coordinated and sequenced projects in Lewis County.

The Alliance worked in partnership with:

- Lewis County
- Local cities and towns (Pe Ell, Centralia, Chehalis, Napavine, Winlock, Toledo, Vader, Mossyrock and Morton)
- State agencies: Washington State Department of Transportation (WSDOT), Washington Department of Natural Resources (DNR) and Department of Fish and Wildlife (DFW)
- Public and private utilities and industry: Boistfort Valley Water, Birchfield Water, BNSF Railway, Lewis County Public Utility District, ports and private developers.

¹ [Planning and Flexibility Are Key to Effectively Deploying Broadband Conduit through Federal Highway Projects | U.S. GAO](#) published Jun 27, 2012.

Figure 1. Economic Alliance of Lewis County interactive GIS map



The development of the interactive map represented the beginning of the Lewis County Dig-Once Pilot. The goal was to understand what it would take to pull together a regional dig-once approach for culvert removals alongside multiple infrastructure investment needs in the region. Building collective motivation to plan together and jointly compile the layers for an interactive mapping tool required significant effort and resources. Jurisdictions with less capacity came to a common space to plan together, which increased local capacity and provided technical assistance for smaller jurisdictions in Lewis County to advance their infrastructure project needs. Looking to the future, this work set the stage for more planned and coordinated projects.

Budget needs

The Lewis County Dig-Once Pilot aims to test cost effectiveness of coordinating and sequencing multiple projects at a regional scale. The local partners, working with the Department of Commerce, discussed current planning and reviewed opportunities visualized using the GIS mapping tool. This led to a collective realization that incorporating additional infrastructure improvements both supports economic opportunities and opens up affordable and middle housing development. Commerce worked with the Economic Alliance of Lewis County to develop a cost estimate for two separate projects totaling \$10 million to support projects that if sequenced and coordinated at a basin-wide scale, are likely to achieve between 16% to 33% cost savings and result in several environmental, social and economic benefits.

1. Rush Road (combined project) – \$7.5 million total

In the past, multiple public agencies including Lewis County, state agencies, the City of Chehalis and the Port of Chehalis have made ad hoc improvements to portions of Rush Road; funding for the remaining efforts has been a challenge. Rush Road improvements are phased over several years. Remaining improvements include but are not limited to widening the roadway and shoulders, installing curbs, gutters, and sidewalks, improving road base stabilization and illumination, creating intersection modifications, incorporating ADA improvements and replacing a fish barrier on an unnamed tributary to the Newaukum River.

This project becomes even more critical with anticipated increased traffic at I-5 and Rush Road resulting from new development at the Port of Chehalis. Improving Rush Road at this time allows for other infrastructure improvements that ensure water flow capacity for the Port which aligns with a plan for a Hydrogen Fueling Station to support Lewis County's initiative to be a Hydrogen Hub for Transit. This

investment supports roadway improvements as well as water and sewer system services for future affordable and middle housing development.

2. Reynolds Road and Harrison Avenue improvements for planning and engineering – \$2.5 million

Project scope allows for: Harrison Avenue Road Corridor Improvements, Ford's Prairie Interceptor, Harrison Water Main, Railroad At-Grade Crossing, Switching Track and Switch Replacement, Reynolds Road Corridor Improvements, Coffee Creek Fish Barrier Replacement and upgrades and expansion of multiple utilities, including sewer service extension and consideration of broadband conduit. As with the Rush Road project, this project also supports affordable and middle housing developers.

The budget estimates stemming from the Lewis County Dig-Once Pilot highlight the importance of access to capital funding (as grants or loans) in time to achieve cost-effective sequencing for implementing projects.

3. Promote local dig-once coordination through a second dig-once pilot project

Work with interested communities to coordinate regional dig-once approaches helps increase local capacity and ensure efficient planning and construction of multiple infrastructure services. There is an opportunity to document efficiencies gained by coordinated regional infrastructure planning and construction in furtherance of a statewide dig-once policy.

Opportunities and challenges to a dig-once approach

While the dig-once approach provides great opportunities to achieve cost savings; reduce economic, social and environmental impact of construction projects; and capitalize on increased services for the region, there are reasons why dig-once approaches are considered too challenging to achieve in practice:

1. Dig once requires ongoing coordination and facilitation to assist project delivery, including aligning planning, permitting, design, funding and construction for multiple projects so that they can dig once. Some jurisdictions might have existing resources to provide these services, while other communities, such as small and rural communities, might not. If local capacity for coordination is limited, there is the option of hiring consultants for these services, provided the availability of sustained resources for this purpose.
2. Funding sources for each project need to be available within a similar time period so that projects aligned to dig once stay on schedule.
3. Dig once requires significant project management and an agreement to try to reduce design and schedule changes at critical points in the project so that schedule-based dependencies remain on track.
4. Contract agreements need to spread administration costs across project funds and assets as well as address broadband conduit ownership and future access rights.
5. Project coordination requires communication about opportunities to install fiber or conduit and other ROW construction activities with nearby communities including Broadband Action Teams (BATs) that include both public and private broadband service providers.
6. Each county (or larger region) needs to have a clear understanding of projects that might be sequenced to dig once. An inventory of projects similar to the Lewis County experience can identify and create dig-once efficiencies on a county-wide scale. Local coordinators and partners, with assistance from state partners, could create and maintain this information.

Statewide policy recommendations

1. Establish funding mechanism to support flexible financing for regional dig-once projects.

Flexible and affordable funding for rural, small and underserved communities provides needed capital for multiple infrastructure projects with identified system improvements and broadband service needs to receive funding within a single award, or multiple awards in a similar timeframe. Options for funding mechanisms include:

- Make projects whole through a new funding program administered through Commerce and coordinated with SYNC partner agencies to provide bridge funding to fill funding gaps not covered by other awards.
- For state highway projects, utilize WSDOT statutory authority ([RCW 47.44.160](#)) to incorporate broadband facilities and infrastructure and charge fees to recover costs.

These funds should be noncompetitive, first-come first-served for rural, small and underserved communities that demonstrate ability for taking a dig-once approach. This includes access to grants or forgivable loans for portions of a project that support infrastructure, such as locally owned fish passages. Eligibility for dig-once funding should include:

- A local lead coordinator/facilitator or equivalent services
- Substantial road improvements included in transportation portion of the project
- Multiple infrastructure services (water, wastewater, broadband, stormwater, fish barriers, energy) extended, upgraded or relocated
- Existing or proposed local agreements to coordinate project planning, design, funding and delivery
- Considered distressed or disadvantaged based upon the definitions of distressed area under [RCW 43.168.020 \(3\)](#) or disadvantaged community based on [Washington State health disparities map](#) or [Federal Justice40 Initiative criteria](#).

2. Harmonize the program policies and applications of state infrastructure funders participating at SYNC to sequence timing of funding and construction projects with a dig-once approach.

The members of [SYNC](#) (Public Works Board, Transportation Improvement Board, Ecology, Health, Commerce and Transportation) agree to be active participants with community coordination efforts on project proposals that adhere to a dig-once approach.

To assist local leaders to dig once and advance their infrastructure projects, the state infrastructure funders at SYNC commit to exploring and implementing coordinated program policies and identifying opportunities in their funding applications to sequence timing of funding to support multiple projects that could be implemented within the same time and space. These efforts highlight both state-funder-to-state-funder and state-to-local funding coordination and ease the administrative burden on communities to distill information about state awards in their county or region: making dig-once efforts easier to access. These policies and opportunities will build capacity for small and distressed communities to take on the local leadership role and deepen coordination with state infrastructure funders in the process.

3. Support local leadership to develop regional dig-once approaches.

Small and distressed communities need planning and technical assistance funding to coordinate across jurisdictions. Local leadership of dig-once efforts creates a single point of contact for coordination of local infrastructure project delivery, including compilation of planned infrastructure projects in a comprehensive map view. The role of the Economic Alliance of Lewis County in the Lewis County Dig-Once Pilot demonstrates the value of local leadership to galvanize county or region-wide support to gather information, communicate project schedules and implement dig once. The implementation of tools to support local efforts include:

- Piloting local models that utilize Economic Alliances, Economic Development Councils, Council of Governments or other locally-driven entities with capacity to coordinate across jurisdictions.
- Utilizing information from existing planning processes and combining with developing public works projects.
- Offering state support for financial and technical assistance in communities interested in utilizing GIS mapping to visualize proposed future capital infrastructure project needs and opportunities.
- Building local capacity through the SYNC's technical assistance efforts. Share lessons learned from the Lewis County Dig-Once Pilot and apply a dig-once approach in other regions of the state to develop supportive trainings for regional dig-once approaches.
- Developing template documents and related agreements for local jurisdictions to consider and use as they coordinate planning and construction activities.

4. Encourage local leaders to coordinate with BATs and broadband service providers to identify areas to accelerate broadband expansion and lay conduit for future use.

Regional infrastructure coordination efforts should engage BATs and broadband service providers to accelerate broadband expansion by identifying areas for possible investments in broadband service and leveraging efforts of local BATs. This coordination connects regional planning with the needs and desires of the community and will better identify early opportunities to dig once and place broadband conduit, if not full fiber infrastructure, during ground disturbance for transportation or other public works projects.

5. Support efforts to publish maps illustrating state and local transportation projects to enhance awareness of dig-once opportunities.

Transportation projects are the primary catalyst for dig-once opportunities. Published maps of intended state and local projects assist dig-once coordination and delivery of multiple infrastructure projects. County-wide or regional compilations of planned infrastructure projects, similar to the Lewis County interactive GIS map, enable regional collaboration of dig-once opportunities.

Cities, counties and WSDOT publish planned capital improvement plans and update them on a regular basis, but there are not widely available visual representations of these planned projects. Visualizing planned regional infrastructure investments enhances awareness of opportunities to coordinate project planning and construction in order to dig once for broadband action teams and broadband service providers, other utility providers and private developers.

Examples of state, regional and local transportation project lists and maps currently available include:

- [WSDOT construction and planning projects \(searchable database\)](#)

- [Metropolitan and Regional Transportation Improvement Program \(GIS map\)](#)
- [Puget Sound Regional Council - Transportation System Conditions Tool \(GIS map\)](#)

Conclusion

This report highlights what we have learned about the challenges and opportunities that come with coordinating a regional dig-once approach with the Lewis County Dig-Once Pilot participants and partners. This includes nine months of work by Commerce and includes nearly two years of effort invested by local partners to establish a local coordinating group.

The projects identified in this report have not yet been fully funded and construction has not taken place which makes it difficult to calculate actual versus anticipated savings. However, increased federal and state funding of infrastructure is an exciting opportunity to realize regional level community aspirations. Yet without mechanisms to support the local coordinating bodies, the concept is hard to put into practice. State infrastructure funders have an opportunity to make it easier to access funding for projects that achieve multiple objectives and create wide-ranging benefits. The regional dig-once approach is able to identify and visualize local infrastructure needs that promote economic growth and prosperity.

Small and lower-capacity regions face barriers to access capital resources that align multiple projects simultaneously and achieve the cost savings and efficiencies. This leads to reduced capacity to deliver needed cost-effective, system-wide improvements. The proposed policy considerations will incentivize and facilitate regional dig-once opportunities across the state.

The example presented from the pilot approach taking place in Lewis County sets forth a practice for local/regional economic development entities to play the role of coordinator/facilitator. Mapping tools can do two things:

- 1) The mapping exercise is a team-based approach to telling the region's story. It puts into action options for continued coordination and shared expenses.
- 2) Sets a path forward for planning and design at geophysical and cross-jurisdictional boundaries.

Construction completion and budget estimates for Lewis County and additional pilot projects elsewhere in Washington are essential for providing a proof of concept that locally led regional approaches, combined with access to flexible funding for multiple coordinated projects, builds needed infrastructure services cost effectively and with minimal interruptions.

Equity is a foundation for state infrastructure funding. To ensure equitable and resilient infrastructure, the state has a role to play to make easy to access funding available regardless of political and economic connections. A loan and grant program set up solely to support local regional dig-once projects will give local jurisdictions equitable access and incentive to coordinate and find the cost savings that can be achieved when projects that disturb roads and earth are done in concert with one another.