

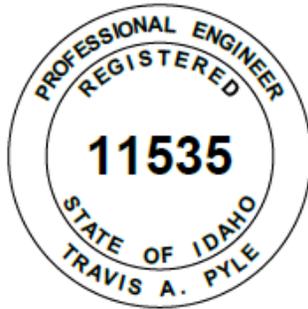
BONNER COUNTY SOLID WASTE

USDA Rural Development Funding Support

Preliminary Engineering Report

April 2021





This document was prepared under the direct supervision of Travis A. Pyle, a registered Professional Engineer in the State of Idaho, employed at Great West Engineering, Inc.

DRAFT

Table of Contents

| | |
|---|-----------|
| 1.0 EXECUTIVE SUMMARY..... | 1 |
| 1.1 Problem Definition | 2 |
| 1.2 Alternatives Considered..... | 2 |
| 1.3 Recommended Alternative..... | 3 |
| 1.4 Project Funding and Schedule | 3 |
| 2.0 PROJECT PLANNING..... | 4 |
| 2.1 Location..... | 4 |
| 2.2 Environmental Resources..... | 7 |
| 2.2.1 Physiography and Topography | 7 |
| 2.2.2 Geology and Soils..... | 9 |
| 2.2.3 Surface and Ground Water Hydrology..... | 10 |
| 2.2.4 Fauna, Flora, and Natural Communities | 11 |
| 2.2.5 Housing, Industrial, and Commercial Development..... | 11 |
| 2.2.6 Cultural Resources | 13 |
| 2.2.7 Utility Use..... | 14 |
| 2.2.8 Floodplains and Wetlands..... | 14 |
| 2.2.9 Wild and Scenic Rivers..... | 15 |
| 2.2.10 Public Health Considerations | 16 |
| 2.2.11 Existing Solid Waste System in the Proposed Project Area | 16 |
| 2.2.12 Prime Agricultural Land Protection..... | 16 |
| 2.2.13 Land Use and Development..... | 17 |
| 2.2.14 Environmental Justice..... | 17 |
| 2.2.15 Precipitation, Temperature, and Prevailing Winds..... | 17 |
| 2.2.16 Air Quality and Noise..... | 17 |
| 2.2.17 Energy Production and Consumption | 17 |
| 2.2.18 Green Infrastructure and Sustainability | 17 |
| 2.2.19 Socioeconomic Profile | 18 |
| 2.3 Population Trends..... | 18 |
| 2.4 Community Engagement..... | 20 |
| 2.5 Regulatory Requirements | 20 |
| 3.0 EXISTING SOLID WASTE FACILITIES..... | 22 |
| 3.1 Location Map..... | 22 |
| 3.2 History | 22 |

| | | |
|--------------|---|-----------|
| 3.3 | Condition of the Solid Waste System..... | 22 |
| 3.3.1 | Overall Description of the System..... | 22 |
| 3.3.2 | Colburn Transfer Site | 23 |
| 3.3.3 | Rural Collection Sites | 28 |
| 3.3.4 | Waste Management Disposal Contract..... | 34 |
| 3.3.5 | Operation and Maintenance | 34 |
| 3.4 | Financial Status of Solid Waste System | 37 |
| 3.5 | Solid Waste Generation | 38 |
| 3.6 | Solid Waste Collection Sites Service Areas..... | 39 |
| 3.7 | Special Wastes, Recyclables & Waste Diversion | 41 |
| 3.8 | Recycling Alternatives | 41 |
| 3.9 | Waste Projections | 42 |
| 4.0 | NEED FOR THE PROJECT | 43 |
| 4.1 | Health, Sanitation, and Security..... | 43 |
| 4.1.1 | Colburn Transfer Site | 43 |
| 4.1.2 | Rural Collection Sites | 43 |
| 4.2 | Aging Infrastructure..... | 43 |
| 4.2.1 | Colburn Transfer Site | 43 |
| 4.2.2 | Rural Collection Sites | 44 |
| 4.3 | Reasonable Growth | 44 |
| 4.3.1 | General Organization Context | 44 |
| 5.0 | SOLID WASTE SYSTEM ALTERNATIVES..... | 45 |
| 5.1 | Description of Alternatives | 45 |
| 5.1.1 | Optimal Operation of Existing Facilities | 45 |
| 5.1.2 | Solid Waste System Alternatives Screening..... | 45 |
| 5.2 | Design Criteria..... | 54 |
| 5.2.1 | Transfer Alternatives | 54 |
| 5.2.2 | Rural Collections Alternatives | 55 |
| 5.3 | Site Plan / Schematics | 55 |
| 5.3.1 | Transfer Alternatives | 55 |
| 5.3.2 | Rural Collection Site Alternatives | 55 |
| 5.4 | Environmental Impacts..... | 55 |
| 5.4.1 | Transfer Alternatives | 55 |
| 5.4.2 | Rural Collections Alternatives | 55 |
| 5.5 | Land Requirements..... | 55 |
| 5.5.1 | Transfer Alternatives | 55 |
| 5.5.2 | Rural Collection Site Alternatives | 56 |
| 5.6 | Potential Construction Problems..... | 56 |

| | | |
|------------|--|-----------|
| 5.6.1 | Transfer Alternatives | 56 |
| 5.6.2 | Rural Collections Alternatives | 56 |
| 5.7 | Sustainability Considerations | 56 |
| 5.7.1 | Transfer Alternatives | 56 |
| 5.7.2 | Rural Collections Alternatives | 56 |
| 5.8 | Cost Estimates | 56 |
| 5.8.1 | Transfer Alternatives | 57 |
| 5.8.2 | Rural Collections Alternatives | 57 |
| 5.8.3 | Total Project Estimated Costs | 58 |
| 5.9 | Annual Operating Budget..... | 59 |
| 5.9.1 | Transfer Alternatives | 59 |
| 5.9.2 | Rural Collections Alternatives | 59 |
| 6.0 | SOLID WASTE SYSTEM ALTERNATIVES ANALYSIS | 60 |
| 7.0 | PROPOSED PROJECT | 61 |
| 7.1 | Preliminary Project Design..... | 61 |
| 7.1.1 | Colburn Transfer Site | 61 |
| 7.1.2 | Rural Collection Sites | 67 |
| 7.2 | Project Schedule | 67 |
| 7.3 | Permit Requirements | 68 |
| 7.4 | Sustainability Considerations | 68 |
| 7.5 | Organizational and Staffing Requirements | 68 |
| 7.5.1 | Colburn Transfer Site | 68 |
| 7.5.2 | Rural Collection Sites | 68 |
| 7.6 | Total Project Cost Estimate (Engineer’s Opinion of Probable Cost)..... | 69 |
| 7.7 | Financing Options | 69 |
| 7.8 | Annual Operating Budget..... | 69 |
| 8.0 | CONCLUSIONS AND RECOMMENDATIONS | 71 |
| 9.0 | REFERENCES..... | 72 |

List of Exhibits

| | | |
|--------------|---|----|
| Exhibit 2-1. | Idaho Counties Map | 4 |
| Exhibit 2-2. | Bonner County Solid Waste Collection Sites | 6 |
| Exhibit 2-3. | Bonner County USGS Map | 8 |
| Exhibit 2-4. | Rathdrum Prairie (Sole-Source) Aquifer Limits..... | 10 |
| Exhibit 2-5. | Bonner County Zoning Map | 12 |
| Exhibit 2-6. | National Register of Historical Places in Idaho (Bonner County) | 13 |
| Exhibit 2-7. | Wild and Scenic Rivers Map (Bonner County Area – St. Joe River) | 15 |

| | |
|---|----|
| Exhibit 2-8. Bonner County Population Charts | 19 |
| Exhibit 3-1. Public Entry Area (Colburn) | 25 |
| Exhibit 3-2. Waste Transfer Building Showing Dilapidated Exterior (Colburn)..... | 25 |
| Exhibit 3-3. Waste Transfer Building Interior Showing Floor and Push Walls (Colburn)..... | 26 |
| Exhibit 3-4. Aerial View of Waste Transfer Building Showing Waste Piles (Colburn) | 26 |
| Exhibit 3-5. Closed Household Hazardous Waste (HHW) Facility (Colburn) | 27 |
| Exhibit 3-6. Front Entry Showing Unpaved Areas (Dickensheet) | 29 |
| Exhibit 3-7. Failing Eco-Block Retaining Wall (Dickensheet)..... | 29 |
| Exhibit 3-8. Compromised Retaining Wall (Dickensheet) | 30 |
| Exhibit 3-9. Proposed Location for New Container Z-Wall (Top Left) (Dufort) | 31 |
| Exhibit 3-10. Unpaved Areas (Dufort) – Change Out pic showing existing retaining wall | 32 |
| Exhibit 3-11. Unpaved Areas (Idaho Hill)..... | 33 |
| Exhibit 3-12. Failing Eco-Block Container Wall (Idaho Hill)..... | 33 |
| Exhibit 3-13. Bonner County Population and Waste Tonnage Chart (1994-2020)..... | 39 |
| Exhibit 3-14. Bonner County Full-Service Collection Site Service Area | 40 |
| Exhibit 5-1. Bonner County Center of Waste Mass | 49 |

List of Figures

| |
|--|
| Figure 3-1. Colburn Site Existing Site Plan |
| Figure 3-2. Dickensheet Site Existing Site Plan |
| Figure 3-3. Dufort Site Existing Site Plan |
| Figure 3-4. Idaho Hill Site Existing Site Plan |
| Figure 5-1. Colburn Site Proposed Site Improvements |
| Figure 5-2. Dickensheet Site Proposed Site Improvements |
| Figure 5-3. Dufort Site Proposed Site Improvements |
| Figure 5-4. Idaho Hill Site Proposed Site Improvements |
| Figure 7-1. Proposed Transfer Building Floor Plan Colburn Site |
| Figure 7-2. Proposed HHW Building Floor Plan Colburn Site |
| Figure 7-3. Proposed Shop Building Floor Plan Idaho Hill Site |
| Figure 7-4A. Public Traffic Flow Colburn |
| Figure 7-4B. Commercial Traffic Flow Colburn |
| Figure 7-4C. Onsite Operations Traffic Flow Colburn |
| Figure 7-4D. Long-Haul Transport Traffic Colburn |

List of Tables

| | |
|---|----|
| Table 3-1. Summary of Bonner County Solid Waste Collection Sites | 23 |
| Table 3-2. Bonner County Solid Waste Annual Revenue History (Rounded to the nearest \$1,000) | 37 |
| Table 3-3. Bonner County Solid Waste Annual Expense History (Rounded to the nearest \$1,000)..... | 38 |
| Table 3-4. Bonner County Waste Diversion (FY 2020) | 42 |
| Table 5-1. Estimated Capital Costs for Proposed Colburn Site Improvements..... | 57 |
| Table 5-2. Estimated Capital Costs for Proposed Dickensheet Site Improvements..... | 57 |
| Table 5-3. Estimated Capital Costs for Proposed Dufort Site Improvements..... | 58 |
| Table 5-4. Estimated Capital Costs for Proposed Idaho Hill Site Improvements | 58 |
| Table 5-5. Estimated Capital Costs for the Project..... | 58 |
| Table 5-6. Annual O&M Budget for Colburn Transfer Site | 59 |
| Table 5-7. Annual O&M Budget for the Three Rural Collection Sites..... | 59 |
| Table 7-1. Colburn Preliminary Design Data Summary | 61 |
| Table 7-2. Summary of Peak Tonnages and Vehicle Arrival Rates for Colburn (Current and Future)..... | 62 |
| Table 7-3. – Project Schedule..... | 68 |
| Table 7-4. Annual Fiscal Year Operating Budget for Bonner County Solid Waste..... | 70 |

List of Appendices

- Appendix A – Special Election Resolution 21-35
- Appendix B – Soil Data Reports
- Appendix C – Flood and Wetlands Maps
- Appendix D – Public Involvement Information
- Appendix E – 10-Year Capital Improvements Plan
- Appendix F – Waste Management Contract
- Appendix G – County Financial Information (to be provided when available from auditor)
- Appendix H – Engineer’s Opinion of Project Costs
- Appendix I – Engineering Calculations
- Appendix J – Financial Forecast (20-Year)

DRAFT

1.0 EXECUTIVE SUMMARY

This Facility Planning Study (DEQ)/Preliminary Engineering Report “PER” (USDA-RD) evaluates the existing Bonner County solid waste system to determine current deficiencies. It also plans for future needs to meet the estimated population growth and meet solid waste management requirements. The study includes an estimate of the future population growth and solid waste growth developed through observation of past growth and census data. The solid waste system was evaluated to determine where it may be inadequate or inefficient at this time and to determine the potential future needs to provide environmental protection and safe sanitation. The study is organized into two main categories – the Colburn Transfer Site and the Rural Collection.

Several alternatives were considered to correct the current inadequacies and provide additional future capacity. The alternative analysis recommended a preferred alternative to present to the citizens and the County to focus their resources. The Table of Contents provides a detailed list of the information provided in the report. Copies of the reference materials are included in the report appendices.

Bonner County strives to provide its citizens with satisfactory and affordable sanitation services by seeking funds for a large-scale system improvement project. The project is meant to provide a solution to the County’s ongoing sanitation problems by improving the facilities to reduce environmental impacts and provide a more efficient and safe operation.

This report intends to provide the County with the information needed to properly inform its citizens of their sanitation system needs and the costs associated with each option. Many hours have been spent preparing and exploring various project options and their respective costs. The Board of County Commissioners along with staff will present the analysis to the citizens to raise their awareness of the solid waste facility needs. A solid waste bond election will be held to provide the capital necessary to fund the project. The bond will be repaid through assessment and gate fees. The intended loan period is 10 years.

At present, the County’s solid waste infrastructure cannot meet the current or future needs of the community. There is inadequate space to manage solid waste at several facilities, there is a lack of supporting infrastructure and no permanent place in the County to collect and manage household hazardous waste (HHW).

The deterioration, age, and problems with the current solid waste system need to be addressed for continued system reliability. The Board of County Commissioners wish to lead the County forward by providing adequate finances, trained personnel, and reliable infrastructure. The County will accomplish this vision by providing a team of technical experts to design the facility improvements along with competent well-trained personnel to operate the facilities after completing the proposed improvements. The current facility personnel have the necessary experience to operate the system except for the HHW facility, which will require some additional training and certification. The County also supports the continued training of personnel for a safe and efficient operation.

The proposed project will provide system upgrades within their existing property rights of way at the Colburn Transfer Site and the three rural collection sites of Dickensheet, Dufort, and Idaho Hill.

1.1 Problem Definition

The proposed project will provide much needed improvements to several of Bonner County's solid waste collection sites while also providing safer and more environmentally protective operations. There are 13 collection sites spread out around the County to provide convenient and responsible sanitation services. The Colburn Transfer Site, the central collection point and largest of all the sites in the County, has been using a "temporary" building since 1994 for waste processing and transfer. Not only is the waste transfer building dilapidated, but it is also undersized. The building siding is falling apart, there are no covers over the windows, and the tipping floor and push walls are in dire need of repair before severe structural damage occurs to the building rendering it useless. Garbage is piled on an exterior pad in front of the building on a routine basis exposing trash to the elements. Windblown litter is commonplace, along with contact water (leachate) draining off the pad and comingling with stormwater. The household hazardous waste (HHW) facility was shut down in June 2018 because of an inspection by the North Side Fire Department, which revealed a lack of ventilation and leaving the County without a permanent place to safely collect and process HHW.

Retaining walls for waste containers at Dickensheet and Idaho Hill sites are failing. There is a lack of impermeable surfacing to safely manage contact water and mitigate dust at all three rural sites. Several of the collection sites are lacking basic utility services. There is no water supply at Dickensheet or Idaho Hill for fire protection, drinking water, or operations. There is also no sewer service at Idaho Hill. There is a lack of security at Dickensheet and Idaho Hill without perimeter fencing to also contain blown litter. The Idaho Hill site is also in need of a shop building for basic equipment repair and office space for the site attendant and staff.

County staff with the assistance of their collections and transfer site operations contractor have done an excellent job in operating the solid waste system serving the community. Improvements have been made to several of the rural collection sites over the years along with paving a large area at Colburn for material recycling piles. However, the age of the infrastructure limits the personnel's ability to safely manage solid waste and HHW. These limitations have created a significant need for the system's recommended improvements to meet standards of practice and protect public health and safety in the community.

1.2 Alternatives Considered

Solid waste system alternatives for waste disposal, transfer, and rural collections were considered for Bonner County. Four alternatives were considered for waste disposal and included: (1) Transport and disposal (T&D) with Waste Management at the Columbia Ridge Landfill in Arlington, Oregon; (2) Disposing of waste at other landfills; (3) Developing and operating their own County landfill; or (4) Implementing a more comprehensive waste recycling and diversion program. At this point, the County's transport and disposal contract with Waste Management was decided to be reasonable to carry forward until the contract expires in 2022. At which point, other alternatives for T&D could be explored.

Four alternatives also were considered for waste transfer. These included (1) Doing nothing and closing the Colburn site; (2) Developing a new site and building a completely new facility; (3) Direct hauling all of the waste to the regional landfill; or (4) Improving and expanding the existing Colburn site. All of the alternatives were screened except for improving and expanding the Colburn site. With a large property area, existing facilities and infrastructure and centralized location, it was determined that this alternative would be best for the County.

Three alternatives were considered for rural collections and included: (1) Providing household collections throughout the County; (2) Doing nothing and closing the rural sites; or (3) Improving and expanding the existing sites. Providing door to door collections was determined to be cost prohibitive. Closing or doing

nothing to these sites would not address the problems, and so improving and expanding the sites was deemed the best option.

1.3 Recommended Alternative

Alternatives for waste disposal, transfer and rural collection were evaluated for the solid waste system. The preferred alternative is to continue with long-haul trucking and regional waste disposal and retain the existing Colburn site with improvements with an estimated cost of \$5,993,000. The proposed project also includes improvements and expansion of three rural collection sites (Dickensheet, Dufort, and Idaho Hill) that are deficient at an estimated cost of \$2,452,000. Including other anticipated project expenses such as loan service fees, interim loan interest, bond attorney fees, and upfront engineering costs, the County is seeking a total loan amount up to \$8,733,700. The Special Election Resolution 21-35 is provided in **Appendix A**.

1.4 Project Funding and Schedule

The County intends to apply for project funding with USDA Rural Development to take advantage of the available low-interest loan option. These packages assist communities in helping the proposed project be affordable to the citizens of Bonner County.

Bonner County intends to apply for design and construction funding during spring 2021. It is anticipated that interim funding will be in place by spring 2022 when construction bids are received by contractors for the project. The County expects all necessary permits and approvals in place by winter 2022. The project is anticipated to advertise for bid by April 2022, followed by a construction start in May 2022 (weather permitting). The construction is anticipated to last up to 18 months for all the sites with a completion date of November 2023 and final payment / project closeout by December 2023.

2.0 PROJECT PLANNING

2.1 Location

Bonner County is in the northern panhandle of Idaho and was formed on February 21, 1907. It was named for travel entrepreneur Edwin L. Bonner, a ferry operator. At that time, Boundary County was included as part of Bonner County. Boundary County was formed from Bonner County in 1915. According to the U.S. Census Bureau, Bonner County has a total area of 1,919 square miles, of which 1,735 square miles is land and 185 square miles (or 9.6%) is water. Refer to **Exhibit 2-1** for an Idaho counties map.



Exhibit 2-1. Idaho Counties Map

Bonner County includes the City of Sandpoint, the County seat, and most populous community in the County. The County also includes the towns of Clark Fork, Dover, East Hope, Hope, Kootenai, Oldtown, Ponderay, and Priest River along with the unincorporated communities of Careywood, Cocolalla, Colburn, Coolin, Laclede, Lamb Creek, Nordman, Outlet Bay, Sagle, Schweitzer, Vans Corner, and Westmond.

Bonner County, Idaho covers an area of approximately 1,920 square miles with a geographic center of 48.26902256°(N), -116.66044903°(W).

The following are the far north, south, east, and west coordinates of Bonner County, Idaho:

North: 48.84729385°(N)

South: 47.88904190°(N)

East: -116.04710388°(W)

West: -117.04265594°(W)

The solid waste system of Bonner County includes operation of 13 collection sites (refer to **Exhibit 2-2**). Of these sites, the Colburn Transfer Site is the central collection point for all waste in the County. This is where the waste is delivered from all the collection sites, consolidated, and then long hauled by transfer truck to a regional landfill approximately 300 miles away in Arlington Oregon. The remaining 12 sites are considered "Rural Collection Sites" and are spread out across the County to provide convenient drop-off locations for the community. Of these 12, 3 sites are deficient and in need of upgrades and improvements. These sites include Dickensheet, Dufort, and Idaho Hill.

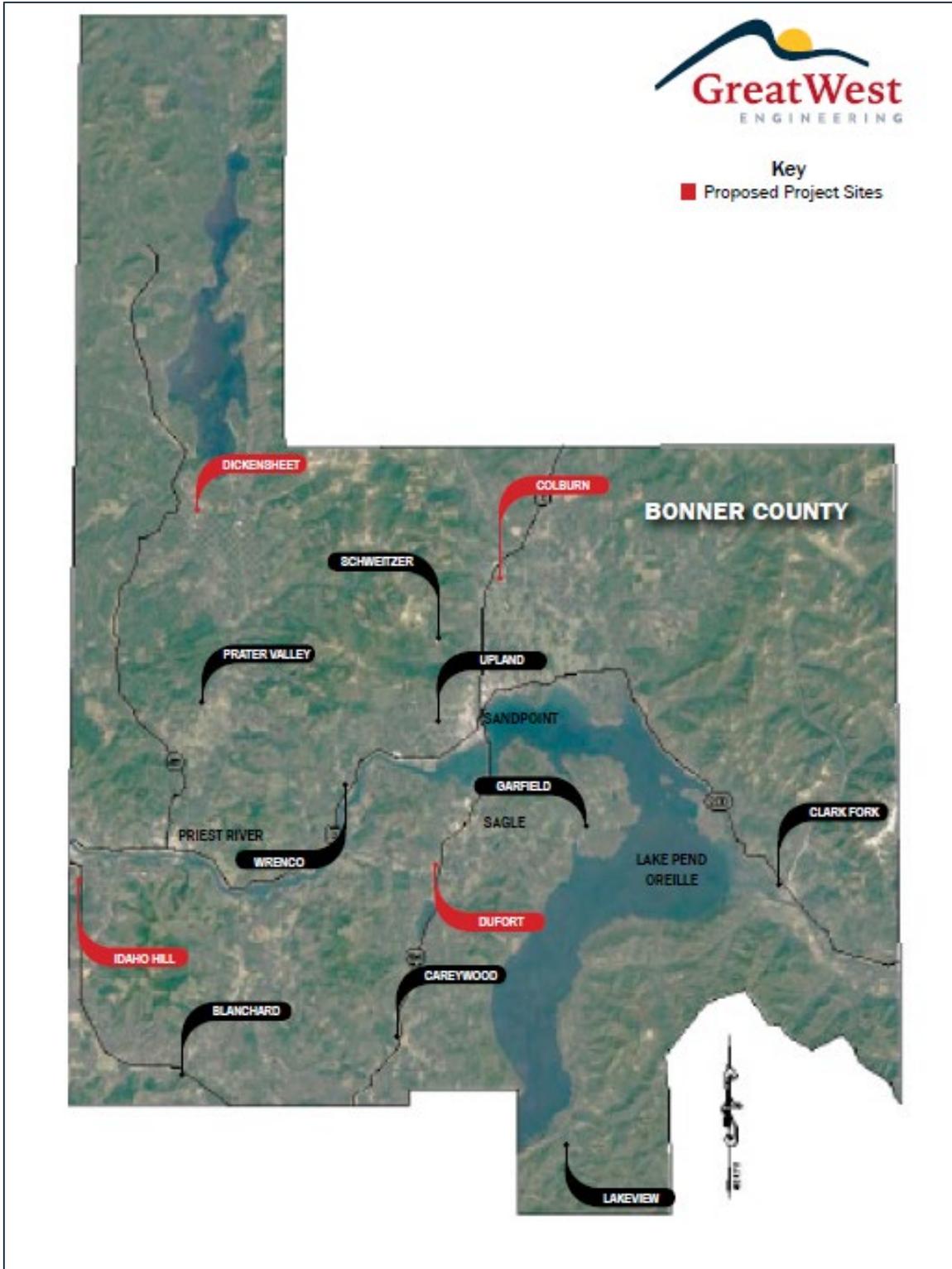


Exhibit 2-2. Bonner County Solid Waste Collection Sites

2.2 Environmental Resources

To evaluate the environmental impact of each alternative for this preliminary engineering report it was necessary to collect information on the environmental resources of the project area. This information can then be used by agencies reviewing the project and by the preparer of the report to determine the environmental impact of each alternative and the recommended improvements. As part of the USDA RD process, an Environmental Assessment was conducted (Great West, April 2021). Refer to that report for additional information and details associated with potential environmental impacts. The following environmental resources are found in the project areas along with a description of expected impacts.

2.2.1 Physiography and Topography

The lowest elevation in Bonner County is 2,031 feet. This ranks Bonner County **8th** in terms of lowest elevations when compared to a total of 44 counties in Idaho. Bonner County's highest elevation is 6,946 feet (feet) which ranks it **35th** in terms of highest elevations when compared to a total of 44 counties in Idaho. A USGS Map of Bonner County is provided in **Exhibit 2-3**. The project's planning area generally includes the entire County limits with collection sites throughout with particular interest in the four sites of Colburn, Dickensheet, Dufort, and Idaho Hill (cross-reference with **Exhibit 2-2**).



Exhibit 2-3. Bonner County USGS Map

Bonner County is bisected by the Clark Fork River, Pend Oreille Lake and Pend Oreille River, with the Selkirk Mountain Range centrally located in the County north of the Pend Oreille River. The Selkirk Mountain Range extends from the north county boundary toward the Pend Oreille River, separating the Priest Lake region from the Selle Valley Region. The Selle Valley region is generally considered the area bounded by the Selkirk Mountain Range to the west, Cabinet Mountain Range to the east, and the Pend Oreille water system to the south. South of the Pend Oreille water system, the populated portions of the County consist of three large valleys, which include the Highway 41 corridor, the Hoodoo Valley, and Highway 95 corridor. The valleys within the County are collectively referred to as the Purcell Trench.

The Colburn site is located in the Selle Valley Region of Bonner County. The Idaho Hill site is located within the Highway 41 corridor, in the southwest portion of the County. The Dickensheet site is located in the Priest Lake region of the County, and the Dufort Site is located along the Highway 95 corridor south of the town of Sagle.

2.2.2 Geology and Soils

The regional geology of the Idaho Panhandle is generally composed of three periods, consisting of the formation of base sedimentary rock, opening of the Purcell Trench, and the Ice Age. The initial period involved the formation of basement marine sedimentary rocks with varying thicknesses.

The second formation period occurred when the Panhandle region began to spread or rift, allowing large masses of granitic magma to rise to the upper part of the crust. This movement of magma expedited the rift process, forming the Cabinet and Purcell mountains on the easterly border of the County. This movement also formed the Selkirk Mountains centrally located within the County.

The most recent formation period occurred when glacial ice sheets moved south from Canada carving the landscape through erosion. Sediments associated with this period include glacial till, glacial outwash, and glaciolacustrine deposits.

We conclude there are no special physiological, topographical, geological, or geotechnical issues in the planning area. All soil data can be found in **Appendix B**.

2.2.2.1 Colburn

The predominant soil type encountered in the vicinity of the Colburn area is Mission silt loam. Lesser amounts of Selle fine sandy loam can be found in the vicinity, according to the USDA Natural Resources Conservation Service (NRCS) soils mapping website. Mission silt loam is derived from silty glaciolacustrine sediments from mixed sources, and windblown loess. Typically, the surface layer is grayish brown, neutral silt loam about 2 inches thick. The upper portion of the subsoil is yellowish brown, slightly acidic silt loam about 9 inches thick. The lower layer is mottled, gray, medium acidic silt about 12 inches thick. The Selle series surface layer is generally brown and light yellow-brown, fine sandy loam about 15 inches thick. The subsoil is a brown loamy fine sand about 25 inches thick (USDA NRCS Website).

2.2.2.2 Dickensheet

The dominant soil type in this area is Bonner silt loam with lesser areas of Bonner gravelly silt loam. The surface layer of Bonner silt loam is pale brown, slightly acidic silt loam about 5 inches thick. The subsoil is a pale brown to very pale brown, slightly acidic gravelly silt loam and gravelly sandy loam about 24 inches thick. Samples collected by EMCON in 1992 indicate surface and subsurface soil consists primarily of fine sand with varying amounts of boulders, cobbles, and silt.

2.2.2.3 Dufort

The primary soil type in this area is Bonner gravelly ashy silt loam. The parent material of Bonner gravelly ashy silt loam is volcanic ash and loess over outwash derived of granite. The surface layer of Bonner gravelly ashy silt loam is pale brown about 6 inches thick. The subsoil is pale brown, gravelly loam (USDA NRCS).

2.2.2.4 Idaho Hill

The primary soil type in this area is Bonner gravelly silt loam. The surface and subsurface soil consist of fine to medium sand with varying amounts of silt. The Bonner soil is pale brown, slightly acidic gravelly

silt loam to a depth of 5 inches. The soil below this is a pale brown, slightly acidic gravelly silt loam and gravelly, sandy loam about 24 inches thick. Samples collected by EMCON in 1992 indicated surface and subsurface soil distribution ranges from medium sand to silt.

2.2.3 Surface and Ground Water Hydrology

2.2.3.1 Regional

Hydrology in Bonner County is influenced greatly by geology and precipitation and varies significantly among the sites. The depth of the ground water is influenced by local geology and can range from a few feet along rivers, streams, and lakes, to several hundred feet beneath some of the plateaus. Ground water supplies are generally abundant in the region. The Rathdrum Prairie sole-source aquifer is located at the south edge of the County, near the City of Blanchard and Careywood, and is not expected to be impacted by the proposed project. Refer to **Exhibit 2-4** for the location of the Rathdrum Prairie Aquifer.

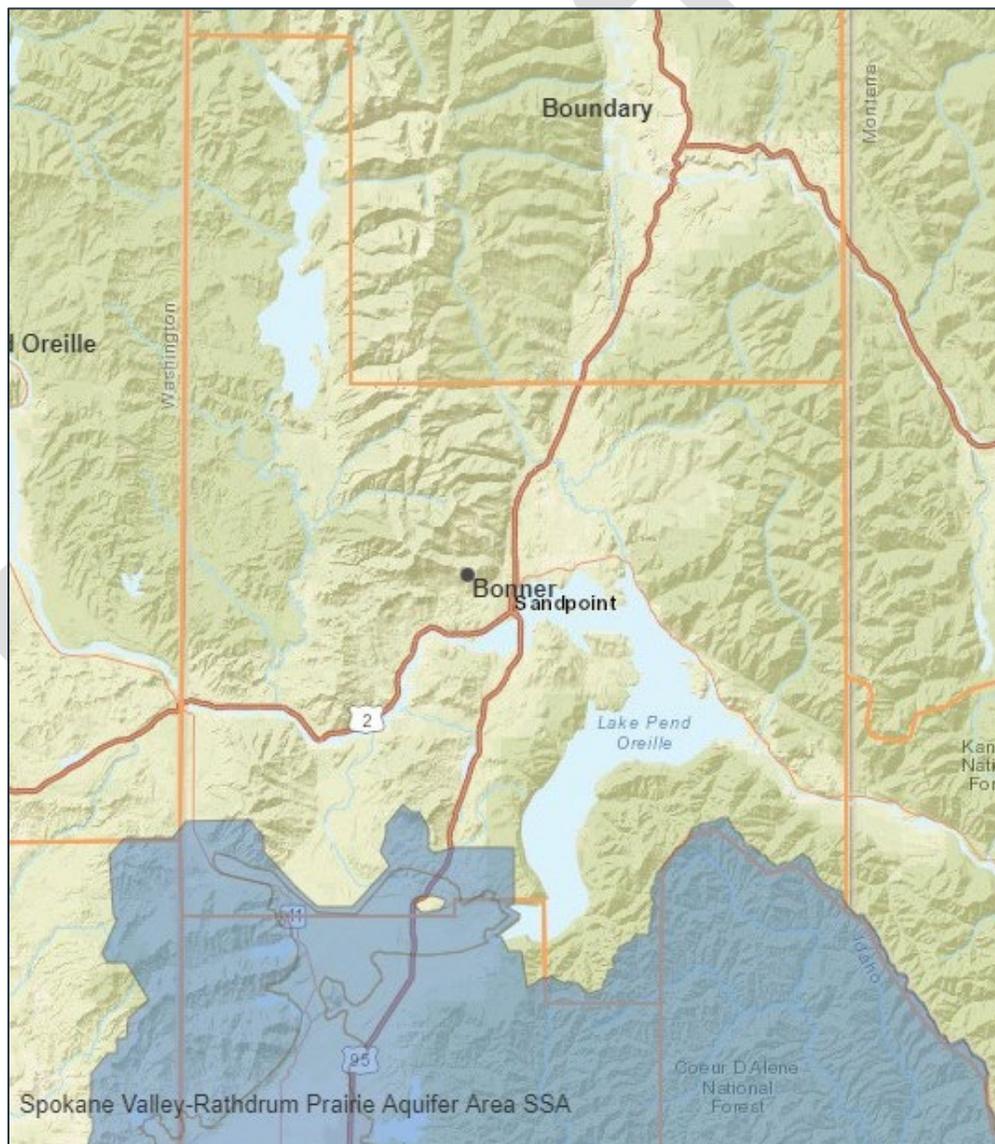


Exhibit 2-4. Rathdrum Prairie (Sole-Source) Aquifer Limits

2.2.3.2 Colburn

Mission silt loam is poorly draining, and permeability is low. Runoff capacity is medium, and the hazard of water erosion is moderate to high. Selle fine sandy loam has a high permeability with a low to moderate available water capacity. The hazard of water erosion is slight (USDA NRCS).

Based on well logs of obtained from the Idaho Department of Water Resources, the shallow soil in the vicinity of the Colburn site consists of alternating layers of gravels, sands, and clay. Ground water in the area is approximately 50-100 feet below ground surface.

2.2.3.3 Dickensheet

Bonner soil has a moderate permeability, low water capacity, and slight erosion hazard (USDA NRCS).

Based on well logs obtained from the Idaho Department of Water Resources, the shallow soil in the vicinity of the site consists of sand and gravel with areas of bedrock. Ground water in the area is approximately 100-200 feet below ground surface.

2.2.3.4 Dufort

Bonner gravelly silt loam has a moderate to very rapid permeability, with a low water capacity, and slight erosion hazard (USDA NRCS).

Based on well logs obtained from the Idaho Department of Water Resources, the shallow soil in the vicinity of the site consists of fine sand with areas of gray clay and silt. Ground water in the area is approximately 50 feet below ground surface.

2.2.3.5 Idaho Hill

Bonner gravelly silt loam has a moderate to very rapid permeability, with a low water capacity, and slight erosion hazard (USDA NRCS).

Based on well logs of obtained from the Idaho Department of Water Resources, the shallow soil in the vicinity of the site consists of sand, fine sand, and gravel at depths of 50 to 70 feet below grade. Ground water in the area is approximately 100-200 feet below ground surface

2.2.4 Fauna, Flora, and Natural Communities

The known threatened, and endangered species residing in Bonner County are Canada Lynx, Grizzly Bear, Woodland Caribou, and Bull Trout. The Whitebark Pine is proposed as threatened. Because the proposed sites are all previously developed and being utilized as waste collection/transfer sites, the proposed projects are not expected to negatively impact any threatened species.

2.2.5 Housing, Industrial, and Commercial Development

The proposed project will take place at already established solid waste collections site. The project is expected to directly improve customer experience at each of the four sites. Because project construction will take place at pre-established sites, the project is not expected to adversely impact any particular portion of society. The County has adopted eleven different types of zones. These zones' rules and regulations can be found in Title 12, Chapter 3, Zoning Districts and Land Uses of the Bonner County Revised Code. Each of the sites is zoned based on their respective location. Colburn is zoned as Agriculture/forest-10 or A/f-10. The number is the zone label refers to the smallest parcel allowed in that

area. Idaho Hill is zoned Rural-10 (R-10). Dickensheet is zoned A/f-20, and Dufort is zoned Rural-5 (R-5). Refer to **Exhibit 2-5** for the Bonner County Zoning Map.

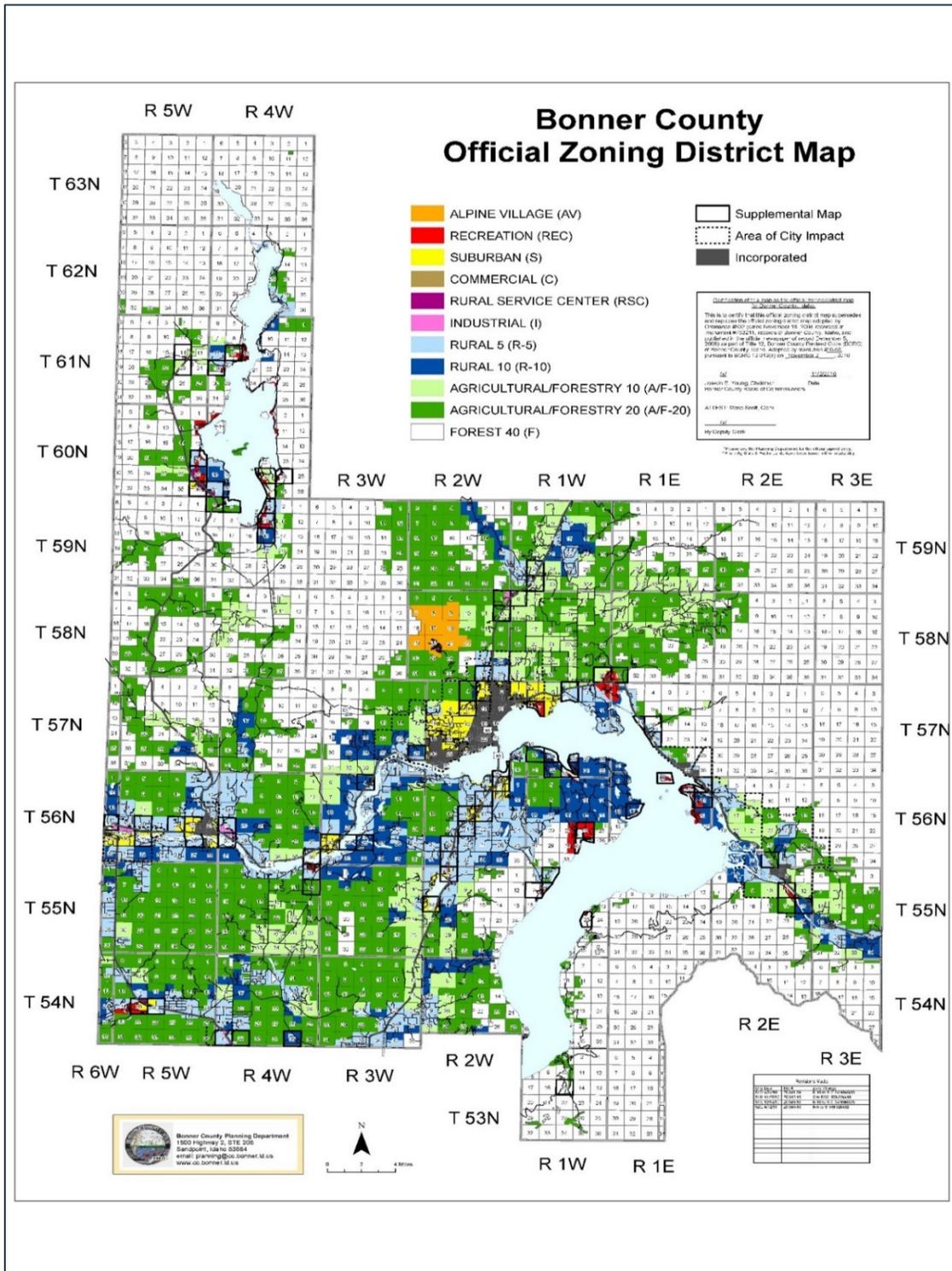


Exhibit 2-5. Bonner County Zoning Map

2.2.6 Cultural Resources

Bonner County lies within the Kalispel Tribal Historical territory. Before construction, formal consultation with the Kalispel Tribe of Indians and Idaho State Historical Preservation Offices (SHPO) will be conducted. A map from the National Register of Historic places in Bonner County is shown in **Exhibit 2-6** as provided by the National Historical Society GIS website. None of the four solid waste sites are located near nation register listed properties (compare this map to **Exhibit 2-2**).

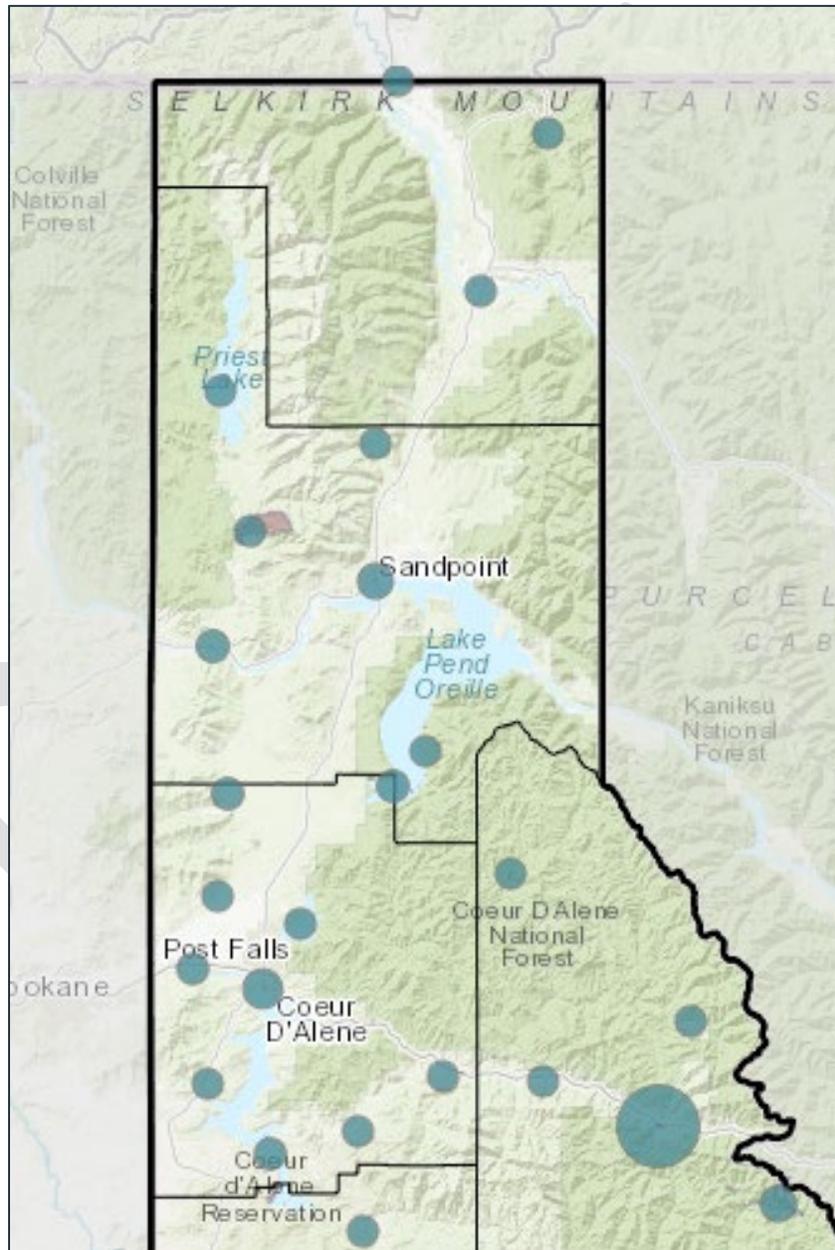


Exhibit 2-6. National Register of Historic Places in Idaho (Bonner County)

2.2.7 Utility Use

The main utilities available to Bonner County residents are power, telephone, natural gas, water, and sewer. Electricity is primarily provided by two utility companies – Northern Lights and Avista (Inland Power provides electricity to customers on the very far southwest part of the County). Avista is the natural gas provider, and the City of Sandpoint provides water, sewer, and sanitation to all residents within the City Limits and the Area of City Impact.

2.2.7.1 Colburn

There is currently no sewer service at Colburn. Water is provided by a small water system, Colburn Water Association. Electrical service is provided by Northern Lights.

2.2.7.2 Dickensheet

There is no water or sewer service at Dickensheet. Port-a-potties are used for septic. Electrical service is provided by Northern Lights.

2.2.7.3 Dufort

Water is supplied to Dufort from a well. There is vault toilet for septic service. Electricity is provided by Northern Lights.

2.2.7.4 Idaho Hill

There is no water or sewer service at this site. Electricity service is provided by Inland Power.

2.2.8 Floodplains and Wetlands

2.2.8.1 Regional

Bonner County participates in the National Flood Insurance Program (NFIP) established by the Federal Emergency Management Agency (FEMA). Wetland maps from the USFWS National Wetlands online tool and flood hazard maps for each site are provided in **Appendix C**.

2.2.8.2 Colburn

Map No. 160107C0495E is the most recent designated flood insurance rate map (FIRM) for the Colburn Site was finalized in 2009. The site is located within an area of minimal flood hazard.

The wetland map from the USFWS National Wetlands Inventory online tool identifies no wetlands on or adjacent to the Colburn site.

2.2.8.3 Dickensheet

Map No. 16017C0410F is the most recent designated flood insurance rate map (FIRM) for the Colburn Site was finalized in 2014. The site is located within an area of minimal flood hazard.

The wetland map from the USFWS National Wetlands Inventory online tool identifies no wetlands on or adjacent to the Dickensheet site.

2.2.8.4 Dufort

Map No. 16017C0950E is the most recent designated flood insurance rate map (FIRM) for the Colburn Site was finalized in 2009. The site is located within an area of minimal flood hazard.

The wetland map from the USFWS National Wetlands Inventory online tool identifies no wetlands on or adjacent to the Dufort site.

2.2.8.5 Idaho Hill

Map No. 16017C0850E is the most recent designated flood insurance rate map (FIRM) for the Colburn Site was finalized in 2009. The site is located within an area of minimal flood hazard.

The wetland map from the USFWS National Wetlands Inventory online tool identifies no wetlands on or adjacent to the Idaho Hill site.

2.2.9 Wild and Scenic Rivers

Idaho has approximately 107,651 miles of river; of which, 891 miles are designated as wild and scenic (or less than 1%). There are no designated 'wild' rivers and creeks surrounding Bonner County. The closest in proximity is the Saint Joe River, about 141 miles away. As such, the proposed project within the study area would not impact any wild and scenic rivers. **Exhibit 2-7** provides a map from the National Wild and Scenic Rivers System website for northern Idaho and the location of the St. Joe River.

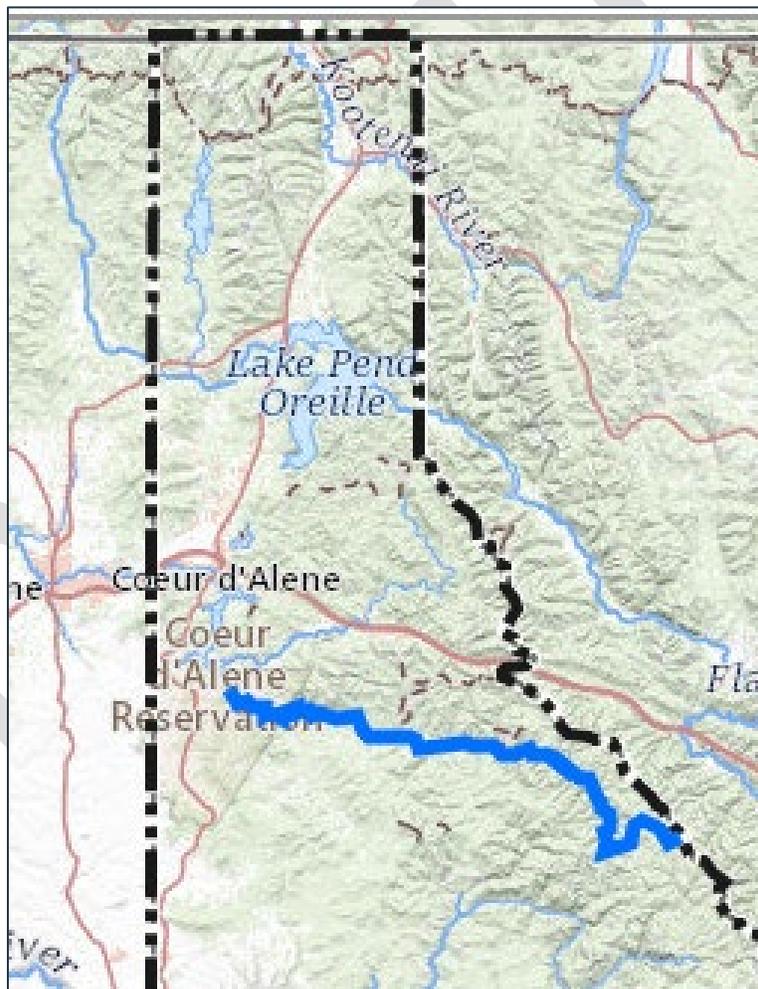


Exhibit 2-7. Wild and Scenic Rivers Map (Bonner County Area – St. Joe River)

2.2.10 Public Health Considerations

Due to the growing amount of solid waste being generated within the County, the existing waste transfer building is undersized and antiquated at Colburn. The current operation creates an unsanitary and undesirable situation for human health and wildlife with blowing litter and contact water (leachate) draining off the exterior waste pad and comingling with stormwater. Waste has to be double handled at the site because of the lack of space at the waste transfer building to direct dump whereby exposing the containers to weather and potential leakage of contact water.

The existing household hazardous waste (HHW) building at Colburn is used by the County to remove refrigerant chemicals from appliances. While the building has a dedicated floor drain system, it does not meet current ventilation requirements and has been found to lack many safety measures deemed necessary by the local Fire Marshal. To safely manage HHW, Bonner County only accepts HHW at a pre-established time when a contractor specializing in HHW disposal can be on site to collect and transport the waste. While necessary to maintain public safety, this process is expensive and greatly limits the County's ability to provide continuous HHW management services.

The Dickensheet and Idaho Hill sites lack basic water service and space to dump garbage. The sites are also unpaved exposing the ground to potential contact water contamination. The Dufort site is the busiest rural collection site and needs to be expanded to handle the demand, requiring a new retaining wall and additional pavement and drainage to manage the waste.

2.2.11 Existing Solid Waste System in the Proposed Project Area

All solid waste generated in Bonner County, including solid waste generated within incorporated cities and towns, is transported to the Colburn site where it is consolidated and loaded into long haul transfer trucks and transported to a regional landfill. The existing waste transfer building was constructed in 1994 for temporary use while a permanent solution to replace the recently closed landfills was developed. There is no available information regarding the original design capacity of the waste transfer building. The tipping floor is already undersized for waste storage and handling inside the building, requiring waste to be piled outside on a concrete pad until it can be pushed into the building and loaded into the transfer trailers. During peak days of the year (summer), the incoming waste tonnage is already too great for the operators to load the trailers in a day which leaves garbage on the floor.

2.2.12 Prime Agricultural Land Protection

The soil survey published by NRCS identifies soils that, if irrigated, are recognized as "Prime Farmland." The soil types identified at the Colburn site are Mission silt loam and Selle fine sandy loam. Mission silt loam is considered farmland of statewide importance, if drained. Selle fine sandy loam is considered prime farmland.

The soil types identified at the Dickensheet site are Bonner silt loam and Bonner gravelly silt loam. Bonner silt loam is considered prime farmland. Bonner gravelly silt loam is not prime farmland.

While the proposed project occurs in areas where prime farmland is present, all the sites, except for Dufort, are located adjacent to capped landfills, and therefore, the proposed project is not expected to impact prime farmland.

The soil types identified at the Idaho Hill and Dufort sites are Bonner gravelly ashy silt loam. Bonner gravelly ashy silt loam is prime farmland.

2.2.13 Land Use and Development

Land use policy and an active planning and zoning board determine land use within the County. The proposed project will not affect established land uses.

2.2.14 Environmental Justice

No foreseeable environmental impacts are expected from the proposed project. Any disturbed areas will be returned to its current vegetative state after the completion of the construction phase except for the tipping floor site, which is currently used to store metal refuse. No disproportionate benefit to any demographic within the community will occur because of the proposed solid waste system improvements.

2.2.15 Precipitation, Temperature, and Prevailing Winds

The average annual precipitation is 29.8 inches. The average temperature in the planning area is 46 °F with an annual high temperature is 57°F, and an average annual low temperature is 35°F. Prevailing wind is from the south-southwest.

2.2.16 Air Quality and Noise

The air quality in the Bonner County area is good. There are no known noise pollutants. The planning area is not concerned with air quality regulated by the Idaho Department of Environmental Quality (DEQ). The rural location of the planning area lends itself to relatively quiet noise levels. Typical regular noise is mostly generated from normal highway and street traffic.

Any capital improvement project resulting from this study, especially excavating and backfilling (trenchwork), will need to employ measures to minimize dust and noise.

2.2.17 Energy Production and Consumption

Idaho has a per capita carbon score of 47. Idaho has the 39th highest resident population. Each Idaho resident, per population average, produces approximately 11 tons of carbon dioxide each year. Idaho is the 47th highest carbon dioxide polluting state in the United States.

Idaho is rich in renewable energy resources but has few fossil fuel reserves. The Snake River and several smaller river basins offer Idaho some of the Nation's most significant hydroelectric power resources. Idaho's geologically active mountain areas have substantial geothermal and wind power potential. The State economy is energy-intensive, and energy-consuming industries include agriculture, mining, forest products, and transportation. Bonner County's total energy consumption is close to the state and national average.

Northern Lights and Avista supply electricity in the County. There is currently no energy production with the existing solid waste system, nor are there plans to incorporate energy production into the proposed system. The current energy consumption required to operate the new waste transfer building includes a knuckleboom crane and site and building lighting. Depending on design, the knuckleboom crane may be mobile (on tracks) and diesel fueled rather than an electrically powered unit that is stationary.

2.2.18 Green Infrastructure and Sustainability

During the engineering design phase, where opportunities arise, higher efficiency options will be considered such as building lighting and heating and cooling systems, where applicable.

2.2.19 Socioeconomic Profile

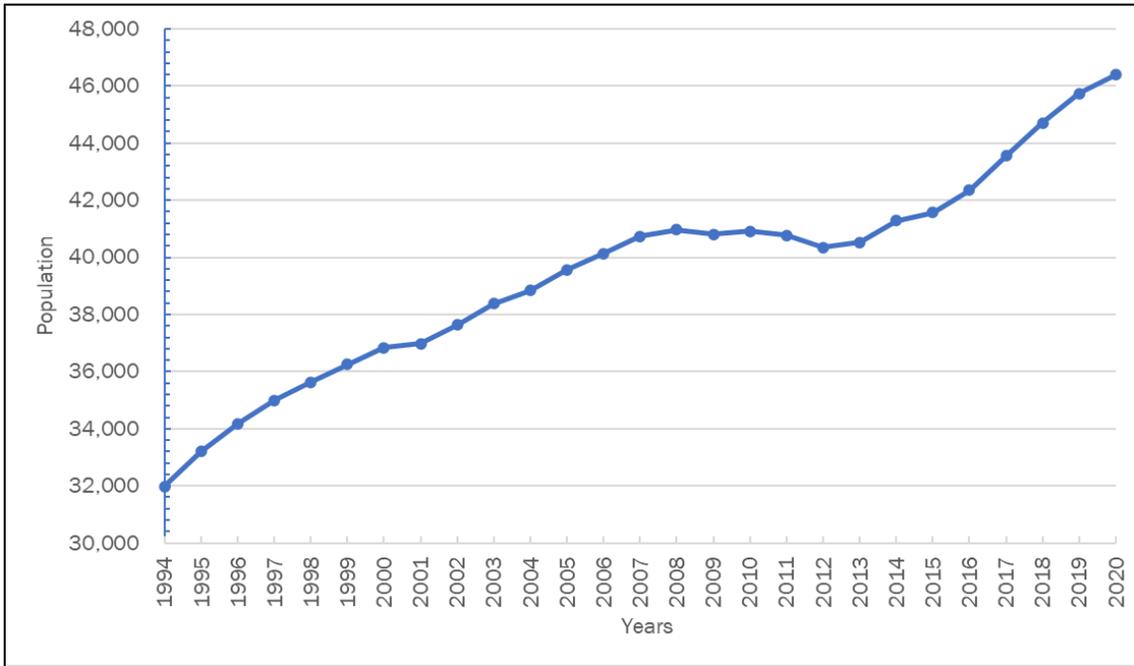
Bonner County has an estimated 47,000 residents based on U.S. Census Bureau projections for 2019 and the associated forecasting for this project (see **Section 2.3**). The U.S. Census Bureau also reports the racial makeup is approximately 95.02% White and two or more other races and ethnicities at 4.98%. The median age is 47.9 years. The population comprises 49.9% male and 50.1% female. Over 90% of the population in Bonner County have high school diplomas or higher degrees while approximately 24% have a bachelor's degree. The median household income is \$50,256 (in 2019 dollars). Individuals below the poverty level make up 12.6% of the population.

All of Bonner County residents have been affected by the recent increased solid waste fees to pay for the needed improvements for the proposed project. Residential assessments as well as gate fees have increased for commercial users. No individual group of people, disadvantaged or otherwise, will be affected more than any other group.

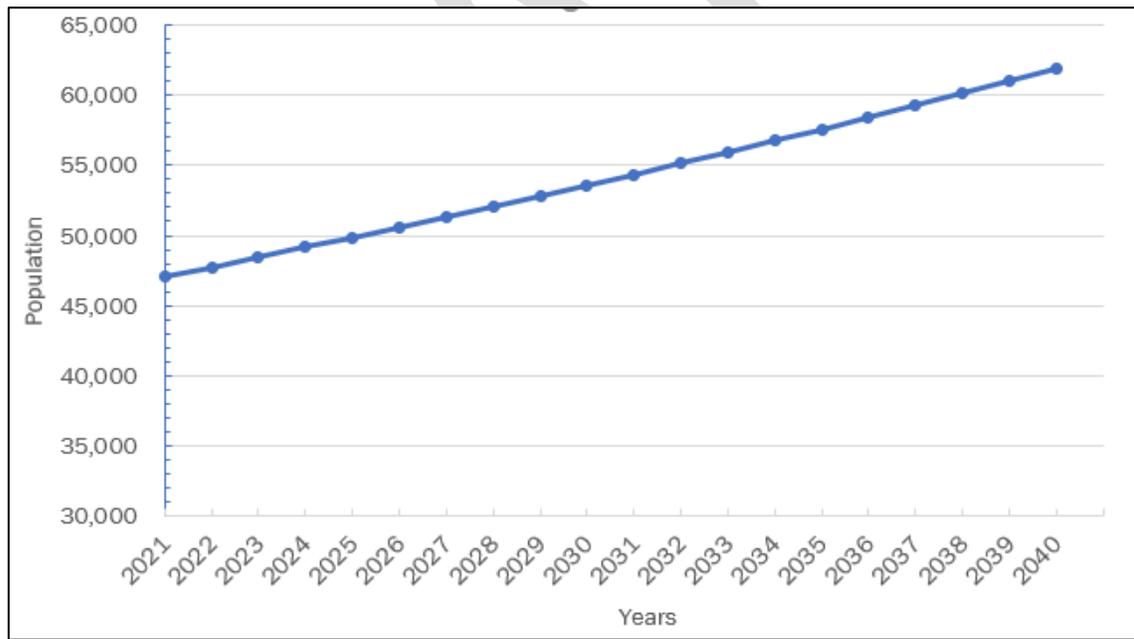
2.3 Population Trends

Established in 1907, Bonner County grew slowly for approximately the first 60 years. Beginning around 1970, the population boomed and has continued growing at a relatively rapid pace ever since. The U.S. Census Bureau reported the population of Bonner County at 40,877 people based on the 2010 census (April 1, 2010). The U.S. Census Bureau currently estimates the population of Bonner County at 45,739 people as of July 1, 2019 (V2019) with an average growth rate of 11.9% (or approximately 1.32% per year) from April 1, 2010 to July 1, 2019, while the U.S. as a whole grew at a rate of 6.3% (or 0.7% per year). The neighboring Idaho counties of Kootenai and Boundary have reported population growth rates of 19.7% and 11.6% (2.2% and 1.3% per year), respectively, over this same period. These are also pre-COVID figures, which are anticipated to increase as people leave the larger cities for smaller communities like Bonner County.

Exhibit 2-8(a) provides a graphical illustration of the County population trend from 1994 through 2020 (2020 population estimate of 46,402 people). For the last 25 years, the population in Bonner County has been growing at an average rate of approximately 1.45% per year, which is slightly higher than the reported annual growth of 1.32% from 2010-2019. Population projections for the next 20 years (2021-2040) are provided in **Exhibit 2-8(b)** and uses the 1.45% annual growth factor.



(a) Bonner County Population Growth (1994-2020) (U.S. Census Bureau Data and Estimates)



(b) Bonner County Population Growth Projections for next 20 Years (2021-2040) (1.45% Annual Growth Rate)

Exhibit 2-8. Bonner County Population Charts

2.4 Community Engagement

Community engagement for the proposed project has included:

- Solid Waste Advisory Committee (SWAC) June 17, 2019 Meeting, discussing recommendations for solid waste fee structure concerning the capital improvements plan. A motion was made and approved to raise the residential fees from \$115/household to \$185/household and the commercial fees from \$16 to \$18 per cubic yard.
- Bonner County Solid Waste Press Release on July 17, 2019, explaining the 10-year capital improvements plan identified several areas of improvements with a noted potential fee increase. Notes the July 10, 2019 workshop held between the Bonner County Commissioners and Bonner County Solid Waste staff to discuss options for moving forward on the capital improvement plan's recommendations. The press release also announces the September 4, 2019 public hearing to solicit public comment and answer any questions. The Press Release also includes a link to the plan on the Bonner County website.
- Daily Bee (local paper) article, "County mulls solid waste fee hike," published July 16, 2019. The article announces a Public Hearing to be held September 4, 2019 at 5:30 pm at the Bonner County Administration Building first-floor conference room. It also discusses the center point for the improvements at the Colburn site.
- Letter to the editor July 2019 in the Beacon, "McDonald's remarks bear no resemblance to the facts," written by Todd Sudick of Priest River who notes that several improvements were done to collection sites during his tenure as commission between 2015-2017.
- Public Hearing Notices Regarding Fee Changes (September 4, 2019) with publications in local papers on various dates in August 2019.
- Public Hearing September 4, 2019 Meeting, increasing solid waste fees to be effective 10/1/2019, by passing Resolution #19-81.

Refer to **Appendix D** for public involvement information. In addition to these public participation events, the County will be scheduling co-meetings with the Road and Bridge Department that is also up for a bond election as well as the upcoming public meeting that is required as part of the Environmental Assessment portion of the RD Funding requirements.

2.5 Regulatory Requirements

The 1976 Resource Conservation and Recovery Act (RCRA) Subtitle D regulates municipal solid waste management activities nationwide. In 1993, the Idaho Solid Waste Facilities Act, Idaho Code § 39-74, was passed by the legislature and incorporated minimum RCRA facility standards and procedures into Idaho law. DEQ, the counties, and Idaho's public health districts all play a role in regulating and managing solid waste facilities in the state. RCRA also requires states to regulate illegal dumping and the management of wastes that do not contain municipal waste as a component. The Idaho Legislature promulgated the "Solid Waste Management Rules" (IDAPA 58.01.06) to meet this requirement.

DEQ ensures compliance by authorizing and inspecting solid waste facilities and working with counties and public health districts to address open dumping concerns. For more information or assistance with an issue or question, contact the Coeur d'Alene Regional DEQ Office.

Waste transfer stations are regulated under the “Solid Waste Management Rules” (IDAPA 58.01.06) as Tier II facilities. DEQ approves their siting and design, and the public health districts provide operational oversight. For more information, consult DEQ’s Guidance for Siting, Design, and Operations of Nonmunicipal Solid Waste Facilities in Idaho in the resources below.

Several of the collection sites operate an inert waste landfill. “Inert wastes” are typically rock, concrete, cured asphaltic concrete, masonry block, brick, gravel, and dirt.

Although household hazardous waste (HHW) facilities are oftentimes associated with solid waste facilities such as transfer stations and landfills, there are no state rules for them in Idaho. Panhandle Health uses the “Best Management Practices for Containing Critical Materials During Storage and Handling” (a guidance manual) as part of their Critical Materials Program for reviewing plans and specifications to permit the operation of HHW facilities on or near the Rathdrum Prairie Aquifer. Their concern is related to proper secondary containment (sump sizing, floor slopes towards the sump, and an overhead cover) of these facilities. Although this site is not near the Rathdrum Prairie Aquifer, the design plans and specifications will be submitted to Panhandle Health as part of the permit application for proper secondary containment.

DRAFT

3.0 EXISTING SOLID WASTE FACILITIES

3.1 Location Map

The locations of the 13 solid waste collection sites were introduced in **Section 2** (refer to **Exhibit 2-2**). The 13 collection sites include the main transfer site at Colburn and the three rural sites of Dickensheet, Dufort, and Idaho Hill, which have notable deficiencies.

3.2 History

Prior to the late 1960's and early 1970's, there is little historical information on the solid waste system. Bonner County had multiple unattended dump sites located throughout the County where citizens would deposit their solid waste into existing piles of waste. It is not clear whether these dump sites were managed or maintained by the County or whether they were unaffiliated. Based on interviews with long time County citizens, the County established three primary landfill sites in the late 1960's and early 1970's at the current Idaho Hill, Colburn, and Dickensheet sites. During this period, the County also operated approximately 30 unattended collections sites located throughout the County. The County utilized a contractor to maintain the sites and transport the waste from the sites to the landfill locations. The landfills remained in use until October 1993 when they were closed and capped because of non-compliance with Federal regulations. Late in 1994, the current Coburn transfer site came online for the purpose of transferring the County's solid waste to nearby, out-of-state landfills. The tipping floor was designed and constructed by Waste Management, then leased to the County over a period of 20 years at which time ownership was transferred to the County. Upon establishing the tipping floor, the County began transitioning the existing collection sites to supervised, secure, collection sites or closed the unattended sites completely. Today, the County operates 13 collection sites, of which 10 are supervised sites and 3 are unsupervised.

3.3 Condition of the Solid Waste System

3.3.1 Overall Description of the System

The County maintains a solid waste management system under Bonner County Solid Waste (BCSW). The system is funded by a combination of property assessment fees and gate fees. Each household currently pays \$185 per year as an assessment fee on their property taxes for operation of the collection sites and waste transport and disposal that the County pays the hauling contractor, Waste Management. This allows the public to dispose of a maximum of six cubic yards (cy) per day at a collection site. Commercial waste disposal is charged \$18 per cubic yard at the sites. Commercial customers are charged the gate fee based on their service level (e.g., a 1 cubic yard dumpster emptied once per week is charged a flat disposal fee of 4.33 cubic yards per month at the \$18 per cubic yard rate or \$77.94 per month). If the customer is on an on-call service basis, they are charged by the cubic yard for each dump. Any compactors are charged a disposal charge of \$54.00 per yard.

The County maintains 13 collection sites consisting of the Colburn Transfer Site and 13 rural collection sites. Waste from all the collection sites is transported to the Colburn transfer site, located north of Sandpoint, which also serves as a collection site. Waste that is received at the site for transfer by the franchise hauler, Waste Management, is then unloaded directly on the tipping floor of the transfer building or outside pad, pushed into the building using a loader or small dozer, top-loaded into long-haul trailers, and hauled by Waste Management roughly 300 miles to their landfill in Arlington, Oregon.

Table 3-1 presents a summary of the Bonner County solid waste collection sites. Refer to **Exhibit 2-2** for a map of the site locations.

Table 3-1. Summary of Bonner County Solid Waste Collection Sites

| Site Name | Site Type | Supervised ⁽¹⁾ |
|-----------------------------------|----------------------|---------------------------|
| West Side Collection Sites | | |
| Blanchard | Full-Service | ✓ |
| Dickensheet ⁽²⁾ | Full-Service | ✓ |
| Idaho Hill ⁽²⁾ | Full-Service | ✓ |
| Prater Valley | Full-Service | ✓ |
| East Side Collection Sites | | |
| Careywood | Household Trash Only | ✓ |
| Clark Fork | Full-Service | ✓ |
| Colburn ^(2,3) | Full-Service | ✓ |
| Dufort | Full-Service | ✓ |
| Garfield Bay | Household Trash Only | ✓ |
| Lakeview | Household Trash Only | |
| Schweitzer | Household Trash Only | |
| Upland | Household Trash Only | ✓ |
| Wrenco | Household Trash Only | |

Notes:

1. Supervised sites are open from 7AM – 5PM, seven days a week, except for certain holidays. Garfield and Careywood hours are seasonal. They follow regular supervised site hours, except for between Labor Day to Memorial Day when the hours are 7AM – 3PM, Thursday through Monday.

2. The Idaho Hill, Colburn, and Dickensheet Sites also have inert waste pits offering soil, concrete, and asphalt disposal.

3. Colburn is the main transfer site for the County where Waste Management’s long-haul trailers are loaded to transport waste by truck to Waste Management’s Columbia Ridge Landfill in Arlington, Oregon.

Most towns in the County offer curbside collection, but participation is voluntary except for the City of Sandpoint where it is mandatory. Residents pay for this added convenience in addition to the yearly assessment fee.

Great West Engineering conducted a 10-year capital improvements plan for the solid waste collection sites in Bonner County (refer to **Appendix E**). The sites that were not selected for improvements are discussed in the plan and are considered adequate for future waste management.

3.3.2 Colburn Transfer Site

The Colburn site is located north of Sandpoint, Idaho. It is accessed by Pinecone Road off Highway 95 (Physical Address: 119 Colburn Culver Road, Sandpoint, Idaho 83864). Refer to **Exhibit 2-2** as introduced in **Section 2** for the location of the Colburn site. Colburn is a full-service site and is attended/supervised. It is the only transfer site in Bonner County. Meaning the only site where waste is collected and consolidated in a centralized location and then long hauled by truck and trailer to a regional landfill. All other sites are considered rural collection sites where waste is collected and hauled to Colburn.

Colburn also accepts scrap metal and wood waste and has an inert pit that accepts dirt, concrete, and asphalt. It formerly had an operating HHW facility but was shut down because of an inspection by the North Side Fire Department, which revealed a lack of ventilation and leaving the County without a permanent place to safely collect and process HHW. This site is part of the mobile HHW collection program where a mobile unit is staged for weekly collection of HHW. The public drops off waste in dumpsters or roll-off containers located on site, and the bins are dumped in the waste transfer building for waste consolidation and loading into long-haul trailers.

Construction contractors also unload waste on the tipping floor or pad of the transfer building. All trucks and vehicles share Pinecone Road, the main access road into the facility, but then split off at the public entrance gate. Commercial trucks continue to the service gate entrance and along the service road while public customers turn right into the main entrance gate and dump either at the dumpsters or roll-off containers for oversized materials. Contractors with trailers also enter through the public gate but are directed to haul and dump on the tipping floor/pad at the waste transfer building.

Operations includes a yard goat, which pulls the long-haul transfer trailers into the loading bay of the waste transfer building facing north, and then once the trailers are full, the yard goat loops around into the main yard area next to the public and then drops full trailers south of the transfer building next to Waste Management's extra dumpsters and containers. The yard goat then picks up an empty trailer off the service road corner and then pulls it north and around to the loading bay of the building.

Long-haul trucks share the service road with commercial trucks and operations but have a lower-level access into the loading tunnel at the basement level. They drop off empty trailers east of the transfer building and pick up the loaded trailers south of the transfer building in the yard next to all of Waste Management's extra dumpsters and containers. Refer to **Figure 3-1** for the overall existing site plan.

Transfer sites experience severe service conditions. The existing waste transfer building is dilapidated and undersized requiring use of an exterior concrete pad to dump and store waste before it is pushed into the waste transfer building for loading. Because of the lack of area for waste processing at the waste transfer building, a public drop-off area is operated as well at the site requiring double handling of waste. The existing household hazardous waste (HHW) facility is no longer operating after a closure occurred in June 2018 following inspection by the North Side Fire Department which revealed a lack of ventilation, leaving the County without a permanent place to safely collect and process HHW. The scales in the load-out tunnel have are challenging to keep clean and have had concerns over the year of accurate readings. Tunnel scales provide a means to check trailer weights. However, there is no scale available to check final overall payload of the tractor and trailer for accurate records and road requirements before they leave the site. The following exhibits are pictures of the Colburn site:



Exhibit 3-1. Public Entry Area (Colburn)



Exhibit 3-2. Waste Transfer Building Showing Dilapidated Exterior (Colburn)



Exhibit 3-3. Waste Transfer Building Interior Showing Floor and Push Walls (Colburn)



Exhibit 3-4. Aerial View of Waste Transfer Building Showing Waste Piles (Colburn)



Exhibit 3-5. Closed Household Hazardous Waste (HHW) Facility (Colburn)

3.3.2.1 Notable Concerns and Issues

The following list identifies are notable concerns and issues with the aging infrastructure and inadequate space for waste processing at the Colburn site:

1. General Environmental Concerns: In general, there are contamination concerns at the Colburn site caused by blowing litter off the outdoor tipping pad coupled with concerns of contact water (leachate) draining off the outdoor pad that comingles with stormwater. This is an environmental concern that can be curbed by enlarging the enclosed waste tipping area inside the building and providing controlled contact water management. The contact water that is collected inside the current waste transfer building is conveyed through drains and pipes to a 3,500-gallon tank, which is monitored by dipping on a routine basis and usually emptied about once a year. The liquid is then hauled and dumped at the Newport, Washington wastewater treatment plant.
2. Antiquated and Undersized Waste Transfer Building – The existing waste transfer building was constructed in 1994 by Waste Management. Although it was originally built as a temporary structure to last between 5-7 years (as reported by County staff), it is still in operation today. Ownership was eventually turned over to the County, but operation is still done under contract with Waste Management. The building is dilapidated with sections of damaged metal siding and areas with siding panels completely missing. There are four window-type cutouts in the walls of the building that are missing the original chain link fencing. In addition to several cosmetic issues, the building is undersized. Oftentimes waste is piled up on a concrete pad in a fenced-in area in front (west) of the building until the waste can be pushed into the building and top-loaded into trailers. There is concern of leachate run-off from this pad into non-controlled areas mixing with stormwater on the site. Short metal push-walls line the edges of the tipping floor and are offset several feet from the building walls. They are made of relatively low-strength (gauge) steel welded to metal posts. The tipping floor was reported to be repaired several years ago with an overlay that has since worn through, as evidenced by eroded concrete and exposed aggregate. The load-out tunnel has raised scales in the pit that are challenging for cleanout with concerns of accurate readings.
3. Inoperable HHW Facility – As a result of inadequate ventilation, the HHW facility was shut down because of an inspection by the North Side Fire Department, which revealed a lack of ventilation and leaving the County without a permanent place to safely collect and process HHW. The County currently uses portions of the building for storage and removing refrigerants from white goods. The County currently hires a contractor to circulate on weekends around each of the main transfer sites in the County to collect HHW materials.

4. Double-Handling of Public Waste – Because of the limited tipping floor space, the public dumps their garbage into containers at the northeast end of the facility. Garbage trucks bringing waste into the site will periodically dump the containers and unload the waste on the tipping floor or outside pad. This causes added environmental risk for waste handling and possible leachate drainage from the containers.
5. Comingled Traffic Flow – All vehicles share the main access road (Pinecone Road) into and out of the facility. The public enters the facility on the north side through a gate and drops off waste in containers at the northern edge of the site. Contractors (trucks and trailers) enter with the public and drop off waste on the tipping floor or the tipping pad in front of the transfer building. Commercial trucks (garbage and roll-off container trucks) and long-haul transfer trucks enter the facility through the service entrance gate and use the service road. Commercial vehicles comingled with contractors at the tipping pad or floor. Long-haul transfer trucks stay within the southern portion of the site, dropping off empty trailers and picking up full ones before leaving. Operations staff pull empty trailers into the transfer building loading tunnel and then pull loaded trailers out through the main yard before staging them for the long-haul transfer trucks to hitch-up.
6. No Commercial Truck Scaling – The only scales at the site are the pit scales in the loading bay of the waste transfer building. There are no other means to weigh the incoming waste before it is dumped on the tipping floor and comingled with the rest of the trash. Other than waste volumes, waste tonnage is not tracked from the collection sites and curbside collection routes.

3.3.3 Rural Collection Sites

3.3.3.1 Dickensheet

Dickensheet is an attended/supervised, full-service rural collection site with an inert pit that also accepts dirt, concrete, and asphalt, as well as scrap metal, yard and wood waste, and TVs. Dickensheet is located in the northwest corner of the County next to Priest Lake (Physical Address: 1978 Dickensheet Road, Coolin, Idaho). Refer to **Exhibit 2-2** for the location of the Dickensheet site. Refer to **Figure 3-2** for the overall existing site plan. This site is also part of the HHW mobile collection rotation program accepting HHW once per month. The following exhibits are pictures of the Dickensheet site:



Exhibit 3-6. Front Entry Showing Unpaved Areas (Dickensheet)



Exhibit 3-7. Failing Eco-Block Retaining Wall (Dickensheet)



Exhibit 3-8. Compromised Retaining Wall (Dickensheet)

Notable Concerns and Issues

The following list identifies are notable concerns and issues with the aging infrastructure and inadequate space for waste processing at Dickensheet:

1. Failing Retaining Walls – The z-wall structure for the waste drop-off area is failing. It is comprised of stacked ecology blocks. Also, during the summer months, the site experiences a high-level of congestion while people wait to unload their trash into the containers. An additional stall and container will help to curb this issue.
2. Lack of Security / Windblown Litter – There is no perimeter fencing around the site to provide security and a catchment for blowing litter. There is also no yard lighting or surveillance cameras. The site has been vandalized. There is also tendency for litter to be blown off the property.
3. Unpaved Areas – Several areas around the site are unpaved adding to fugitive dust and potential for soil contamination with contact water (leachate) leaking from containers. Pavement will help to reduce dust and prevent contaminated water from leaching into the soil.
4. No Water Service – There is no water at the site for drinking, operations, and fire protection. This will add a well with piping system to the gate shack and yard frost-free spigots.

2.1.2.2 Dufort

Dufort is an attended/supervised rural collection site located south of the Sandpoint (Physical Address: 15 Dufort Road, Sagle, Idaho). Accessed via Highway 95, it is a full-service site without an inert pit and does not accept dirt, concrete, and asphalt like Dickensheet and Idaho Hill sites. Refer to **Exhibit 2-2** for the site location. The site was renovated in the last seven years. It is a paved site and has a concrete retaining wall (or what is called a “z-wall”) for unloading waste from vehicles into the lower containers. **Figure 3-3** provides an overview of the existing site. The site is seasonally busy (summer) but still has plenty of room for queuing of vehicles during most of the year. It is also part of the HHW rotation along with Colburn and Dickensheet. The following exhibits are pictures of the Dufort site:



Exhibit 3-9. Proposed Location for New Container Z-Wall (Top Left) (Dufort)



Exhibit 3-10. Unpaved Areas (Dufort) – Change Out pic showing existing retaining wall

Notable Concerns and Issues

The following list identifies are notable concerns and issues with the aging infrastructure and inadequate space for waste processing at Dufort:

1. Congestion / Lack of Site Capacity – The site experiences heavy congestion during seasonal periods of the year. Adding a second public drop-off area next to the existing will provide additional unloading stalls and container storage.
2. Unpaved Areas – Areas are unpaved adding to fugitive dust and potential for soil contamination with contact water (leachate) leaking from containers. Pavement will help to reduce dust and prevent contaminated water from leaching into the soil.
3. Improving / Modifying Drainage System – Adjust/relocate the drainage swale with the expansion of the container z-wall area and added pavement.

2.1.2.3 Idaho Hill

Idaho Hill is an attended/supervised rural collection site, located on the far east side of the County, off Highway 41 (Physical Address: 36608 Highway 41, Oldtown, Idaho). Refer to **Exhibit 2-2** for the location of the site. Idaho Hill is a full-service site that accepts scrap metal, refrigerators, TVs, and tires as well as having an inert pit for dirt, concrete, and asphalt disposal. **Figure 3-4** shows an overview of the Idaho Hill site. This site is also part of the HHW mobile collection rotation program accepting HHW once per month. The following exhibits are pictures of the Idaho Hill site:



Exhibit 3-11. Unpaved Areas (Idaho Hill)



Exhibit 3-12. Failing Eco-Block Container Wall (Idaho Hill)

Notable Concerns and Issues

The following list identifies are notable concerns and issues with the aging infrastructure and inadequate space for waste processing at Idaho Hill:

1. Failing Retaining Walls – The z-wall structure for the waste drop-off area is failing. It is comprised of stacked ecology blocks. An additional stall and container will be needed for future demand.
2. Lack of Security / Windblown Litter – There is no perimeter fencing around the site to provide security and a catchment for blowing litter. There is only yard lighting and no surveillance cameras. The site has been vandalized. There is also tendency for litter to be blown off the property.
3. No Maintenance Shop or Office Space – There is no location on the west side of the County to service solid waste system equipment nor space at the site for office or a restroom.
4. Unpaved Areas – Several areas around the site are unpaved adding to fugitive dust and potential for soil contamination with contact water (leachate) leaking from containers. Pavement will help to reduce dust and prevent contaminated water from leaching into the soil.
5. No Water or Sewer Service – There is no water at the site for drinking, operations, and fire protection. This project will add a well with piping system to the gate shack and yard frost-free spigots. A new septic system will provide sewer to service the site and new shop building.

3.3.4 Waste Management Disposal Contract

The County is contracted with Waste Management for transportation and waste disposal at the Columbia Ridge Landfill in Arlington, Oregon. The most recent contract with Waste Management was signed during the 2018 fiscal year, for a period of 5-years. Waste Management weighs all the loads at the landfill so that an accurate measurement of tonnage is made. Older pit scales are used in the existing waste transfer building at Colburn but are currently suspect for accuracy. The contract has an annual price escalator tied to inflation (Consumer Price Index). In 2020, the County paid Waste Management on the order of \$3.4 million dollars for these services. In addition to the transportation and disposal contract, Bonner County has contracts with Waste Management for intra-county transfer of waste from the rural collection sites to Colburn and operating the tipping floor at Colburn. The costs for these services in 2020 were approximately \$700,000 for rural collections and \$400,000 for operating the tipping floor. See **Appendix F** for a copy of the contract with Waste Management.

3.3.5 Operation and Maintenance

The County operates and maintains all 13 collection sites except for the waste transfer building (“tipping floor”) at the Colburn site, which is contracted out to Waste Management. Refer to **Table 3-1** for the list of attended and unattended sites. Supervised sites are open from 7AM – 5PM, seven days a week, except for certain holidays. Garfield and Careywood hours are seasonal. They follow regular supervised site hours, except for between Labor Day and Memorial Day when the hours are 7AM – 3PM, Thursday through Monday.

The County has 26 full-time employees assigned to the solid waste system, including:

- (1) Solid Waste Director (paid partially by Solid Waste and Emergency Management)
- (1) Solid Waste Operations Manager
- (2) Solid Waste Assistant Managers
- (2) Solid Waste Technicians
- (1) Administrative Assistant (paid partially by Solid Waste and Emergency Management)

- (19) Collection Site Attendants

Solid Waste Director's responsibilities include:

- Managing overall solid waste operation in accordance with Bonner County, State and Federal requirements
- Coordination with County support and administrative staff
- Reporting to County Commissioners
- Annual budgeting
- Recordkeeping
- Coordination and communication with vendors, suppliers, and contractors
- Communication with public
- Responsible for long term and short-term planning for solid waste
- Plans, directs, and otherwise oversees determination of sites of new facilities and expansion of existing facilities
- Administers contracts for Rural Collection, Transfer Site Operations and Long Haul and Disposal

Solid Waste Operations Manager's responsibilities include:

- Assists Solid Waste Director
- Supervises employees to include instructing, assigning, and reviewing work, maintaining standards, acting on employee problems, interview, hire and train new employees
- Coordinates solid waste processing operations
- Analyzes field operations and formulates improvements to ensure compliance
- In conjunction with the Director negotiates contracts
- Prepares requests for Proposals for equipment and services, represents in negotiations with vendors and service contractors, and participates in contract administration
- Assists with tax parcels on an ongoing basis to ensure proper solid waste fee attachments.
- Payroll processing
- Data entry and waste trend analysis
- Managing the budget worksheet

Solid Waste Assistant Managers' responsibilities include:

- Managing and scheduling Solid Waste Technicians and Site Attendants
- Assists Operations Manager
- Supervises employees to include instructing, coaching, hiring.
- Assists with performing long range planning for staffing needs, equipment
- Coordinates solid waste processing operations
- Performs general duties of a Heavy Equipment Operator

- Performs snowplowing functions as needed at site facilities
- Distribution of supplies and picking up all fees and invoices from collection sites to bring into the office.
- Oversees maintenance of transfer sites, fences, equipment. Ensures compliance with all local, state, and federal laws and ordinances related to the operations of the solid waste facilities and functions

The Solid Waste Administrative Assistant's responsibilities include:

- Answer telephones and greets in office public about solid waste collection
- Assists public and site attendants with obtaining solid waste stickers
- Process invoices for payment
- Processing of money from collection sites and entering solid waste data
- Completing solid waste deposit
- Processing and billing of solid waste credit customers

The Solid Waste Technicians' responsibilities include:

- Ensures proper safety and cleanliness of equipment and work area
- Performs snowplowing functions as needed at site facilities
- Haul all refrigeration units from collection sites to Colburn site and removes CFC and compressors from units
- Process paint and motor oil for proper disposal
- Performs general duties of a Heavy Equipment Operator
- Hauls recycle bins from collection sites to central location
- Assists Assistant Managers as needed
- Fills in as site attendant as needed

The Site Attendant's responsibilities include:

- Estimating the volume of waste, collecting payment, and writing a receipt for recordkeeping
- Charging out-of-County users
- Directing users to the proper disposal area
- Monitoring material types in loads
- Coordinating with the Solid Waste Supervisor for container pick-up when the containers are full
- Insuring special wastes such as scrap metal are properly segregated
- Picking up wind-blown litter
- Assisting public users
- Insuring that site access is secured during closed hours, and
- Other duties as necessary to properly operate the collection sites

Not only is Bonner County contracted with Waste Management to transport waste to the regional landfill in Arlington, Oregon, but they also have a contract with them to haul waste from each of the rural collection sites to Colburn and operate tipping floor at Colburn.

3.4 Financial Status of Solid Waste System

Bonner County Solid Waste (BCSW) has operated the current solid waste system and has done so successfully since 1995. The Bonner County Board of Commissioners, which oversees the BCSW department, has the legal responsibility for this Solid Waste Preliminary Engineering Report. The Bonner County Board of Commissioners is elected by and directly accountable to the electors within the County limits. Capital, operation and maintenance (O&M) costs of the solid waste system are paid for by property owners within the County through a system of fees.

The County obtains most of its solid waste revenues from fee assessments, which are paid by each household. The County also generates revenue from disposal fees (gate fees) from commercial waste and recycling income. These revenues are used to operate and maintain the collection sites, conduct recycling activities, and pay for the waste hauling and disposal. The County financial status is sound because of quality financial planning and execution. Copies of County revenue and expense statements are included in **Appendix G**.

Capital, operation, and maintenance costs will continue to be paid for by users within the County. Fees for the solid waste system will be assessed to cover the debt service and O&M costs. The County provides administrative assistance to manage the day-to-day business of the County and operators to perform the operation and maintenance of the system.

The County currently has 26,433 households assessed at a rate of \$185 annually per household unless the households qualified for a reduced fee. The \$185 fee entitles the user to utilize the County’s solid waste facilities. Construction, demolition, and bulky wastes (“non-typical” wastes) are charged an additional \$18/cubic yard at the gate. The site attendants are required to estimate the volume of each non-typical load and the customer is billed accordingly. Recurring accounts are assessed monthly flat fees based on the size of the container and the frequency of pick-up. Residents who have curbside collection service pay for this service directly to the private provider.

The County also receives monies from recycling revenues. The total annual revenue of the County solid waste system was \$8,369,000 in 2020. The fees were increased in 2020 in anticipation of necessary system improvements. **Table 3-2** summarizes the County’s solid waste revenue history for the last three fiscal years. These revenues are used to operate and maintain the collection sites while also paying for waste hauling costs and disposal fees.

Table 3-2. Bonner County Solid Waste Annual Revenue History (Rounded to the nearest \$1,000)

| Item | 2018 | 2019 | 2020 |
|---|--------------------|--------------------|--------------------|
| Commercial Disposal Fees | \$2,178,000 | \$2,592,000 | \$3,186,000 |
| Recycle Fees | \$142,000 | \$77,000 | \$52,000 |
| Residential Fees | \$2,694,000 | \$3,013,000 | \$4,890,000 |
| Gate Fees – Individual fees collected at sites | \$106,000 | \$154,000 | \$200,000 |
| Account Interest | \$21,000 | \$24,000 | \$25,000 |
| Misc. Revenue – Penalty Revenue, Delinquent Fees, Refunds | \$53,000 | (\$11,000) | \$16,000 |
| Total | \$5,194,000 | \$5,849,000 | \$8,369,000 |

The fees associated with the 2018 and 2019 fiscal years reflect user fees of \$14 per cubic yard for commercial waste and property assessment fees of \$115 per household. The approximate number of households for these two years are 23,429 and 26,204, respectively. For the 2020 fiscal year, the fees were increased to \$18 per cubic yard for commercial waste and \$185 per household.

Table 3-3 summarizes the County’s expense history for the last three fiscal years. The County has no current debt service on the solid waste system.

Table 3-3. Bonner County Solid Waste Annual Expense History (Rounded to the nearest \$1,000)

| Item | 2018 | 2019 | 2020 |
|---|--------------------|--------------------|--------------------|
| Salaries & Benefits | \$1,368,000 | \$1,383,000 | \$1,550,000 |
| Vehicles – Fuel, Maintenance, Tires | \$56,000 | \$55,000 | \$71,000 |
| Other Expenses – Education, Small Assets, Supplies | \$27,000 | \$17,000 | \$444,000 |
| Capital Improvements – Professional Services, Equipment, Etc. | \$75,000 | \$56,000 | \$1,000 |
| Waste Management Fees – Operations, Transportation, Rural Collection, Commercial Collection | \$3,787,000 | \$4,346,000 | \$4,566,000 |
| Local Operations – Utilities, Operations, HHW supplies | \$559,000 | \$544,000 | \$599,000 |
| Other Services | \$80,000 | \$64,000 | \$87,000 |
| Total | \$5,952,000 | \$6,465,000 | \$7,318,000 |

As shown above, the BCSW expenses exceeded the revenue for the 2017-2019 fiscal years. During the 2018 fiscal year, BCSW signed a 5-year contract with Waste Management to continue work for the County. The new contract terms resulted in a cost increase.

Based on projections and factoring in debt financing (refer to **Section 7**), the County expects to maintain the current residential fee through 2039 while increasing the commercial gate fee in 2030 to \$20/cy, then in 2034 to \$23/cy in order to maintain operations and supplement revenue for loan repayment.

3.5 Solid Waste Generation

Exhibit 3-13 provides a graphical illustration of both County population and municipal solid waste (MSW) trends from 1994 to 2020 (projected population for 2020 based on U.S Census data). The amount of MSW discarded in 1994 by a population of almost 32,000 people was approximately 19,300 tons, equivalent to approximately 3.30 pounds per person per day (lbs/person/day). The waste tonnage has grown to approximately 45,307 tons in 2020, equivalent to a per capita generation rate of 5.35 lbs/person/day as compared to the national average per capita waste generation in the United States of 4.5 lbs/person/day. The average per capital generation rate in Bonner County for the last 5-years is 5.19 lbs/per/day. It is important to note that this per capita rate is purely MSW and does not include other wastes that may be disposed in the inert waste pits, recycled, or diverted. This number is the equivalent to the amount of waste that is exported each year by Bonner County to the regional landfill for disposal.

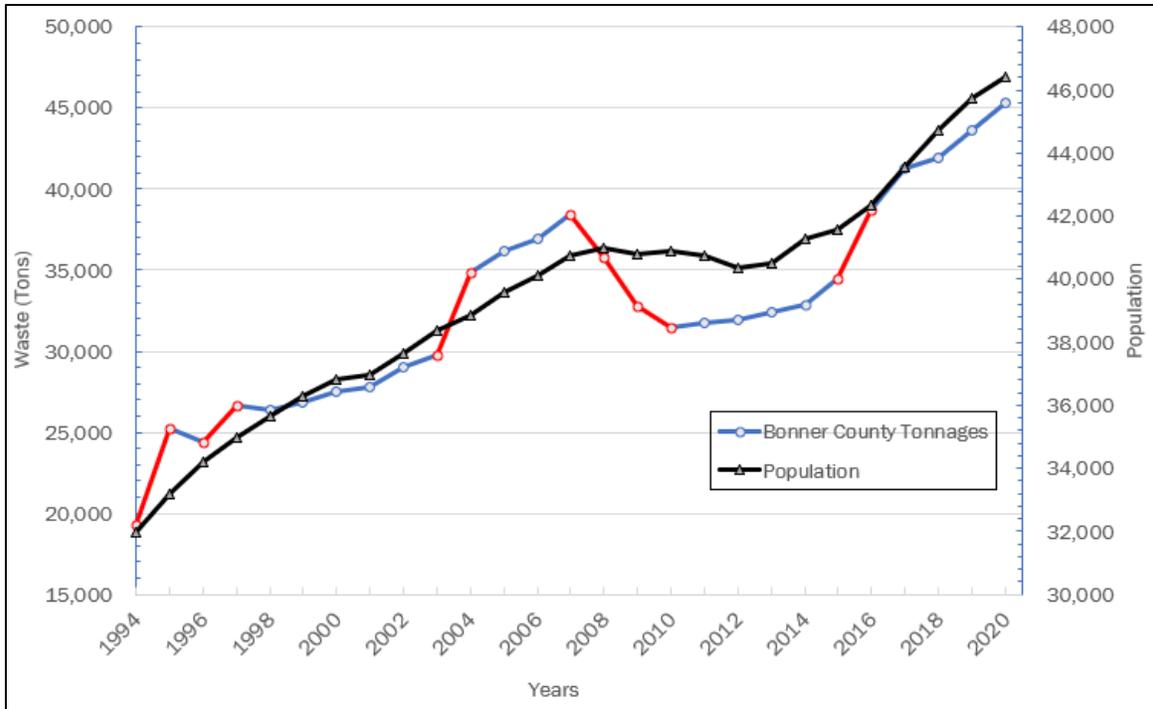


Exhibit 3-13. Bonner County Population and Waste Tonnage Chart (1994-2020)

3.6 Solid Waste Collection Sites Service Areas

Bonner County is bisected by the Clark Fork River, Pend Oreille Lake, and Pend Oreille River and extends from the east County border to the west. The Selkirk Mountain Range extends from the north County boundary southerly to the Pend Oreille River, separating the Priest Lake region from the Selle Valley Region. The Selle Valley region is generally considered the area bounded by the Selkirk Mountain Range in the west, Cabinet Mountain Range in the east, and the Pend Oreille water system to the south. South of the Pend Oreille water system, the populated portions of the County consist of three large valleys, namely the Highway 41 corridor, the Hoodoo Valley, and Highway 95 corridor. There are six full-service collection sites and seven household-only collection sites that service the citizen’s needs for disposal of all types of solid waste. Blanchard, Dickensheet, Idaho Hill, Prater Valley, Clark Fork, Colburn, and Dufort are the six full-service sites. Of the six, three (Dickensheet, Idaho Hill, and Colburn) sites have inert pits that also accept dirt, concrete, and asphalt. These three sites along with the second busiest site in the system, Dufort, are the underpinning of the solid waste system for Bonner County.

Exhibit 3-14 shows the approximate service areas associated with each of the full-service collection sites in Bonner County.

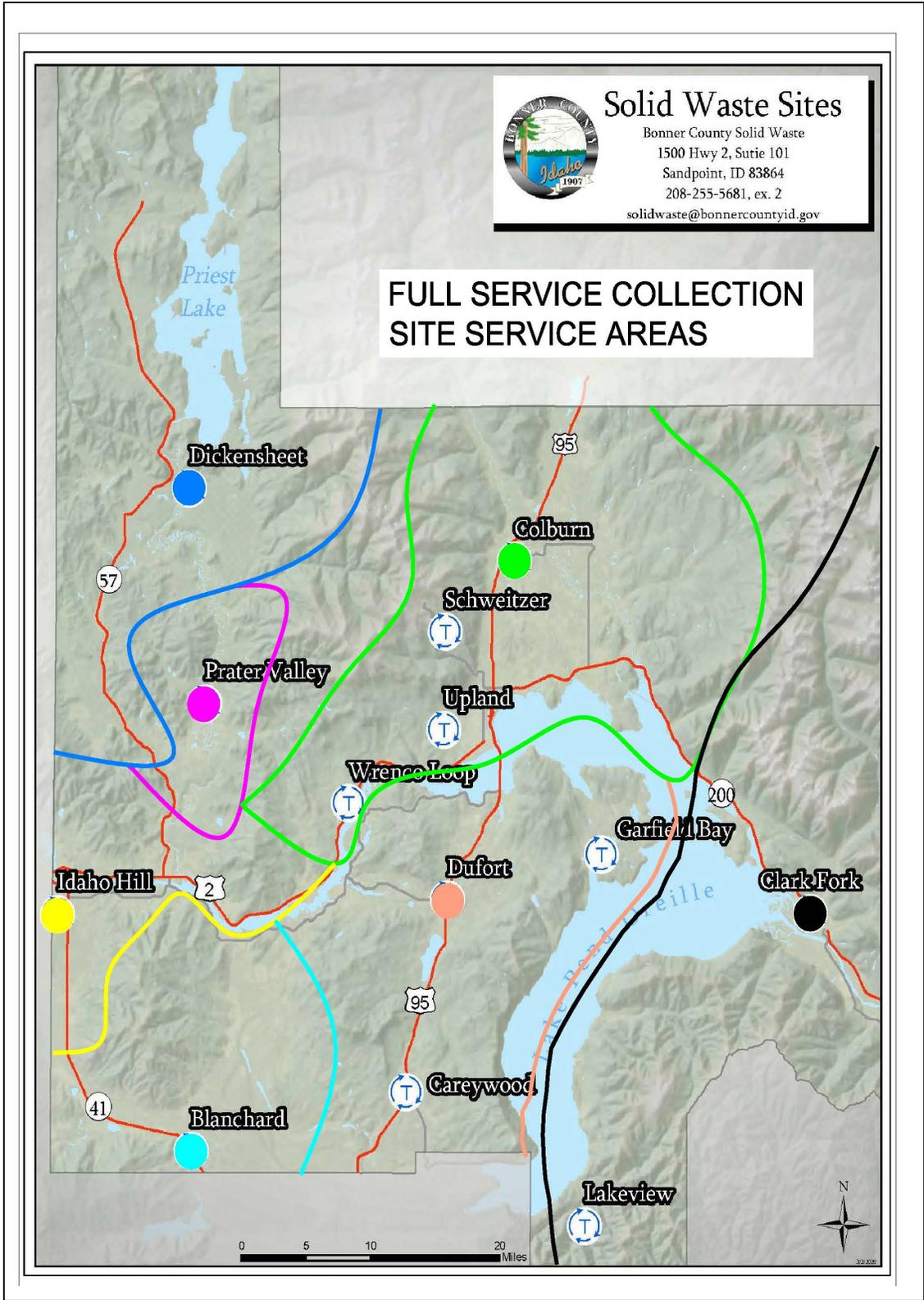


Exhibit 3-14. Bonner County Full-Service Collection Site Service Area

Largely the service areas are limited by geographic barriers to travel and development. Colburn's service area contains the most densely populated portions of Bonner County, including the City of Sandpoint. The service area for Dickensheet includes the Priest Lake area and the Priest River valley north of the Prater Collection Site. Idaho Hill's service area includes the cities of Oldtown and Priest River along the Highway 2 corridor to the east and the Highway 41 corridor to the south. The area for Dufort includes areas south of the Pend Oreille River and west of Lake Pend Oreille along the Highway 95 corridor.

3.7 Special Wastes, Recyclables & Waste Diversion

The County manages special wastes at the collection sites; however, some wastes are not accepted. Materials are monitored by the site attendants as they come into the site. Following is a discussion of special wastes and how the County handles them.

- Asbestos – The County does not accept asbestos materials at any of the collection sites. Asbestos generators are required to haul waste directly to a licensed landfill.
- Green wastes – Green wastes include tree limbs and grass clippings. The County operates a burn program at Dickensheet and Idaho Hill for clean untreated wood waste.
- Inert Wastes – Dirt, concrete, and asphalt are accepted at three locations in the County that have the inert pits (Colburn, Dickensheet, and Idaho Hill).
- Tires – Tires are accepted at the sites for special waste fee and recycled by a tire recycling company.
- Metal - The County collects scrap metal in a separate container or stockpiles in piles at each site. The metal is stockpiled until an adequate quantity is present to have a private recycler crush the metal. The metal is then hauled to a recycler and sold. Metal consists primarily of white goods and other scrap metal wastes. County staff are licensed to perform freon removal and the public is charged for this service. The County maintains records for green removal in compliance with Federal law.
- Liquid & Hazardous Wastes – Bulk liquid wastes and hazardous wastes are specifically disallowed by the County. Municipal solid waste landfills are specifically not allowed to take these wastes by federal regulation and the County does not have the ability to handle them. Household quantities of these wastes are acceptable at the sites with the mobile service. The site attendant screens the waste stream at the collection site to help insure that bulk liquid and hazardous wastes are not dumped at the site.
- Recyclables – The County collects recyclables at each of the collection sites. Recyclables accepted include cardboard, newspaper, cans, plastic, and batteries.
- Used Oil – The County collects used oil at each of the collection sites. Used oil is burned as a fuel source in several County facilities (Colburn site and the future shop building at Idaho Hill).
- Automotive Batteries – Used auto batteries are collected at each of the collection sites. Used batteries are sold by the County which results in additional revenue for the County.

3.8 Recycling Alternatives

A detailed discussion of recycling alternatives, their economic feasibility and the potential for tonnage diverted from the waste stream is beyond the scope of this report. The County is currently diverting about 18.5% of its waste stream as shown in **Table 3-4**. This does not include the amount of single stream recycling that is occurring in the City of Sandpoint, household hazardous wastes that are collected by the mobile unit, nor inert wastes that are disposed in the inert landfills in the County. This percentage is purely the fraction of waste that is diverted at the collection sites as compared to the amount of MSW that is shipped out of the County for disposal.

This is a reasonable effort for a rural County in Idaho. Given the relatively small waste volumes generated by the County and the long distance to recycling markets, full scale recycling is clearly not economically feasible for the County. The County's expenses most oftentimes exceed revenues from commodity sales. The County's current effort is a reasonable and appropriate level of recycling.

Sandpoint has curbside single stream. Not included in the recycling and diversion numbers.

Table 3-4. Bonner County Waste Diversion (FY 2020)

| Material / Item | Tonnage |
|------------------------------|----------------|
| Cardboard | 1,190 |
| Scrap Metal | 877 |
| Wood | 7,916 |
| E-Waste | 51 |
| Tires | 247 |
| Batteries | 11 |
| Total | 10,292 |
| MSW Waste Generation | 45,307 |
| Total Waste | 55,99 |
| % Recycled / Diverted | 18.5% |

3.9 Waste Projections

A per capita generation rate of MSW was used to project future waste tonnages for Bonner County based on a population increase of 1.45% per year. **Exhibit 3-13** shows the projected waste generation numbers in Bonner County for the next 20 years (2021-2040). In year 2040, it is estimated that Bonner County will generate approximately 58,500 tons of MSW per year with an estimated population of 61,865 people. The waste generation forecasts can be challenging given the possibility of population booms as more people move to the rural parts of the County. However, this can be counter-balanced by increased rates of recycling and waste diversion. BCSW staff believe this is a reasonable approach to forecast future waste tonnages especially since the community has shown some resistance to growth in the recent years.

4.0 NEED FOR THE PROJECT

4.1 Health, Sanitation, and Security

4.1.1 Colburn Transfer Site

Overall, concerns and issues generally include inadequate space for dumping and storing solid waste and no HHW facility were previously discussed. The exterior pad in front of the waste transfer building along with a depilated building creates safety and environmental concerns. Water that comes into contact with the waste tends to runoff the pad and combine with stormwater and leaching into the soil. Windblown litter is also a common occurrence. Because of inadequate dumping space at the waste transfer building, residential waste is dumped at a drop-off area rather than directly on the tipping floor which increases the chance of contact water leaking from the containers. With no permanent place to dispose of HHW, these types of materials are costly for the County to manage through a mobile system with the possibility of illegal dumping of these materials as well.

4.1.2 Rural Collection Sites

4.1.2.1 Dickensheet

Needs at the Dickensheet site are centered around repairing failing walls that are a safety hazard, increase unloading space to reduce congestion, paving to control dust and help to reduce the potential for soil contamination from contact water leaching into the soil, and security issues. There is also no water at the site for drinking, operations, and fire control. Furthermore, the site need is need of a perimeter fence with privacy slats, site lighting and surveillance cameras for improved security. The perimeter fence will also aid in catching windblown litter.

4.1.2.2 Dufort

The Dufort site experiences high traffic and waste loads during the summer months causing congestion and safety issues on the site as discussed in Section 3.2.3. With an added container area, additional stalls can be provided for public dumping to ease overcrowding. Paving will also help to mitigate soil contamination. Relocated and improved drainage systems will help to manage stormwater.

4.1.2.3 Idaho Hill

This site has multiple needs for various safety and public health reasons. Like Dickensheet, the block retaining walls are failing. There is a lack of basic utility services at the site. There is no permanent restroom and no water and sewer. There are several areas with dirt surfacing that causes dust and potential soil contamination issues. A shop building and office is needed at the site to service and maintain vehicles and equipment for the solid waste facilities. Furthermore, the site need is need of a perimeter fence with privacy slats, site lighting and surveillance cameras for improved security. The perimeter fence will also aid in catching windblown litter.

4.2 Aging Infrastructure

4.2.1 Colburn Transfer Site

As previously noted, Colburn has been in operation as a collection site and waste transfer site since 1994. Much of the original infrastructure is in-place today. The original waste transfer building that was built to be temporary is still in use. The building is dilapidated and undersized for the current load and future projected loads to manage and handle waste safely. The scales in the tunnel are old and suspect, and there is no commercial scale for long-haul trucks and trailers to weigh for accurate waste tonnage records and payloads. Also as previously noted, the HHW facility is unsafe and was shut down in June 2018 after the because of an inspection by the North Side Fire Department, which revealed a lack of

ventilation and leaving the County without a permanent place to safely collect and process HHW. General site / yard improvements include paving, striping and signage for additional access, traffic flow modifications, and to improve and expand grading and drainage systems.

4.2.2 Rural Collection Sites

3.2.2.1 Dickensheet

The container wall is failing and requires replacement and expansion to provide additional space for a waste container and more room for unloading trash.

3.2.2.2 Dufort

The Dufort site is relatively new. There is no aging infrastructure at this site. The capacity of this sites needs to be enhanced to handle the vehicles and waste load during the summer months.

3.2.2.3 Idaho Hill

The container wall is failing and requires replacement and expansion to provide additional space for a waste container and more room for unloading trash.

4.3 Reasonable Growth

The population is projected to grow at a rate of 1.45% per year, or a total of about 29% over the 20-year planning period. Future waste projections are based on a per capita generation rate of 5.19 lbs/person/day. Waste is estimated to grow in the County from 45,300 tons in 2021 to over 58,500 tons in 2040. The proposed improvements to the Colburn Transfer Site and the three rural collection sites along with the other nine existing sites are adequate to handle significantly more waste tonnage than what is projected based on the population growth and per capita generation rate.

4.3.1 General Organization Context

Other public agencies involved in the planning and coordination of solid waste programs within the area include the Idaho Department of Environmental Quality, Region 10 of the U.S. Environmental Protection Agency, and Panhandle Health. Great West Engineering of Boise, ID is assisting Bonner County with planning efforts and the funding agency application process for this project.

5.0 SOLID WASTE SYSTEM ALTERNATIVES

This section presents the alternatives that were considered for the Bonner County Solid Waste System improvements. The first part of this section discusses optimal operation considerations for the existing solid waste facilities, and then it is followed by the specific alternatives for waste disposal, transfer, and the collection sites. Each of the sections provide a description of the alternative and those that are carried forward into design criteria, site plan/schematics, environmental impacts, potential construction problems, and sustainability considerations.

5.1 Description of Alternatives

5.1.1 Optimal Operation of Existing Facilities

The purpose of this section is to discuss how the current solid waste system is being maintained and operated and to explore the possibility of improving operations to either achieve the objectives of this PER in their entirety or to assist in achieving these objectives. Such an approach could either eliminate the need for capital improvements to achieve plan objectives or reduce the extent of the capital improvements.

The County does an excellent job of operating and maintaining its solid waste system. No operational improvements were noted which would achieve the County's goal of improving the overall solid waste system except for increasing the cycle time of waste transfer trailer loading at Colburn. Waste Management is currently operating the tipping floor and it is estimated that it takes on the order of 45-60 minutes to cycle trailers through. Based on observations of other transfer stations, cycle times are typically on the order of 20-30 minutes to load 25-30 ton of waste into a trailer. This could reduce some of the trash from piling up outside of the waste transfer building; however, the tipping floor area is too small for multiple trucks to dump directly on the floor of the building while still providing room to pile and store garbage and push it into the top-load chute.

The solid waste system provides a good and convenient service to the residents of the County. However, the County is interested in improving the system. Improvements in the system are needed to make the facilities safer for public use and provide the basic service provided by a transfer site. This section identifies potential solid waste alternatives and screens them for further analysis within this section.

5.1.2 Solid Waste System Alternatives Screening

To fully evaluate alternatives for improvements to Bonner County's solid waste system, it is first necessary to identify the full range of alternatives that are available. Some of the alternatives can be relatively easily dismissed or screened from further analysis while others can be examined in more detail within the remainder of this section. The alternatives considered in this screening section are itemized below.

Disposal Alternatives:

- Alternative 1A – Waste Management Landfill
- Alternative 1B – Other Landfills
- Alternative 1C – County Developed and Operated Landfill
- Alternative 1D – More Comprehensive Recycling and Waste Diversion

Transfer Alternatives:

- Alternative 2A – Do Nothing / Close Site

- Alternative 2B – New Site / New Facility
- Alternative 2C – Direct Haul All Waste (No Transfer Site)
- Alternative 2D – Improve / Expand Colburn Site

Rural Collections Alternatives:

- Alternative 3A – Household Collections
- Alternative 3B – Do Nothing / Close Sites
- Alternative 3C – Improve / Expand Deficient Sites

5.1.2.1 Screening of Disposal Alternatives

Alternative 1A – Waste Management Landfill

The County currently disposes of its waste at Waste Management’s Columbia Ridge Landfill in Arlington, Oregon, approximately 300 miles away. As part of the transportation and disposal contract with Waste Management, the County pays over \$3 million each year for these services. At this time, this rate is considered competitive for transport and disposal in a modern Subtitle D landfill. The Columbia Ridge Landfill was opened in 1990 and has a projected remaining life of 143 years, well within the 20-year planning period for this project. In addition, the County has contract with Waste Management through 2022. For these reasons, this alternative is screened.

Alternative 1B – Other Landfills

There are other landfills in the area within a reasonable distance of Bonner County. Kootenai County owns and operates the Fighting Creek Landfill, which is located 13 miles south of Coeur d’Alene. There are also county-owned and operated landfills in nearby Asotin County, Washington (Clarkston) and Stevens County, Washington (Kettle Falls). None of these landfills, however, accepts waste from out of county or out of state, except for a minor amount of waste from Clearwater County that is disposed at the Asotin County landfill.

Republic Services owns and operates a regional landfill within a reasonable distance of Bonner County that could be competitive on a cost basis. Republic’s landfill in Missoula, Montana is approximately 190 miles away from Bonner County. About 260 miles away from Bonner County is the Waste Connections regional landfill in Boardman, Oregon. Depending on the contract renewal with Waste Management or a new contract with a new company, waste haul and disposal will be required for the Bonner County system, unless Bonner County decides to develop their own landfill (see Alternative 1C). Before the contract expires with Waste Management, Bonner County will be seeking bids for T&D of their waste. At that time, the cost competitiveness will be revisited. For these reasons, this alternative is screened.

Alternative 1C – County Developed and Operated Landfill

There are several factors that make this a poor alternative for Bonner County. First, it would be very difficult to site and license a new landfill in Bonner County. The mountainous terrain of the County limits potential landfill sites. The site soils and hydrogeology are not optimum for landfill development, and it would be very costly to develop a new landfill in the County. Second, the population of Bonner County is too small to financially support a modern landfill by themselves or even with neighboring county partners. The only in-state partner that would be of reason to include is Boundary County, which is smaller than Bonner and would not make a substantial difference in offsetting the cost to Bonner for developing a landfill. Third, it would likely be very difficult to obtain public support for a new landfill in Bonner County due to the recreational, environmental, and aesthetic values of the area. For these reasons, this alternative is screened.

Alternative 1D – More Comprehensive Recycling and Waste Diversion

A detailed evaluation of recycling and waste diversion alternatives is beyond the scope of this report. However, Bonner County has implemented recycling and waste diversion efforts. Several of the collection

sites have inert pits for diverting soil, concrete, and asphalt from the waste stream. The County also collects standard recyclables such as cardboard, newspaper, aluminum, plastic, and tin cans. The County segregates scrap metal and obtains a revenue from this waste stream. The County also recycles used oil and batteries and HHW materials.

With these recycling and waste diversion efforts, the County is addressing those portions of the waste streams that are most easily diverted. More comprehensive recycling through material separation or curbside pick-up of recyclables may be options in the future but are beyond the scope of this project. Recycling has had its challenges in the recent years with little to no market. Oftentimes these waste diversion programs are subsidized by the waste disposal fees and are not financially practical for a small community. For these reasons, this alternative is screened.

5.1.2.2 Screening of Transfer Alternatives

Alternative 2A – Do Nothing / Close Site

The Colburn site has been in existence for as long as the County staff can remember. It was one of the three landfill sites in existence since the late 1960's / early 1970's. Colburn has a high use demand with the most populous community being Sandpoint just a few miles south of the site. This site services a good portion of the community living in Sandpoint and north of the city. Continuing to utilize the existing Colburn Transfer Site without improvements is not a viable option. The existing facility is antiquated, undersized, and has reached the end of its service life. Do-Nothing would result in public safety concerns and environmental issues. Therefore, this alternative is screened from further analysis in this report.

Alternative 2B – New Site / New Location

This alternative explored the possibility of relocating the entire waste transfer facility somewhere else in the County or converting one of the existing collection sites to a transfer site. The transfer site would need to be centralized, have adequate space and be compatible with surrounding land use, and be in close proximity to a transportation corridor. Each of these elements is further discussed below.

1. Centralized Location

A primary factor in siting a transfer site is to determine the centralized location of where the waste is being generated in the County. This determination tends to lend itself well to finding a place where the waste can be consolidated while reducing haul distance on a per ton basis from the outlying rural collection sites. This analysis is oftentimes referred to as the center of waste mass calculation. Like in physics, the center of mass is the unique point where the weighted relative position of the distributed mass sums to zero. In other words, the distribution of mass is balanced around the center.

Applying this concept to waste collection points (or points of generation) in Bonner County, this analysis can be useful to determine where an ideal location is for transfer site. Selecting an arbitrary point of origin to be the southeast corner of the County, the calculation is done in two steps. First the east-west distance (or x-coordinate) is found, followed by the north-south (y-coordinate).

The x-coordinate for the center of mass is calculated using the following equation:

$$X_{CM} = \frac{\sum_{i=1}^n (X_i)(M_i)}{\sum_{i=1}^n M_i}$$

where,

X_{CM} = X-Coordinate to the Center of Mass

X_i = X-Distance to Mass (i)

M_i = Mass (i) for X_i

Similarly, the y-coordinate for the center of mass is calculated using the following equation:

$$Y_{CM} = \frac{\sum_{i=1}^n (Y_i)(M_i)}{\sum_{i=1}^n M_i}$$

where,

Y_{CM} = Y-Coordinate to the Center of Mass

Y_i = Y-Distance to Mass (i)

M_i = Mass (i) for Y_i

The resulting calculation shows that the center of waste mass in the County is located near the small rural collection site of Upland, west of Sandpoint. (refer to **Exhibit 5-1**). Future growth in the County will change this center of mass point. Based on conversations with County staff, growth seems to be occurring around the south/south central zone of the County near Blanchard and the Town of Athol in neighboring Kootenai County. This growth within the County would tend to shift the center of waste mass more south and possibly west depending how the counterbalance of population grows in other parts of the County especially within the City of Sandpoint.

DRAFT

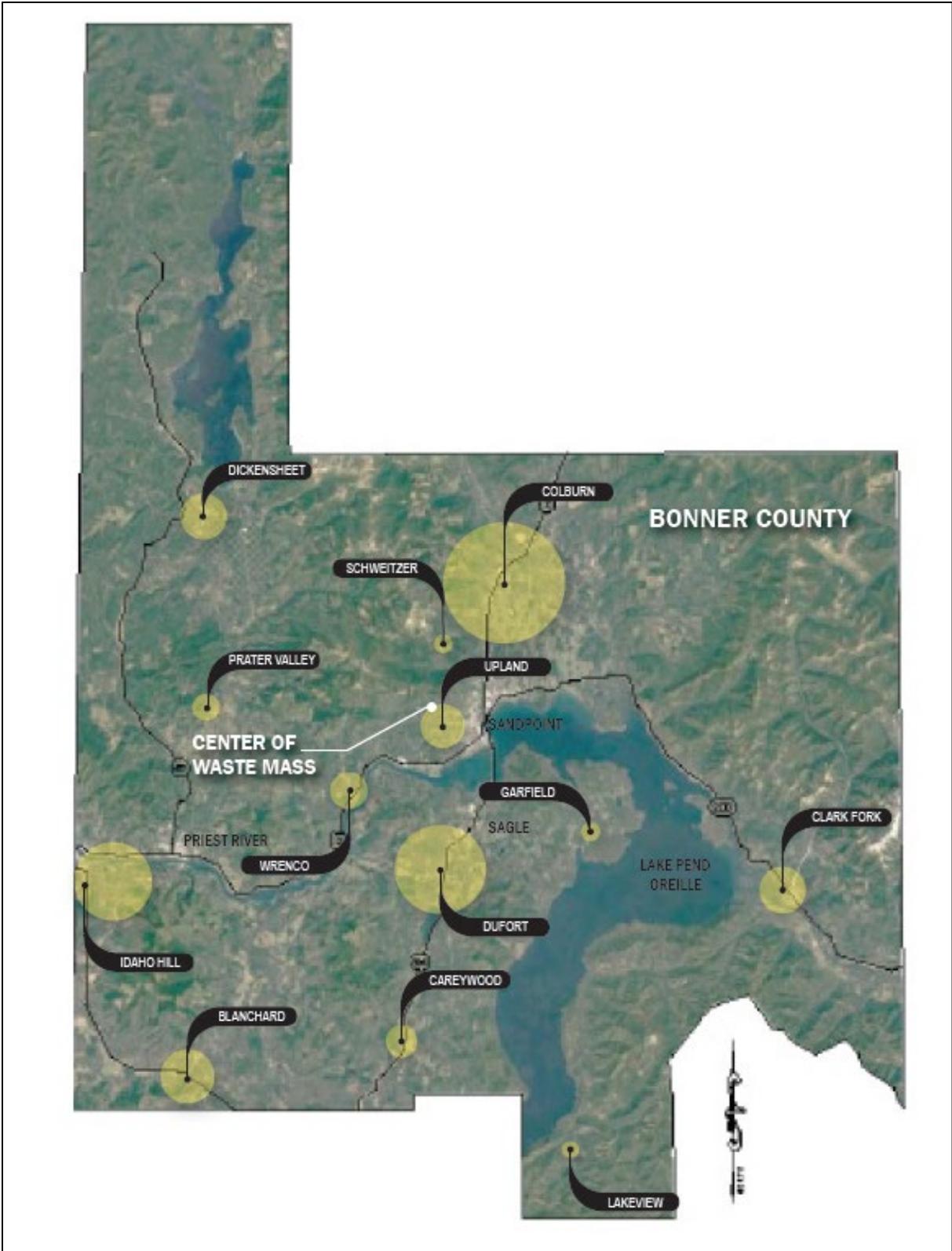


Exhibit 5-1. Bonner County Center of Waste Mass

2. Land Requirements

The area required for a transfer site depends on the volume of waste to be transferred, rates at which waste is received, the various functions and operations to be carried out at the site, and the types of customers and vehicles the facility is intended to serve. Locating a site of sufficient size is critical to operating efficiencies and minimizing impacts on the surrounding community. The site also needs to have sufficient space for onsite roadways to move vehicles around various parts of the transfer site. Waste collection trucks can be up to 40 feet long. Transfer trucks and trailers that move waste to landfill are typically 50 to 70 feet long. These types of vehicles need wide roadways with gradual slopes and curves to maneuver efficiently and safely. The site will need space for parking transfer trailers and to allow incoming and outgoing traffic to form lines without backing up onto public roads. Buffer area around the site is also important for setbacks from roadways and properties and to provide screening from neighbors.

Transfer sites often are two-level buildings. Completely flat sites will need ramps to allow vehicle access to the tipping floor (or areas excavated to allow access to the lower tunnel level). Sites with moderately sloping terrain can use topography to their advantage by allowing access to the upper levels from the higher parts of the natural terrain and lower levels from the lower parts. Sites with steep slopes could require extra costs associated with earthmoving and retaining walls.

3. Land Compatibility and Access

Several design factors go into determining a favorable location to site a waste transfer facility. The transfer site should have direct and convenient access to truck routes, major arterials, population centers, and be acceptable or compatible with possible environmental constraints (location of a sole-source aquifer and its proximity to airports or waterways). Sandpoint is the only community in Bonner County that has mandatory curbside collection. Other areas of the County are voluntary. For efficient collections, the collections trucks need to be near the transfer station or landfill. These trucks need to unload waste routinely following service routes. If they need to haul the waste a long way, it increases collections costs considerably. The community of Sandpoint would experience this cost increase if the transfer station were relocated a far distance away.

4. Ability for Expansion

When selecting a site, the potential for increases in the daily tonnage of waste is required. Also, considering the possibility of adding processing capabilities for recycling and diversion. It is most oftentimes less expensive to expand an existing transfer site than to develop a new site due to the ability to use existing operations staff, utility connections, traffic control systems, office space, and buildings.

5. Access to Utilities

Transfer sites generally require electricity to operate equipment, such as knuckleboom cranes, lighting, water for restrooms and drinking, and sanitary sewer systems for wastewater disposal. Smaller transfer sites use wells for water supply, and some, especially in more rural settings, use septic systems or truck their wastewater for offsite treatment.

6. Zoning Designations and Requirements

Zoning ordinances frequently classify transfer sites as industrial uses, which limits their siting to areas zoned for industry usually in conjunction with a conditional use permit. Exclusive use of predetermined land use criteria, however, might result in locating transfer sites in areas already overburdened with industries or clustering of these types of facilities. If local zoning ordinances are restrictive by disallowing facility siting outside pre-established industrial zones, substantial engineering and architectural design must be incorporated into the facility to minimize impacts on the surrounding community.

7. Summary and Conclusions

For this assessment, a minimum of 12-15 acres would be needed for new waste transfer site to support Bonner County over the next 20 years. Ideally, the site would also have enough space for an inert pit to

continue diverting soil, concrete, and asphalt from the waste stream that would otherwise need to be hauled and disposed in a regional landfill. The site would also need to be gently sloping and free of shallow groundwater, wetlands, and near surface rock. Locational requirements would put this site either north or south of Sandpoint, the population center of the County. Direct access to the highway is also important without having to travel through residential neighborhoods while still being somewhat close to population centers. Land use compatibility of being in an industrial or very rural area of the County are also a necessity.

The County currently does not own any land that would fit these criteria. Acquiring property would be very expensive along with having to build all new infrastructure and would be cost prohibitive. As far as converting an existing collection site to a transfer site, Idaho Hill has space and is next to a highway. However, it is in the extreme southwest corner of the County and far away from the current population center of Sandpoint, resulting in a significant amount of cost per ton to consolidate waste at this site. If the County's population growth shifts more south and west over the next 20 to 30 years, the need for transfer site in this area might be warranted. In this case, Idaho Hill might be a good candidate as a second transfer site for the County. Interim improvements to Idaho Hill as part of this project, however, would not preclude it from one day becoming another main transfer site for the County.

The Upland site is closest to the current center of mass. The County attempted to expand this site into a full-service site a few years ago but that was meant with public concern. The Upland facility is near a daycare and the residents were worried about increased traffic and safety issues. Therefore, the site has remained as a household trash only site. The Dufort site would be a good alternative with its location south of Sandpoint and proximity to the highway, but unfortunately, does not have the available land for a full transfer site. For these reasons, this alternative is screened

Alternative 2C – Direct Haul All Waste (No Transfer Site)

This alternative considers direct haul of all waste from Bonner County to a regional landfill and would eliminate the need for a centralized transfer site. However, for this alternative to be considered, each of the rural collection sites would have to have some sort of waste consolidation to load roll-off containers. Although this alternative has significantly less capital cost, it would have significant maintenance and operational costs. There is a major level of inefficiency in hauling 10-to-12-ton waste containers opposed to 25-to-30-ton waste transfer trailers. It would not be practical employing this alternative given the haul distance to any regional landfill in the area is no less than 400 miles round trip. This would be cost prohibitive and significantly more expensive. For this reason, this alternative is screened.

Alternative 2D – Remodel/Improve Colburn Site

The Colburn site is located north of Sandpoint and is approximately 12 miles away from the current center of waste mass. The site has existing infrastructure that is either sufficient or needs improvements and enough space to add buildings, roads, and supporting infrastructure for all improvements that are needed.

This alternative includes several improvements to recondition and expand Colburn for continued waste collection and transfer needs for the next 20 years and beyond. Each of these improvements is described in the subsequent subsections. Refer to **Section 7** for design details.

1. Constructing a New Waste Transfer Building

A new waste transfer building will be constructed next to (northeast of) the existing transfer building. It will be a two-level pre-engineered metal structure. The tipping level (main level) of the building will feature high-strength concrete floors, tall metal-cladded concrete push walls on the edges and steel-plate armoring surrounding the pit openings. The building will be arranged in the same general orientation as the existing building, opening to the northwest.

Two mixed-use unloading stalls will be provided on the south end of the new building for commercial trucks to use during the weekdays in addition to the existing transfer building that will be reconditioned. Approximately seven unloading stalls will be provided for the public to use during the weekdays plus the two mixed-use stalls on the weekends. Commercial vehicles will enter the building on the southwest end using the service road. The public will enter from the north through the main entrance gate. The commercial area in front of the new building will be separated from the public area using removable traffic barricades. This arrangement will separate public from commercial vehicles and maximize efficiency and safety of the operations.

After waste is dumped on the new tipping floor, it will be pushed to the rear of the facility toward two loading pits (chutes) using a rubber-tire loader with cutting blades to protect the floor. A stationary knuckle-boom crane or a mobile track unit will be located between the pit openings or in front of the pit openings to pull waste off the floor and compact waste in the transfer trailer parked below. The crane will also be used to balance the trailer payload. The lower (basement) level will feature a pull-through tunnel for the existing building drive-through and a new loading tunnel with pit scales to weigh the trailers while they are loaded. A third loading bay can be added as a provision to the building as a future “bump-out” (further east) depending on the capital budget and future needs of the facility.

2. Building a New HHW Facility

The existing HHW facility will be demolished since it is no longer functional, and it will be in the way of the new operations. A new HHW facility will be built on the north end of the facility where the recycling and dumpsters are currently located. The HHW facility will be a slab-on-grade, pre-engineered metal structure with a covered receiving area and an adjacent dry storage area. The building will be placed on a concrete slab with a central sump for secondary containment. The floor will feature an inset (pit) for a hazardous waste locker to use for storing and bulking materials. The facility will feature general building ventilation, explosion-proof electrical and lighting systems, a flammable fixed gas monitoring system, and a safety shower/eye wash station with tepid water supply.

3. Reconditioning the Existing Waste Transfer Building

The following improvements are recommended to recondition the existing building: (1) completely replacing the metal siding with heavier gauge paneling and installing translucent paneling in the window openings, (2) repairing the tipping floor with a high-strength material overlay in heavy wear areas, (3) upgrading the interior and exterior lighting, and (4) replacing the short metal push-wall with a tall, reinforced concrete wall with metal armoring around the pit opening.

4. Adding an Automated Commercial Truck Scale

A new scale will be installed along the service access road before the waste transfer buildings. The primary purpose of the scale will be to weigh commercial trucks entering the facility. Secondly, it can be used to weigh long-haul trucks for cross-checking the pit scales. A radio-frequency identification (RFID) system will be provided that can be monitored remotely from the attendant building at the public entrance gate. Video cameras will be used to monitor traffic pulling on and off the scale with monitors in the attendant building. The scale will also include inbound and outbound kiosks and an intercom system for the driver to communicate with the attendant. Commercial trucks will be tared and read with RFID cards or window tags requiring only inbound scaling. Vehicles that are not tared, such as roll-off container trucks with multiple truck/container combinations, will require both inbound and outbound scaling. Traffic control onto and off the scale will be done by an automatic light that is activated by transactions.

5. Relocating Drop-Off Facilities

The metals collection pile will be relocated north of the wood waste pile area, near the existing location of the tire drop-off area. The tire drop-off area will be relocated south of the existing (former) HHW Facility and north of the future transfer building. The recycle bins, near the public dumpsters and z-wall will be relocated to a new recycling drop-off area across from the old HHW facility. The carboard recycling

container will also be relocated at the new recycling drop-off location. The new waste transfer building will allow for direct waste unloading on the floor of the building and use of the z-wall for overflow (busy periods) and for oversized materials such as furniture.

6. Site/Yard Improvements

Several grading and drainage improvements will be needed to accommodate the new buildings and site infrastructure. The existing road, for the length of the new waste transfer building, will need to be re-graded (flattened), at the same elevation of the existing building tunnel.

Portions of the paved road leaving the basement level of the two transfer buildings will also be re-graded to approximately and re-paved to meet the existing road/ yard grades. A retaining wall will be needed on the north side of the new building until the yard grade is reached as the road climbs out of the basement level of the buildings. The yard area will be paved where the former HHW facility was for the turnaround area for operations (yard goat pulling empty containers into the loading bays).

On the east side of the two waste transfer buildings at the basement level, the road will be extended further east making room for the new tunnel and bypass road. A new (second) buried tank will be needed to collect and store contact water from the new transfer building floor and pit area. The existing swale, further east will be enlarged. Drainage improvements such as catch basins and culverts will be necessary to ensure stormwater flows to the re-graded swale.

The new scrap metal drop-off area will be paved, as well as the new recycling and cardboard drop-off location. Fencing will be installed around the perimeter of the site. The existing fence, east of the service road will be upgraded to chain link, to match the new installation. A new entrance gate will be installed northwest of the existing service gate for on-site operations to access the waste transfer buildings.

7. Improving Site Access and Traffic Circulation

Reversing the traffic flow for the onsite transfer trailer loading operations will create a more efficient traffic pattern and eliminate the comingling of traffic in the yard area. As previously mentioned, this will also require demolishing the existing HHW building and relocating the metals pile next to the wood waste pile.

8. Site Traffic Flow and Control

Signs and pavement markings (striping) will be used throughout the facility to direct and control traffic. There are four main types of traffic utilizing the site: (1) public (including contractors), (2) commercial trucks (garbage trucks and roll-off container trucks), (3) onsite operations (yard goat pulling empty and loaded trailers around the site), and (4) long-haul transport trucks dropping off empty containers and picking up full containers. Refer to Section 7 for design details related to site traffic flow and control improvements.

5.1.2.3 Screening of Rural Collections Alternatives

Alternative 3A – Household Collections

Instead of providing the collection sites for citizens living in the rural parts of the County, each household would be required to contract with the waste hauler for garbage pickup. Although this is an option, it is not a reasonable one for Bonner County for several reasons. First, the sheer remoteness of the County does not lend itself well to a garbage pickup service program. The drive time, accessibility, and weather alone make this option cost prohibitive. Providing containers to service several homes in geographic areas is fraught with challenges. These sites attract bears and other scavengers and would be yet another place for illegal dumping with the potential inability or willingness to pay for disposal / pickup. Therefore, this alternative is screened.

Alternative 3B – Do Nothing / Site Closures

The existing collection sites have serviced the County well. Idaho Hill and Dickensheet sites are two of the original collection sites in the County and service the southwest and northwest areas of the County. These sites also have operating inert pits to divert soil, concrete, and asphalt. Dufort is the busiest collection site besides Colburn and services the southern area of Sandpoint. Over the years, the number of rural collection sites has declined to optimize the system and still provide convenient drop-off for the rural community of Bonner County. Closing any of these sites would be detrimental for convenient and responsible waste collection in Bonner County. Furthermore, doing nothing to improve these sites would result in potential public safety concerns and environmental issues. Therefore, this alternative is screened.

Alternative 3C – Improve / Expand Deficient Sites

This alternative includes several improvements to recondition and expand three of the rural collection sites for waste collection and management that are deficient. Refer to **Section 3.3.3** for a description of the concerns and issues at Dickensheet, Dufort, and Idaho Hill. Refer to **Section 5.2.2** for a description of the design criteria and approach.

5.2 Design Criteria

This section provides an overview of the design criteria used for sizing and layout of transfer sites and rural collection sites. Since none of the disposal alternatives are carried forward after the initial screening, they are not discussed in this section or subsequent sections. Additionally, the design details for the alternatives are presented in **Section 7** for the proposed project.

5.2.1 Transfer Alternatives

When it comes to designing waste transfer sites, there are several design criteria that must be considered. After determining a beneficial location for the facility and site suitability as discussed in **Section 5.1.2.2 – Alternative 2B**, the waste transfer building(s) need to be sized to handle waste throughput and unloading space for waste delivery vehicles (i.e., public self-haul vehicles versus commercial garbage trucks). The waste throughput capacity of a facility is determined by the time it takes to cycle a waste transfer trailer through the loading stall. The trailer needs to be pulled into the loading bay (tunnel), loaded with waste (balance payload and weight), pulled out of the stall, and then replaced with an empty trailer. This cycle time sets the number of loading bays that are needed for a peak hour of waste delivery or the total amount waste that needs to be loaded in a workday, whichever is greater. With typical cycle times of 30 to 40 minutes and 25-to-30-ton trailer payloads, a facility can load upwards of 500 to 600 tons per day through a single loading stall over a 10-hour workday.

The tipping floor area is typically established by the amount of space needed for waste processing (front to back), additional area for waste storage that is needed if there is downtime, and space for waste unloading of vehicles by the various customer types. Commercial unloading stalls are typically sized to be a minimum of 15-foot wide while public stalls are 12-foot wide. Average unloading times along with arrival times set the number of stalls that are needed for a facility. On average, public unloading rates are on the order of 8 to 12 minutes while commercial vehicles tend to be 6 to 8 minutes.

Another important design element for waste transfer sites is efficient and safe movement of the various types of traffic (public, commercial, and operations), space for empty and loaded trailers, areas for recycling and waste diversion, flow control at an entrance gate, space for stacking of vehicles entering and leaving the site, and supporting infrastructure such as HHW facilities, refrigerant removal areas, etc.

Household hazardous waste facilities are designed for the floor space that is needed to receive, process and store the materials until they can be offloaded by a contractor. These facilities often have some sort

of ventilation (natural or engineered), safety shower/eye wash station in case of an exposure, and dry chemical fire protection. Combustible gas detection systems are also common in enclosed facilities.

5.2.2 Rural Collections Alternatives

Aside from the large waste transfer building, collection sites tend to have similar facilities as transfer sites. There needs to be adequate space to unload waste materials into containers, which are typically dumpster or open-top containers positioned behind retaining walls (z-walls). Traffic flow and access are equally important as well as space for recycling and diversion. These facilities typically do not have HHW facilities but may collect basic materials such as used oil and automotive batteries. Security fencing and surveillance are also important for rural sites to help deter vandalism. The number of unloading stalls (z-wall) bays are sized similar to the waste transfer building. In this case, the number has been determined based on observations by solid waste staff on future needs of the facilities that are already deficient.

5.3 Site Plan / Schematics

5.3.1 Transfer Alternatives

The proposed improvements for the Colburn site are provided in Figure 5-1. Refer to Section 5.1 for a description of the Colburn site improvements alternative.

5.3.2 Rural Collection Site Alternatives

Figures 5-2, 5-3, and 5-4 show the proposed improvements for the Dickensheet, Dufort, and Idaho Hill sites, respectively.

5.4 Environmental Impacts

5.4.1 Transfer Alternatives

There are no foreseeable environmental impacts with the proposed improvements at the Colburn site. New facilities will be built within the existing property. There are no known wetlands and the site is outside of the floodplain. Endangered species will not be impacted as the facility is already an operating transfer site, and there are no wild and scenic rivers in the area. Refer to **Section 2.2** for more environmental information concerning the Colburn site.

5.4.2 Rural Collections Alternatives

Like the Colburn site, there are no foreseeable environmental impacts with the proposed improvements at the three rural collection sites. New facilities and improvements will be built within the existing properties. There are no known wetlands and the sites are outside of floodplains. Endangered species will not be impacted as the facilities are already operating collection sites, and there are no wild and scenic rivers in the area. Refer to **Section 2.2** for more environmental information concerning the rural collection sites.

5.5 Land Requirements

5.5.1 Transfer Alternatives

The County owns the existing 35 acres of land at the Colburn site. No additional land requirements or easements are necessary for the proposed improvements.

5.5.2 Rural Collection Site Alternatives

Like the Colburn site, the County owns the property where the Dickensheet, Dufort, and Idaho Hill sites are located. No additional land requirements or easements are necessary for the proposed improvements.

5.6 Potential Construction Problems

5.6.1 Transfer Alternatives

Outside of common construction issues related to weather impacts and shorter seasons working in Northern Idaho, there are no known construction problems related to the proposed improvements at Colburn which may affect cost of construction or operation of the facilities. This site will remain open during construction. As such, sequencing and constraints will be specified as part of the contract documents for the contractor to follow. Having the original waste transfer building separate from new building will allow the work to be staged so that it can stay open and functional.

5.6.2 Rural Collections Alternatives

Like the Colburn transfer site, there are no foreseeable construction issues at the rural collection sites.

5.7 Sustainability Considerations

5.7.1 Transfer Alternatives

During detailed design, sustainable utility practices associated with environmental, social, and economic benefits will be considered in creating a resilient utility for the Colburn site improvements. Water use will be limited at the facility. Dry sweep practices will be used to the extent possible at the waste transfer buildings to conserve water and reduce the management of contact water (leachate). Stormwater will be managed to mimic natural processes such as the use of swales directing water to low areas of the site and evapotranspiration processes. Efficient heating and ventilation systems will be used where appropriate and large spaces will be openly ventilated and void of conditioning on the tipping floors of the waste transfer buildings. Operational simplicity of the facilities will also be included as part of the design aspects of the project. The design provides for 20+ years of capacity for the Colburn transfer site to manage and transfer waste as the central location for waste consolidation in the County.

5.7.2 Rural Collections Alternatives

Much the same as the Colburn site, sustainability practices will be incorporated into the designs for the rural collection sites. Water use will also be limited for these sites. Where applicable, efficient heating and cooling will be used, and open areas will be void of climate control. Operational simplicity will be key much like the transfer site as well as providing sufficient capacity for the next 20+ years.

5.8 Cost Estimates

The engineer's opinion of cost for capital improvements are considered bottom rolled-up-type estimates for the identified cost items. The estimates include cost allowances and costs per square foot for certain components of the estimate. The estimate assumes the project will be done on a competitive bid basis. The contractor will have a reasonable amount of time to complete the work given a reasonable project schedule with no liquidated damages, and the project will be constructed under a single contract. The actual cost of the projects will depend on competitive market conditions, actual labor and material costs, actual site conditions (e.g., suitability of subsurface soils), productivity, project scope, schedule, final design, and other factors. To help cover unknowns at this time, the cost estimate includes a 20%

contingency factor. The amount of taxes on construction materials are estimated assuming half of the construction costs are materials with a tax rate of 6%. The amount of architectural and engineering (A&E) fees are assumed to be 10% of the total construction costs with another 4% to cover limited construction administration services to support the County in construction oversight and contract administration. The costs have been estimated in 2021 dollars (2021\$) and escalated at 2.4% for the time of bidding in 2022. Refer to **Appendix H** for breakdown of costs.

5.8.1 Transfer Alternatives

The estimated capital costs for the Colburn site improvements are provided in **Table 5-1**.

Table 5-1. Estimated Capital Costs for Proposed Colburn Site Improvements

| Facility/Improvement | Estimated Cost |
|--|--------------------|
| Construction | \$4,268,000 |
| Contingency | \$854,000 |
| A/E Fees (10% - design, 4% - CM support) | \$717,000 |
| Taxes | \$154,000 |
| Total | \$5,993,000 |

Notes:

¹. Costs include 20% contingency, 6% taxes on materials (est.), 10% A&E Design Fee, and 4% limited A&E CM support fee. Costs are in 2022 dollars (2022\$).

5.8.2 Rural Collections Alternatives

5.8.2.1 Dickensheet

The estimated capital costs for the Dickensheet site improvements are provided in **Table 5-2**.

Table 5-2. Estimated Capital Costs for Proposed Dickensheet Site Improvements

| Project Item | Estimated Cost ⁽¹⁾ |
|--|-------------------------------|
| Construction | \$758,000 |
| Contingency | \$152,000 |
| A/E Fees (10% - design, 4% - CM support) | \$127,000 |
| Taxes | \$27,000 |
| Total | \$1,064,000 |

Notes:

¹. Costs include 20% contingency, 6% taxes on materials (est.), 10% A&E Design Fee, and 4% limited A&E CM support fee. Costs are in 2022 dollars (2022\$).

5.8.2.2 Dufort

The estimated capital costs for the Dufort site improvements are provided in **Table 5-3**.

Table 5-3. Estimated Capital Costs for Proposed Dufort Site Improvements

| Project Item | Estimated Cost ⁽¹⁾ |
|--|-------------------------------|
| Construction | \$255,000 |
| Contingency | \$51,000 |
| A/E Fees (10% - design, 4% - CM support) | \$43,000 |
| Taxes | \$9,000 |
| Total | \$358,000 |

Notes:

1. Costs include 20% contingency, 6% taxes on materials (est.), 10% A&E Design Fee, and 4% limited A&E CM support fee. Costs are in 2022 dollars (2022\$).

5.8.2.3 Idaho Hill

The estimated capital costs for the Idaho Hill site improvements are provided in **Table 5-4**.

Table 5-4. Estimated Capital Costs for Proposed Idaho Hill Site Improvements

| Project Item | Estimated Cost ⁽¹⁾ |
|--|-------------------------------|
| Construction | \$734,000 |
| Contingency | \$147,000 |
| A/E Fees (10% - design, 4% - CM support) | \$123,000 |
| Taxes | \$26,000 |
| Total | \$1,030,000 |

Notes:

1. Costs include 20% contingency, 6% taxes on materials (est.), 10% A&E Design Fee, and 4% limited A&E CM support fee. Costs are in 2022 dollars (2022\$).

5.8.3 Total Project Estimated Costs

The estimated capital costs for the total project are provided in **Table 5-5**. These costs include an allowance for other project expenses that are anticipated, including loan service fees, bond attorney fees, and interim financing interest.

Table 5-5. Estimated Capital Costs for the Project (Transfer Site and Three Rural Collection Site Improvements)

| Project Item | Estimated Cost ⁽¹⁾ |
|--|-------------------------------|
| Construction | \$6,015,000 |
| Contingency | \$1,204,000 |
| A/E Fees (10% - design, 4% - CM support) | \$1,010,000 |
| Taxes | \$216,000 |
| Subtotal | \$8,265,000 |
| Other Project Expenses ⁽²⁾ | \$288,700 |
| Total | \$8,733,700 |

Notes:

1. Costs include 20% contingency, 6% taxes on materials (est.), 10% A&E Design Fee, and 4% limited A&E CM support fee. Costs are in 2022 dollars (2022\$).

2. This is an allowance amount anticipated to pay back loan services fees, interim financing interest, and bond attorney fees.

5.9 Annual Operating Budget

5.9.1 Transfer Alternatives

The annual operating budget for the Colburn site is provided in **Table 5-6**. The budget assumes Bonner County operates the entire site and no longer uses contracted services from Waste Management for operating the tipping floor. The current rate charged by Waste Management for the tipping floor operations is approximately \$9 per ton, which equates to an annual cost of over \$400,000 per year. This amount alone is over 80% of the total annual O&M budget for the entire station once operations is taken over by the County. The option of the County taking over tipping floor operations was done independently of this study for affordability and the County's flexibility of enhancing operations at Colburn.

Table 5-6. Annual O&M Budget for Colburn Transfer Site

| Facility/Improvement | Budget ⁽¹⁾ |
|-----------------------------------|-----------------------|
| Salaries & Benefits | \$250,000 |
| Insurance | \$15,000 |
| Professional Services | \$20,000 |
| Services, Supplies, and Equipment | \$35,000 |
| Capital Improvements Reserves | \$50,000 |
| Fuel | \$45,000 |
| Equipment Maintenance & Repair | \$50,000 |
| Utilities | \$25,000 |
| Total | \$490,000 |

Notes:

¹ Budget is shared with the entire solid waste system for supervisor, admin, and engineering oversight. Costs are in 2022 dollars (2022\$).

5.9.2 Rural Collections Alternatives

The annual O&M budget for the three rural collection sites of Dickensheet, Dufort, and Idaho Hill is summarized in **Table 5-7**.

Table 5-7. Annual O&M Budget for the Three Rural Collection Sites

| Facility/Improvement | Estimated Cost ⁽¹⁾ |
|-----------------------------------|-------------------------------|
| Salaries & Benefits | \$150,000 |
| Insurance | \$3,000 |
| Professional Services | \$10,000 |
| Services, Supplies, and Equipment | \$15,000 |
| Capital Improvements Reserves | \$5,000 |
| Fuel | \$25,000 |
| Equipment Maintenance & Repair | \$20,000 |
| Utilities | \$5,000 |
| Total | \$228,000 |

Notes:

¹ Budget is shared with the entire solid waste system for supervisor, admin, and engineering oversight. Costs are in 2022 dollars (2022\$).

6.0 SOLID WASTE SYSTEM ALTERNATIVES ANALYSIS

As presented in **Section 5**, the alternatives for waste disposal, transfer, and rural collections were considered. None of the disposal options were carried forward for further consideration after initial screening. All transfer alternatives were screened due to impracticalities and being cost prohibitive to purchase new land and rebuild all the existing infrastructure already offered at the Colburn site. The Colburn site is near the center of waste mass and should remain close in the coming 20+ years of the study, and therefore, was carried forward as the preferred option. Three alternatives were considered for rural collections. The improvement alternative for each of the sites that are deficient was preferred. As such, there is no need to prepare life cycle costs to compare competing alternatives.

Non-monetary factors such as the social and environmental aspects of the project are limited due to the general nature of the project. Each of proposed improvements are at sites that already exist and have so for many years. None of the improvements are expected to cause adverse impacts to the environment. Furthermore, these sites are well established and convenient for the community for responsible waste management.

7.0 PROPOSED PROJECT

The proposed project includes improvements to the Colburn site for central waste transfer out of the County and improvements to three rural collection sites. Each of these projects are discussed in further detail below.

7.1 Preliminary Project Design

The preliminary design for the project focuses on **the alternatives that were selected for the transfer site and rural collection sites as discussed in Section 5.**

7.1.1 Colburn Transfer Site

As discussed in **Section 5.2**, there are several design parameters that are used to size solid waste facilities. Significant effort goes into forecasting waste generation rates and the fraction of waste that will be delivered to the transfer site by the various users (customers). This mix and peak delivery rate establish the size of the waste transfer building. For this project, the existing waste transfer building will be rehabilitated providing up to four public unloading stalls or three commercial stalls in addition to the new waste transfer building.

Table 7-1 summarizes the design data for entire Bonner County Solid Waste system with focus on the current and projected waste tonnages and arrival rates of public and commercial vehicles at the Colburn site.

Table 7-1. Colburn Preliminary Design Data Summary

| Item/Description | Quantity | Unit | Source/Assumptions |
|---|----------|----------|--|
| Design Criteria: | | | |
| Design Period | 20 | Years | Design Period (2040 Design Year) |
| Days per Week of Operation | 7 | DPW | Open Monday - Sunday |
| Hours of Operation | 10 | HPD | Open 7:00 a.m. to 5:00 p.m. |
| Holidays Per Year | 10 | DPY | Assumed Observed Holidays |
| Facility Operational Days per Year Total | 355 | DPY | Minus Holidays |
| Weekdays | 251 | DPY | Calculation (Total DPY - Weekend DPY) |
| Weekend Days | 104 | DPY | Assumes all weekends are non-holidays |
| Total Public Vehicles Per Year (MSW) | 65,640 | VPY | County 2020 data; Assume 80% are garbage drop-off facility users |
| Ave. Public Vehicles Per Day | 185 | VPD | Calculation [VPY / Operating Days (DPY)] |
| Total Commercial Vehicle Per Year | 7,420 | VPY | WMI 2020 Data (trip/2 = visit by WMI) |
| Ave. Commercial Vehicles Per Day | 21 | VPD | Calculation [VPY / Ops Days (DPY)] |
| Annual Population Growth Rate | 1.45% | AGR | Assumed Sustained Growth Rate |
| Per Capita Waste Generation Rate | 5.2 | PPD | Calculated (5-year Average, 2016-2020) |
| Weekday Waste to Weekend Waste Ratio | 75% | Unitless | Estimate. Amount of Weekday Waste tons to Weekend Waste Tons |
| Commercial:Public Tonnage Ratio (Weekday) | 85% | Unitless | Estimate. Ratio of Commercial to Public tons (weekdays) |

| Item/Description | Quantity | Unit | Source/Assumptions |
|---|----------|----------|---|
| Commercial:Public Tonnage Ratio (Weekend) | 70% | Unitless | Estimate. Ratio of Commercial to Public tons (weekends) |
| Peaking Factor (tonnage) | 2.0 | PFr | Great West Estimate |

Acronyms:

AGR = annual growth rate

DPW = days per week

DPY = days per year

PCD = per capital disposal rate

PPL = population

PFr = peaking factor

TPD = tons per day

TPH = tons per hour

TPV = tons per vehicle

TPY = tons per year

VPH = vehicles per hour

VPD = vehicles per day

These data shown in **Table 7-1**, were used to calculate the weekday and weekend peak hourly waste tonnages and vehicle arrival rates for MSW disposal at Colburn looking at the 20-year forecast. A summary of these results is provided in **Table 7-2**. The calculations are provided in **Appendix I**.

Table 7-2. Summary of Peak Tonnages and Vehicle Arrival Rates for Colburn (Current and Future)

| Item/Data | Weekday | | Weekend Day | |
|---------------------------|--------------|-------------|--------------|-------------|
| | Current-2020 | Future-2040 | Current-2020 | Future-2040 |
| Commercial | | | | |
| Peak Day Tons | 230 | 298 | 152 | 198 |
| Peak Hour Tons | 23.0 | 29.8 | 15.2 | 19.8 |
| Peak Day Vehicles | 46 | 60 | 31 | 40 |
| Peak Hour Vehicles | 5 | 7 | 4 | 4 |
| Public | | | | |
| Peak Day Tons | 41 | 53 | 65 | 85 |
| Peak Hour Tons | 4.1 | 5.3 | 6.5 | 8.5 |
| Peak Day Vehicles | 312 | 405 | 503 | 652 |
| Peak Hour Vehicles | 32 | 41 | 51 | 66 |
| Total | | | | |
| Peak Day Tons | 271 | 351 | 218 | 282 |
| Peak Hour Tons | 27 | 35 | 22 | 28 |
| Peak Day Vehicles | 359 | 465 | 533 | 691 |
| Peak Hour Vehicles | 37 | 48 | 55 | 70 |

The following subsections present the proposed improvements to the Colburn site. **Figure 7-1** (attached) shows the preliminary site plan for the location and arrangement of the new facilities and site improvements.

7.1.1.1 New Waste Transfer Building

A two-level, pre-engineered metal building is proposed for the new waste transfer building. It will be located next to (northeast of) the existing transfer building with an offset drive-through tunnel. Sizing of these buildings is primarily based on the projected waste tonnages and delivery vehicle traffic for the design period (20 years). The unloading time for commercial and public self-haul vehicles also is an important factor in the building sizing. The typical time to unload a commercial garbage truck is 6-8 minutes while public self-haul cars and trucks are typically between 8-12 minutes. We have assumed for this analysis 7 minutes for commercial and 10 minutes for public.

The size of the building is based on the 20-year forecast for the peak arrival rate of vehicles and the types of vehicles (users). The weekend traffic sets the design basis with the most vehicles in a given day.

Based on this analysis, a total of 12 stalls are needed for public customers and 1 stall is needed for commercial based on peak hour arrival rates. With up to 4 public stalls and 3 commercial stalls available in the existing transfer building (once it is remodeled), the new building needs to provide 8 public stalls and 1 commercial stall as best practice (in case the existing building is offline as backup). With public stalls being 12-feet wide and commercial stalls 15-wide, the opening of the building needs to be no less than 111 feet wide. This will be a clear spanning building with the front completely opened to avoid the possibility of vehicles backing into building columns and damaging them. This design also provides the most open area for stalls. With front columns and return edges on the building corners, the building will be on the order of 120 feet wide. The depth of the building and tipping floor area are established by the amount of space needed for customer unloading, equipment maneuverability between the unloading piles and the push pit, and amount of space needed for waste area. Other area is used by space to walk behind the push walls for access and emergency egress. The building will also need space for the electrical room and a restroom. One of the front interior corners of the facility will be set aside for the safety shower/eye wash station fed from a recirculating system in the restroom for tepid water to meet code requirements. Based on these general items and layout, the building will have overall dimensions of 120 feet wide by 60 feet deep, or 7,200 square feet (sf) not including the tunnel (basement) area. Based on the County's meetings with the Fire Marshall, the maximum size of new waste transfer building is 7,200 sf (in addition to the existing building) to not require fire sprinkler water protection. Refer to **Figure 7-2** for a preliminary floor plan of the proposed waste transfer building.

The tipping level (main level) of the building will feature high-strength concrete floors (6,000 psi compressive strength) with 8-foot tall metal-cladded reinforced, concrete push walls along the sides of the floor and heavy-gauge steel-plate armoring surrounding the sides and back of the pit openings.

Commercial vehicles will enter the building on the southwest end using the service road. The public will enter from the north through the main entrance gate. The commercial area in front of the new building will be separated from the public area using removable traffic barricades. This arrangement will separate public from commercial vehicles and maximize efficiency and safety of the operations. Use of the existing transfer building will be a combination of commercial and public vehicles depending on arrival rates of these customers.

After waste is dumped on the tipping floor, it will be pushed to the rear of the facility toward the loading pits (chutes) using a rubber-tire loader with rubber cutting blades on the bucket to protect the floor. A stationary knuckle-boom crane or a mobile rubber tracked unit will be located between or in front of the pit openings to pull waste off the floor and compact it in the transfer trailer parked below. The crane will also be used to balance the trailer payload. The lower (basement) level will feature a pull-through tunnel for the existing building drive-through and a new loading tunnel with pit scales to weigh the trailers while they are loaded. Readouts of the pit scale weights will be provided on the tipping floor level.

A second loading bay can be added as a provision to the building as a future "bump-out" (further east) depending on the capital budget and future needs of the facility. In the interim, there will be a roll-up door in the back wall where the future expansion would occur to provide a means to load materials into a roll-off container below. This setup works well for tire loading, scrap metal, or other materials that are diverted off the tipping floor.

7.1.1.2 New HHW Facility

A new HHW facility is proposed for the project and will be located on the far north end of the Colburn site, north of the main entry gate. This location provides users an opportunity to drop off these types of wastes before entering the main area of the site for recycling and garbage unloading.

The proposed HHW building will feature a 1,200-sf main processing room, a 720-sf dry storage and refrigerant (freon) removal room, and a 200-sf covered receiving area where vehicles can pull up to

unload. The size of the HHW building is determined by the needed space for materials receiving, processing, and storage. Based on staff input and typical facility sizing, the facility needs to have enough room for material receiving once inside the building and processing along with a prefabricated hazardous waste locker. These lockers are common to include in these buildings. They are self-contained with secondary containment and fire protection (dry chemical suppression). Refer to **Figure 7-3** for a preliminary floor plan of the HHW building.

The building will be placed on a concrete slab (monolithic pour with a central sump for secondary containment). The floor will have an inset (pit) for a hazardous waste locker. The locker will be inset into the floor slab, so the thresholds of the locker doors are flush with the main building floor. The facility will feature general building ventilation, explosion-proof electrical and lighting systems, a combustible gas monitoring system, and a safety shower/eye wash station with tepid water supply (similar to the new waste transfer building). It is assumed that this size of the facility will not require fire sprinkler water protection. Waste material storage will be inside the hazardous waste locker and possibly around the exterior of the building in metal storage containers.

6.1.1.3 Reconditioning the Existing Waste Transfer Building

The overall assumption for reconditioning the existing waste transfer building is that the building concrete footings/foundation and pre-engineered metal structure are structurally intact and safe. A structural analysis will be performed as part of the design to confirm this assumption. The following improvements are recommended to recondition the existing building: (1) completely replacing the metal siding with heavier gauge paneling, (2) installing translucent paneling in the window openings, (3) repairing 1,500 sf of the tipping floor with a high-strength material overlay in heavy wear areas, (4) upgrading the interior and exterior lighting, and (5) replacing the push walls and reinforced concrete with metal armoring around the pit opening.

6.1.1.4 Automated Commercial Truck Scale

A new 80-ft aboveground, low-profile platform scale is proposed. It will be installed along the service access road before the waste transfer buildings. The primary purpose of the scale will be to weigh commercial trucks entering the facility. Secondly, it can be used to weigh long-haul trucks for cross-checking the pit scale weights and confirming payloads.

A radio-frequency identification (RFID) system will be provided that can be monitored remotely from the attendant building at the public entrance gate. Video cameras will be used to watch traffic pulling on and off the scale with monitors in the attendant building. The scale will also include inbound and outbound kiosks and an intercom system for the driver to communicate with the attendant. Commercial trucks will be tared (pre-weighed without payload) and read with RFID cards or window tags requiring only inbound scaling. Vehicles that are not tared, such as roll-off container trucks with multiple truck/container combinations, will require both inbound and outbound scaling. Traffic control onto and off the scale will be done by an automatic light that is activated by transactions.

6.1.1.5 Relocating Drop-Off Facilities

The metals collection pile will be relocated north of the wood waste pile area, near the existing location of the tire drop-off area. The tire drop-off area will be relocated south of the existing (former) HHW Facility and north of the future transfer building. The recycle bins, near the public dumpsters and z-wall will be relocated to a new recycling drop-off area across from the old HHW facility. The cardboard recycling container will also be relocated at the new recycling drop-off location. The new waste transfer building will allow for direct waste unloading on the floor of the building and use of the z-wall for overflow (busy periods) and for oversized materials such as furniture.

7.1.1.6 Site/Yard Improvements

Several grading and drainage improvements will be needed to accommodate the new buildings and site infrastructure. The existing road, for the length of the new waste transfer building, will need to be re-graded (flattened), at the same elevation of the existing building tunnel to allow access between the two buildings. The existing stairs and a portion of the concrete retaining wall on the northeastern side of the existing building will be demolished, and the hillside excavated and then backfilled to construct the new transfer building.

Portions of the paved road leaving the basement level of the two transfer buildings will also be re-graded to approximately 7% slope (max), and then re-paved to meet the existing road/ yard grades. A retaining wall will be needed on the north side of the new building until the yard grade is reached as the road climbs out of the basement level of the buildings. The yard area will be paved where the former HHW facility was for the turnaround area for operations (yard goat pulling empty containers into the loading bays).

On the east side of the two transfer buildings at the basement level, the road will be extended further east making room for the new tunnel and bypass road (and possible “bump-out” for a future, third loading bay). A new (second) buried tank (approximately 5,000 gallons) will be needed to collect and store contact water from the new transfer building floor and pit area. The existing swale, further east will be enlarged. Drainage improvements such as catch basins and culverts will be necessary to ensure stormwater flows to the re-graded swale. A septic tank and drain field will be needed to service the new restroom in the transfer building.

The new scrap metal drop-off area will be paved, as well as the new recycling and cardboard drop-off location. Six-foot fencing will be installed around the perimeter of the site. The existing fence, east of the service road will be upgraded to chain link, to match the new installation. A new entrance gate will be installed northwest of the existing service gate for on-site operations to access the waste transfer buildings.

7.1.1.7 Site Access and Traffic Circulation Improvements

Reversing the traffic flow for the onsite transfer trailer loading operations will create a more efficient traffic pattern and eliminate the comingling of traffic in the yard area. As previously mentioned, this will also require demolishing the existing HHW building and relocating the metals pile next to the wood waste pile.

7.1.1.8 Site Traffic Flow and Control Improvements

Signs and pavement markings (striping) will be used throughout the facility to direct and control traffic. There are four main types of traffic utilizing the site: (1) public (including contractors), (2) commercial trucks (garbage trucks and roll-off container trucks), (3) onsite operations (yard goat pulling empty and loaded trailers around the site), and (4) long-haul transport trucks dropping off empty trailers and picking up full trailers. Each traffic type is discussed below (refer to the referenced figures).

- **Public Traffic (refer to Figure 7-4A):** Public traffic will continue to enter the facility by taking a right off of Pinecone Road through the main gate on the northern end of the site. The destinations and access routes for public customers using the site include:
 - Waste Transfer Building – Public customers dropping off MSW at the new waste transfer building will enter the site by taking a right turn off Pinecone Road into the main gate and then drive through the northern portion of the yard to the new building and then back into one of the unloading stalls, delineated with floor paint. Removeable traffic barricades will separate public from commercial stalls during the weekdays. On the weekends, all of the stalls will be available to the public. After dropping off waste, the public customer will return via the same path they entered and exit the site through the main gate. The customers can also visit the other facilities as they leave but it will be recommended to

- the public that they do this before they unload their MSW at the new building to keep traffic flow and pull-outs to the right-hand-side for safety and efficiency.
- Z-Wall – During periods of heavy traffic (use), some public customers will be sent to the existing z-wall to drop-off MSW to mitigate congestion and drop-off oversized materials such as furniture. The z-wall is located on the northernmost section of the site, west of the public entrance gate.
 - HHW Facility – Customers dropping off HHW or refrigerators will be directed to the new HHW facility located on the north end of the site. Customers dropping off materials will pull in through the customer entrance gate and make a right turn to reach the facility. After dropping off materials, the customers can loop around and exit the site or continue south to the recycling drop-off area and/or transfer building to drop off MSW.
 - Recyclables Drop-Off Area – The existing recycling bins and the cardboard bin will be relocated, west of the existing (former) HHW Facility. Customers will drive as if visiting the waste transfer building but stop at the bins along the way. After dropping off recyclables, they can then turn around and exit the site or visit the other locations.
 - Wood Waste Drop-off Area– To access the wood waste drop-off area, customers will follow a similar route as if driving to the waste transfer building, but instead, turn right after passing the recyclables drop-off area. The wood waste pile is located on the southern end of a large, paved pad. Customers may use this area to turn around and exit the site via the same path they entered or visit the other drop-off locations.
 - Scrap Metal Drop-Off Area– The scrap metal/large appliance (non-refrigerants) drop-off area will be north of the wood waste drop-off area. To access the scrap metal drop-off area, customers will take a slight right after passing by the recyclables drop-off area. Customers may use the area south of the drop-off to turn around and exit via the same path they entered or visit the other locations.
 - Tire Drop-Off Area –The new tire drop-off area will be south of the existing (former) HHW Facility and north of the new transfer building. The area will be delineated by a low wall of ecology blocks. Customers may use the open area in front of the tire drop-off location to turn around and exit via the same path they entered, or to visit the other drop-off locations.
 - Inert Landfill – To access the inert landfill, customers will follow a similar route as if accessing the wood waste drop-off area but will continue driving past the piles to the landfill, which is located northwest of the scrap metal drop off area. After unloading their waste, customers will turn around and exit via the same path they entered.
 - Commercial Traffic (refer to **Figure 7-4B**): Commercial trucks will continue to access the facility through the service entrance gate. The only destination for commercial customers using the site is the waste transfer buildings. To access the two buildings, commercial trucks (garbage trucks and roll-off container trucks) will drive past the public entrance gate, through the service entrance gate, down the service road and then pass over the new commercial truck scale with their RFID card or tag. Afterwards, they will drive into one of the two transfer buildings to unload. The existing transfer building will be available for commercial waste drop-off, and during the weekdays, two unloading stalls at the south end of the new building, delineated by floor paint and separated from public stalls by removable traffic barriers, will be available to commercial trucks as well. After backing in and unloading waste, the commercial vehicles will exit via the same route they entered; however, this time being able to pass by the automatic scale without weighing if they are tared. If the vehicles are not tared, they will be required to pass back over the scale to be weighed before leaving the site.
 - Onsite Operations Traffic (refer to **Figure 7-4C**): A yard goat will be used onsite to move empty and loaded trailers into and out of the trailer loading bays of the two transfer buildings and park them in designated areas. The yard goat will hook-up to empty containers sitting in the container parking area, located southwest of the existing transfer building, where the full trailers are currently placed. They will travel out along the service road and then turn left through a new entrance gate. The yard goats will loop around south within the open, paved area, east of the entrance gate, and travel down the ramp road to the basement level (loading level) of the transfer buildings. They will enter the loading bay tunnels of the transfer buildings from the northeast, and

after being loaded, exit via the southwest and park the full trailers in the full trailer lot, located next to where the empty trailers are currently placed. From there, the yard goats can turn, rounding the island if necessary, and pick up another empty trailer and take it to one of the transfer building loading bays.

- Long-Haul Transport Traffic (refer to **Figure 7-4D**): Long-haul transfer trucks entering the facility will follow a similar route as commercial vehicles using the service gate and road but after rounding the corner, will drop off empty trailers in the empty trailer parking area. They will then use the yard area where all the spare containers are currently located to turn around and drive to the full container parking area, attach the trailer, and then exit the site via the same route they entered. Occasionally, on an as-needed basis, to check the calibrations of the transfer building pit scales, a long-haul truck may need to be weighed with a fully loaded trailer. The truck would load the trailer at the full container parking area and then turn right to access the scale. Spotters will be needed to navigate the truck through the site, passing the waste transfer buildings, and exit via the public access gate.

7.1.2 Rural Collection Sites

7.1.2.1 Dickensheet

Preliminary design of the Dickensheet site focuses on the improvements to the z-wall by replacing the stacked eco-block wall with a cast-in-place reinforced concrete wall along with adding a bay for another waste container and unloading area. Grading and drainage improvements are needed around the site along with pavement for dust control and to mitigate soil contamination from contact water. A new water well will provide service water to the site and supply water to frost-free yard spigots. Preliminary design also includes adding security by way of yard lights and surveillance cameras with monitors in the attendant shack. 6-ft tall chain link fencing with privacy slats will also enclose the site and help catch blowing litter. **Figure 7-5** (attached) shows the preliminary site plan for the location and arrangement of the new facilities and site improvements at Dickensheet.

7.1.2.2 Dufort

Preliminary design of the Dufort site includes adding a whole new section of z-wall on the south side of the property, mirroring the existing z-wall. This will add ample capacity by doubling the unloading areas and the number of waste containers. Grading and drainage will be provided to accommodate the new z-wall area and relocate an existing drainage swale. Pavement will provide dust free operations around the new z-wall area.

7.1.2.3 Idaho Hill

Preliminary design of the Idaho Hill site includes improvements and expansion of the z-wall like Dickensheet. A new 2,300-sf shop building will provide office space and a restroom and maintenance area for equipment. Lean-to covers on the sides of the building will provide covered storage for equipment. A new well will provide water for the shop building as well as service water for the yard by way of frost-free spigots. A new septic system will be provided to service the new restroom. Also like Dickensheet, grading and drainage improvements will be made as well as paving areas for dust control and soil contamination. Site security is equally important at Idaho Hill adding yard lights and a perimeter 6-ft tall chain link fence with privacy slats to also catch blowing litter. Surveillance cameras will be strategically located around the site to monitor areas and help with site security from vandalism and theft.

7.2 Project Schedule

The milestone schedule for the project is provided in **Table 7-3**.

Table 7-3. – Project Schedule

| Activity | Milestone |
|---|---------------------------|
| Bond Election Passes | May 2021 |
| Loan Approval by USDA RD | June 2021 |
| A/E Design Services | June 2021 – February 2022 |
| Permit Approval by DEQ | March 2022 |
| Bidding | March 2022 |
| Award / Selection | April 2022 |
| Notice to Proceed | May 2022 |
| Construction | May 2022 – December 2023 |
| Substantial Completion / Certificate of Occupancy | November/December 2023 |
| Permit to Operate by the DEQ / Health Dept | December 2023 |
| Project Final Completion / Project Closeout | January 2024 |
| First Payment Due (1 Year later) | January 2025 |

Notes:

¹ Schedule assumes one bidding period followed by subsequent award without protest.

7.3 Permit Requirements

Construction permits through the Bonner County Building Department will be required for each of the sites. The Idaho DEQ will be required to approve the design plans and specifications for the projects as they are considered “transfer stations” and have been permitted as such. The health district will approve the facilities for operation.

7.4 Sustainability Considerations

Sustainability will be considered in the design of the project with a focus on the new waste transfer building. Translucent panels will be provided to provide natural light in addition to the open front of the building. Energy efficient LED lighting will be used as well as energy efficient heating and cooling systems in the restroom and electrical room. Areas that are climate controlled will be well insulated. Climate controlled areas of the new HHW facility also will feature energy efficient lighting and mechanical systems. Water use will be kept to a minimum with small frost-free hydrants and no direct access to water for wash down on the tipping floors. Operations will use dry-sweep techniques to clean the floors while also reducing the amount of contact water (leachate) generation.

7.5 Organizational and Staffing Requirements

7.5.1 Colburn Transfer Site

Additional operators will be required for the new waste transfer building along with spotters and a new HHW technician for the HHW facility.

7.5.2 Rural Collection Sites

No additional staff are required for the rural collection sites.

7.6 Total Project Cost Estimate (Engineer's Opinion of Probable Cost)

Refer to the Engineer's Opinion of costs in **Appendix H**.

7.7 Financing Options

Due to the high cost of the proposed improvements, Bonner County plans to pursue outside assistance to fund the project in the form of low-interest loans. Financing options for the project are by loan interest loan through the USDA RD program. No other financing options are known to exist.

7.8 Annual Operating Budget

Bonner County intends to take a 10-year USDA RD loan. The annual operating budget for the Solid Waste account over the next 10 years is summarized in **Table 7-4**, including revenues (with fee/ rate schedule), expenses, and the debt repayment estimate for the USDA RD Loan. Short-lived asset reserves also are provided in **Table 7-4** for equipment replacement within the system over the next 10 years as part of the operations budget and the capital improvements line items. **Appendix J** provides a 20-year outlook (2020–2040).

This forecast keeps the residential assessment fee at \$185 per household and the commercial gate fee at \$18 per cubic yard until 2030 when it is anticipated to increase to \$20 per cubic yard. These rates are subject to change. Variabilities such as increase costs associated with the T&D contract, waste tonnages shortages, increases in salaries and benefits, etc. will affect the final budgets and fee rates.

After building up the account balance until the USDA RD loan repayment begins in 2025, the expenditures are expected to be slightly higher than the revenues; however, a healthy account balance will persist with a projected minimum of approximately \$2.5 million in 2033. At that time, the commercial gate fees will increase and the account balance will climb again for a future fee assessment and adjustment.

Table 7-4. Annual Fiscal Year Operating Budget for Bonner County Solid Waste

| Budget Item | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------|---------------------|---------------------|
| Beginning Cash | \$3,022,661 | \$3,962,801 | \$4,668,567 | \$5,665,680 | \$6,644,090 | \$6,535,593 | \$6,291,350 | \$5,904,918 | \$5,365,633 | \$4,666,227 |
| Revenues | \$ 8,706,880 | \$8,859,895 | \$9,015,155 | \$9,174,140 | \$9,335,360 | \$9,501,635 | \$9,670,020 | \$9,839,715 | \$10,013,730 | \$10,624,875 |
| Expenses: | | | | | | | | | | |
| Employee Salaries & Benefits | \$1,615,370 | \$1,943,890 | \$1,987,510 | \$2,037,140 | \$2,085,880 | \$2,136,510 | \$2,187,160 | \$2,238,910 | \$2,293,570 | \$2,347,330 |
| Operating Expenses ⁽¹⁾ | \$5,521,540 | \$5,307,840 | \$5,316,250 | \$5,525,750 | \$5,745,360 | \$5,974,970 | \$6,213,470 | \$6,461,180 | \$6,717,880 | \$7,000,390 |
| Capital Improvements – Other ⁽²⁾ | \$629,830 | \$205,500 | \$201,500 | \$102,500 | \$104,500 | \$107,500 | \$109,500 | \$112,500 | \$114,500 | \$117,500 |
| Capital Res. Account Funding ⁽³⁾ | \$0 | \$696,899 | \$512,782 | \$530,340 | \$548,499 | \$567,279 | \$586,703 | \$606,792 | \$627,568 | \$649,056 |
| USDA RD Loan Payment ⁽⁴⁾ | \$0 | \$0 | \$0 | \$0 | \$959,618 | \$959,618 | \$959,618 | \$959,618 | \$959,618 | \$959,618 |
| Total Expenses: | \$7,766,740 | \$8,154,129 | \$8,018,042 | \$8,195,730 | \$9,443,857 | \$9,745,877 | \$10,056,451 | \$10,379,000 | \$10,713,136 | \$11,073,894 |
| Revenues - Expenses | \$940,140 | \$705,766 | \$997,113 | \$978,410 | (\$108,497) | (\$244,243) | (\$386,431) | (\$539,285) | (\$699,407) | (\$449,020) |
| Ending Balance | \$3,962,801 | \$4,668,567 | \$5,665,680 | \$6,644,090 | \$6,535,593 | \$6,291,351 | \$5,904,920 | \$5,365,635 | \$4,666,229 | \$4,217,210 |

Notes:

- ¹ Includes fuel, equipment, incidentals, and the transport and disposal (T&D) contractor fees (currently Waste Management).
- ² Capital budget for other expenses such as waste containers, large equipment, etc.
- ³ Set asides for future capital projects to pay for out-of-pocket in the future. Project to be determined.
- ⁴ Estimated USDA RD loan payment assuming a total loan amount of \$8,733,700 for 10 years at an interest rate of 1.75%.

8.0 CONCLUSIONS AND RECOMMENDATIONS

The previous sections of this report have focused on the need for the project, physical and socio-economic characteristics of the community, project costs, and more extensively the technical viability. Unfortunately, much of the solid waste infrastructure in Bonner County has been neglected for many years and is now in dire need of improvements and repairs. The County finds themselves in a situation where the core of the infrastructure is failing. The Colburn tipping floor was designed for only 5-7 years and has been in operation for more than 25 years. There is no HHW facility in the County to properly manage these materials. Retaining walls are failing for the container z-walls and there is no basic utilities or security at several of the sites.

This project will enhance site security by enclosing the collection sites with fencing, adding yard lighting, and surveillance cameras. It will provide the County with much needed infrastructure to ensure responsible solid waste management for the next 20+ years.

Funding has already been implemented by the County by means of raising the property assessment fees and commercial gate fee to pay back debt and build reserves for future capital projects. This project is an opportunity for the County to get back on track with their capital improvements while saving for the future.

9.0 REFERENCES

Great West Engineering. 2019. Bonner County Solid Waste 10-Year Capital Improvements Plan (April)

Great West Engineering. 2021. Bonner County Solid Waste Environmental Assessment Report (April).

USDA Natural Resources Conservation Service. 2021. Custom Soil Resource Maps for Bonner County (March)

USDA Natural Resources Conservation Service. Website:
<https://www.nrcs.usda.gov/wps/portal/nrcs/site/national/home/>

National Wild and Scenic Rivers System. Website: <https://www.rivers.gov/idaho.php>

National Register of Historical Places in Idaho. Website:
<https://ishs.maps.arcgis.com/apps/webappviewer/index.html?id=461adeaf4eb746dbb2550e60dafa9fb0&extent=-14675791.8495%2C4728429.2953%2C-11447091.7748%2C6851544.1929%2C102100>

FIGURES

M:\4-20113-Bonner County Transfer Station Support\CADD_4-20113\Exhibits\PER\4-20113-PER-FIG 3-1-Colburn Existing.dwg



Figure 3-1
Colburn Site
Existing Site Plan

BONNER COUNTY SOLID WASTE
 PRELIMINARY ENGINEERING REPORT



M:\4-20113-Bonner County Transfer Station Funding_Support\CADD_4-20113\Exhibits\PER\4-20113-PER-FIG 3-2-Dickensheet_Existing.dwg



Figure 3-2
Dickensheet Site
Existing Site Plan

BONNER COUNTY SOLID WASTE
PRELIMINARY ENGINEERING REPORT

M:\4-20113-Bonner County Transfer Station Funding_Support\CADD_4-20113\Exhibits\PER\4-20113-PER-FIG 3-3-Dufort Existing.dwg



Figure 3-3
Dufort Site
Existing Site Plan

BONNER COUNTY SOLID WASTE
PRELIMINARY ENGINEERING REPORT

M:\4-20113-Bonner County Transfer Station Funding_Support\CADD_4-20113\Exhibits\PER\4-20113-PER-FIG 3-4-Idaho Hill Existing.dwg

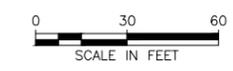


Figure 3-4
Idaho Hill Site
Existing Site Plan

BONNER COUNTY SOLID WASTE
PRELIMINARY ENGINEERING REPORT

M:\4-20113-Bonner County Transfer Station Support\CADD\4-20113\Exhibits\PER\4-20113-PER-FIG 5-1-Colburn Proposed.dwg



Figure 5-1
Colburn Site
Proposed Improvements

BONNER COUNTY SOLID WASTE
 PRELIMINARY ENGINEERING REPORT



M:\4-20113-Bonner County Transfer Station Funding_Support\CADD_4-20113\Exhibits\PER\4-20113-PER-FIG 5-2-Dickensheet_Proposed.dwg



Figure 5-2
Dickensheet Site
Proposed Improvements

BONNER COUNTY SOLID WASTE
 PRELIMINARY ENGINEERING REPORT



M:\4-20113-Bonner County Transfer Station Funding_Support\CADD_4-20113\Exhibits\PER\4-20113-PER-FIG 5-3-Dufort_Proposed.dwg



Figure 5-3
Dufort Site
Proposed Improvements

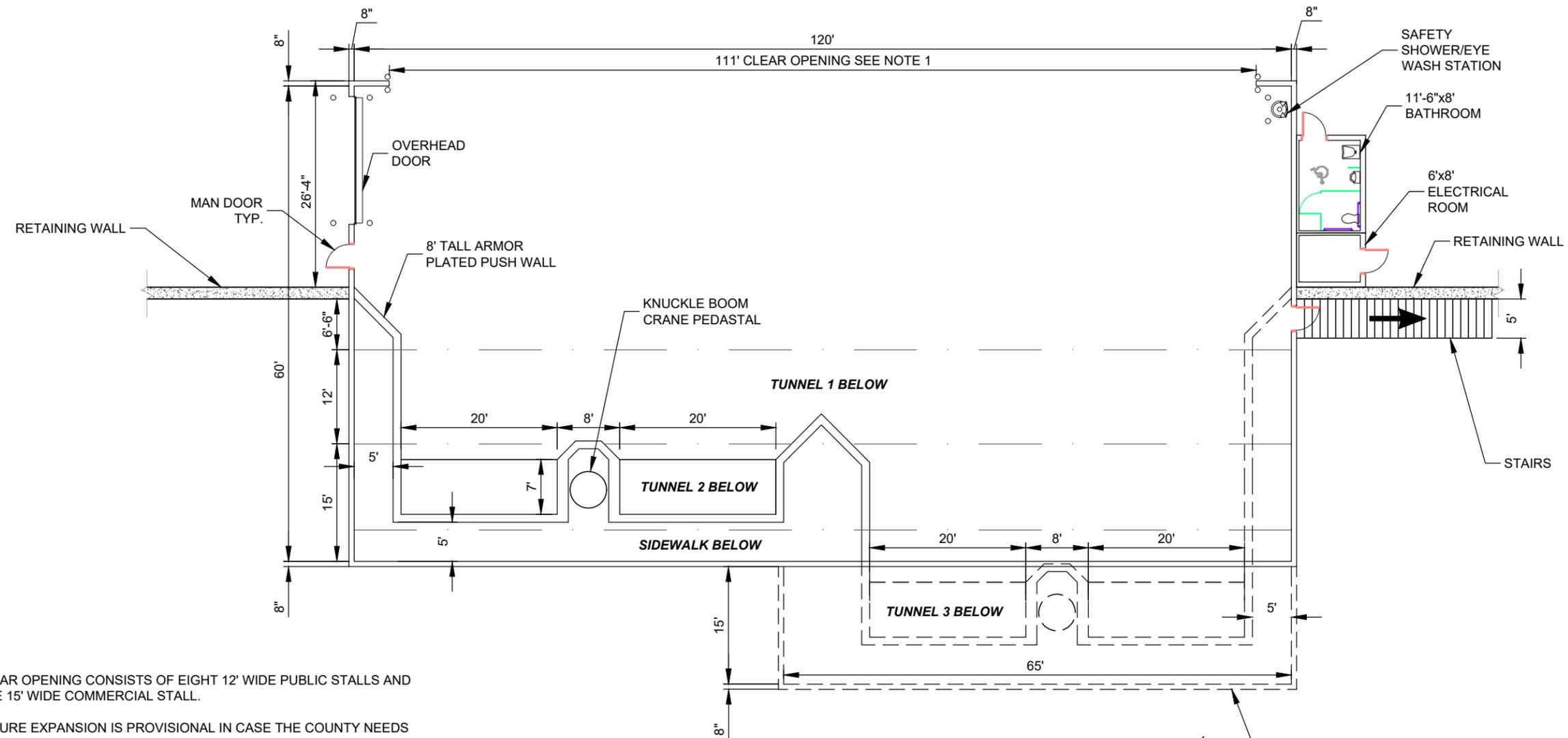
BONNER COUNTY SOLID WASTE
PRELIMINARY ENGINEERING REPORT

M:\4-20113-Bonner County Transfer Station Funding_Support\CADD_4-20113\Exhibits\PER\4-20113-PER-FIG 5-4-Idaho Hill Proposed.dwg



Figure 5-4
Idaho Hill Site
Proposed Improvements
 BONNER COUNTY SOLID WASTE
 PRELIMINARY ENGINEERING REPORT

M:\4-20113-Bonner County Transfer Station Funding_Support\CADD_4-20113\Exhibits\PER\4-20113-PER-FIG 7-1-Transfer Building.dwg



NOTES:

1. CLEAR OPENING CONSISTS OF EIGHT 12' WIDE PUBLIC STALLS AND ONE 15' WIDE COMMERCIAL STALL.
2. FUTURE EXPANSION IS PROVISIONAL IN CASE THE COUNTY NEEDS MORE WASTE THROUGHPUT CAPACITY IN THE FUTURE TO LOAD TRAILERS OR A PRELOAD COMPACTOR.

NEW WASTE TRANSFER BUILDING FLOOR PLAN

1/16" = 1'-0"



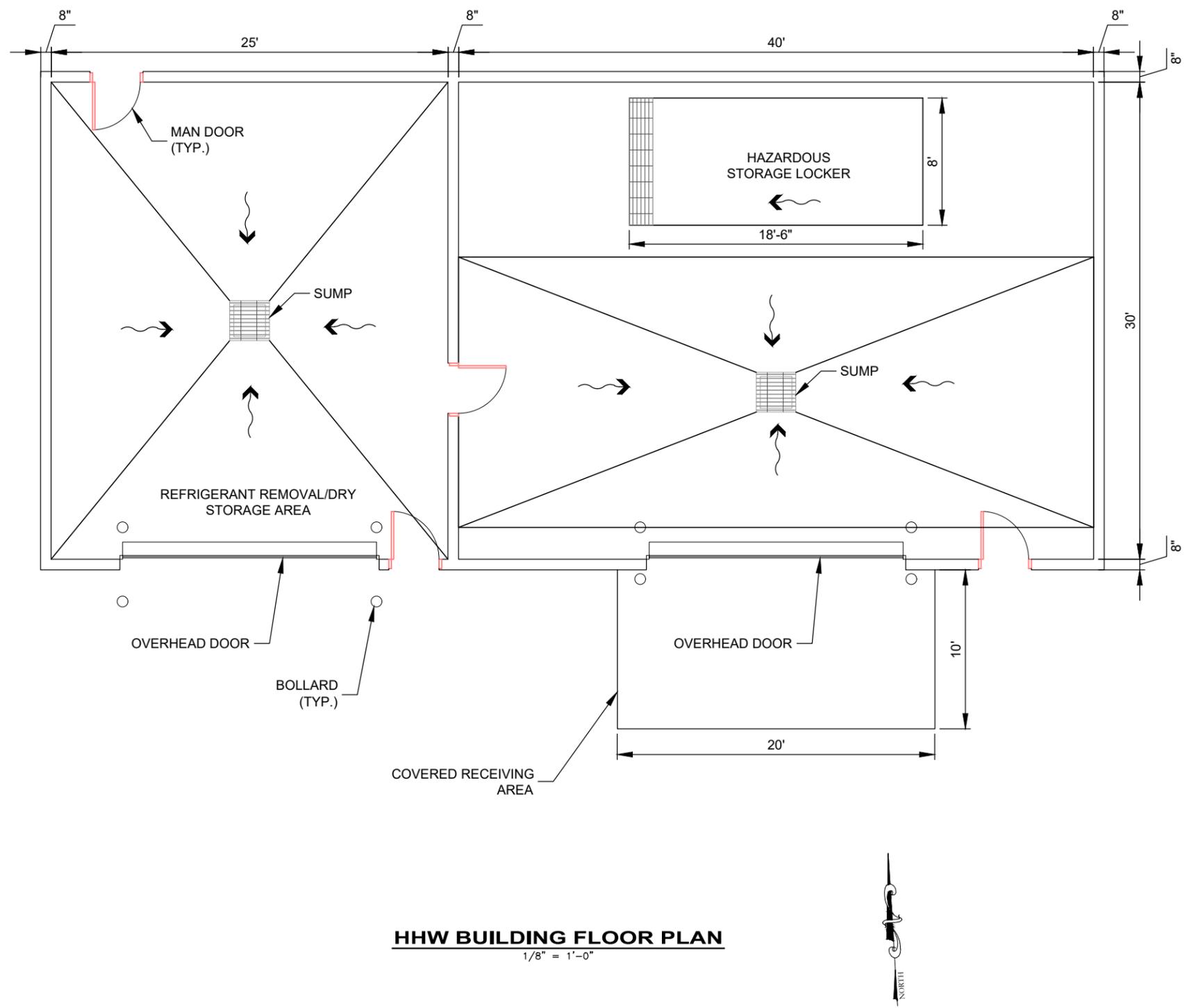
FUTURE EXPANSION



**Figure 7-1
Proposed Transfer Building Floor Plan
Colburn Site**

BONNER COUNTY SOLID WASTE
PRELIMINARY ENGINEERING REPORT

M:\4-20113-Bonner County Transfer Station_Funding_Support\CADD_4-20113\Exhibits\PER\4-20113-PER-FIG 7-2-HHW Building.dwg

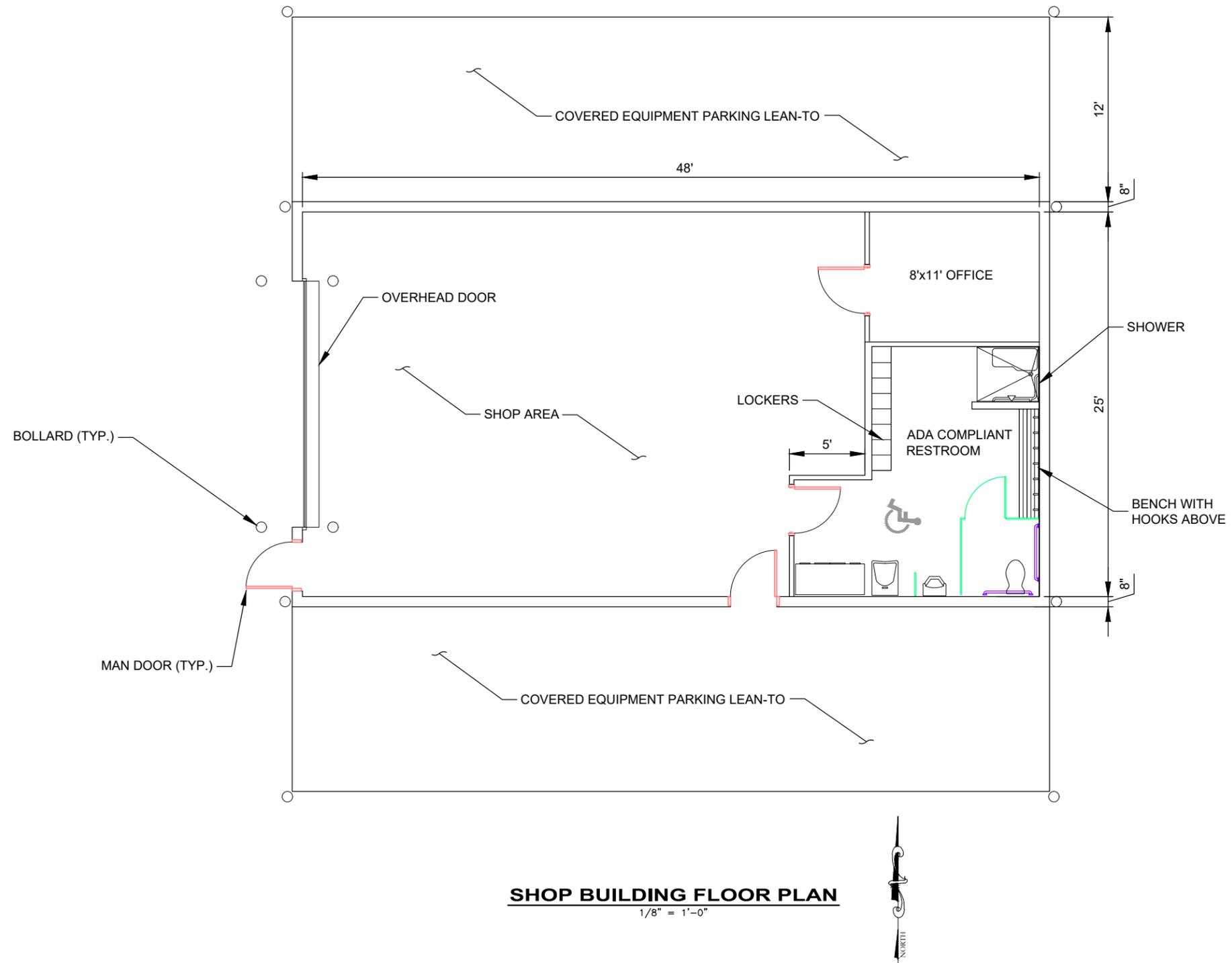


HHW BUILDING FLOOR PLAN
1/8" = 1'-0"



Figure 7-2
Proposed HHW Building
Floor Plan Colburn Site
BONNER COUNTY SOLID WASTE
PRELIMINARY ENGINEERING REPORT

M:\4-20113-Bonner County Transfer Station Funding_Support\CADD_4-20113\Exhibits\PER\4-20113-PER-FIG xx-Idaho Hill Shop.dwg



SHOP BUILDING FLOOR PLAN
1/8" = 1'-0"

Figure 7-3
Proposed Shop Building
Floor Plan Idaho Hill Site

BONNER COUNTY SOLID WASTE
PRELIMINARY ENGINEERING REPORT

M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-03A.dwg

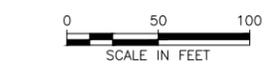
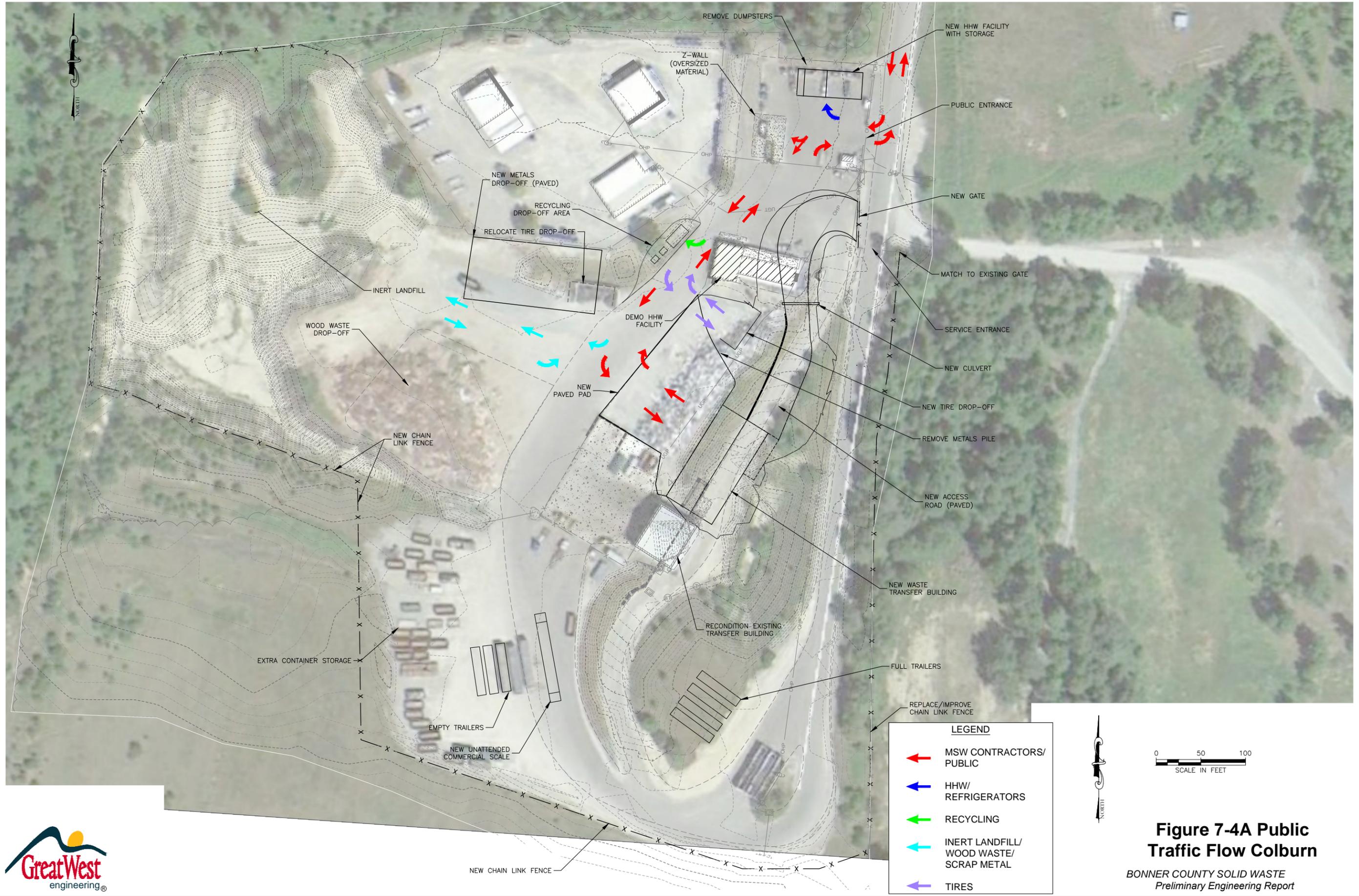


Figure 7-4A Public Traffic Flow Colburn

BONNER COUNTY SOLID WASTE
Preliminary Engineering Report

M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-03B.dwg

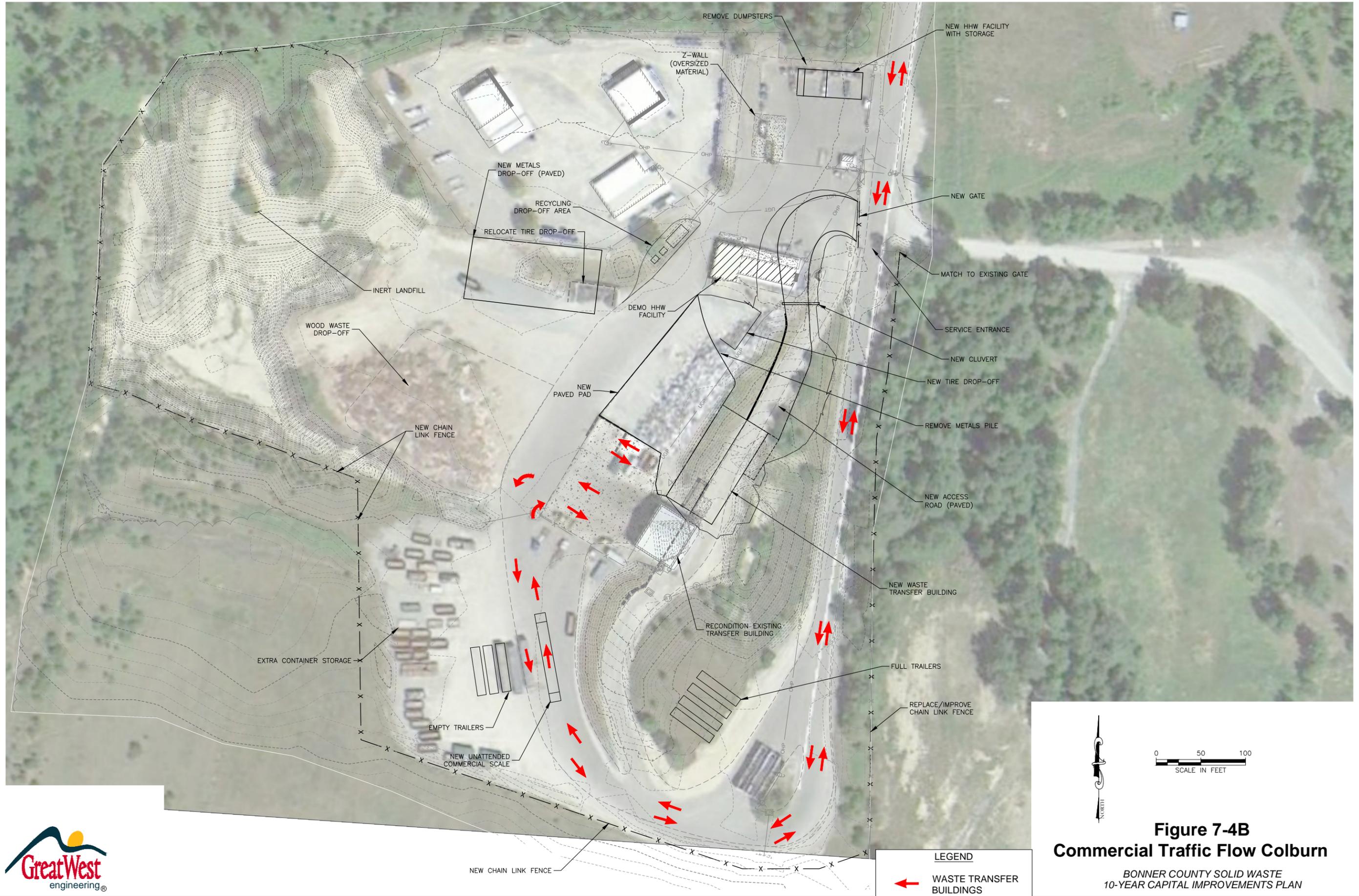
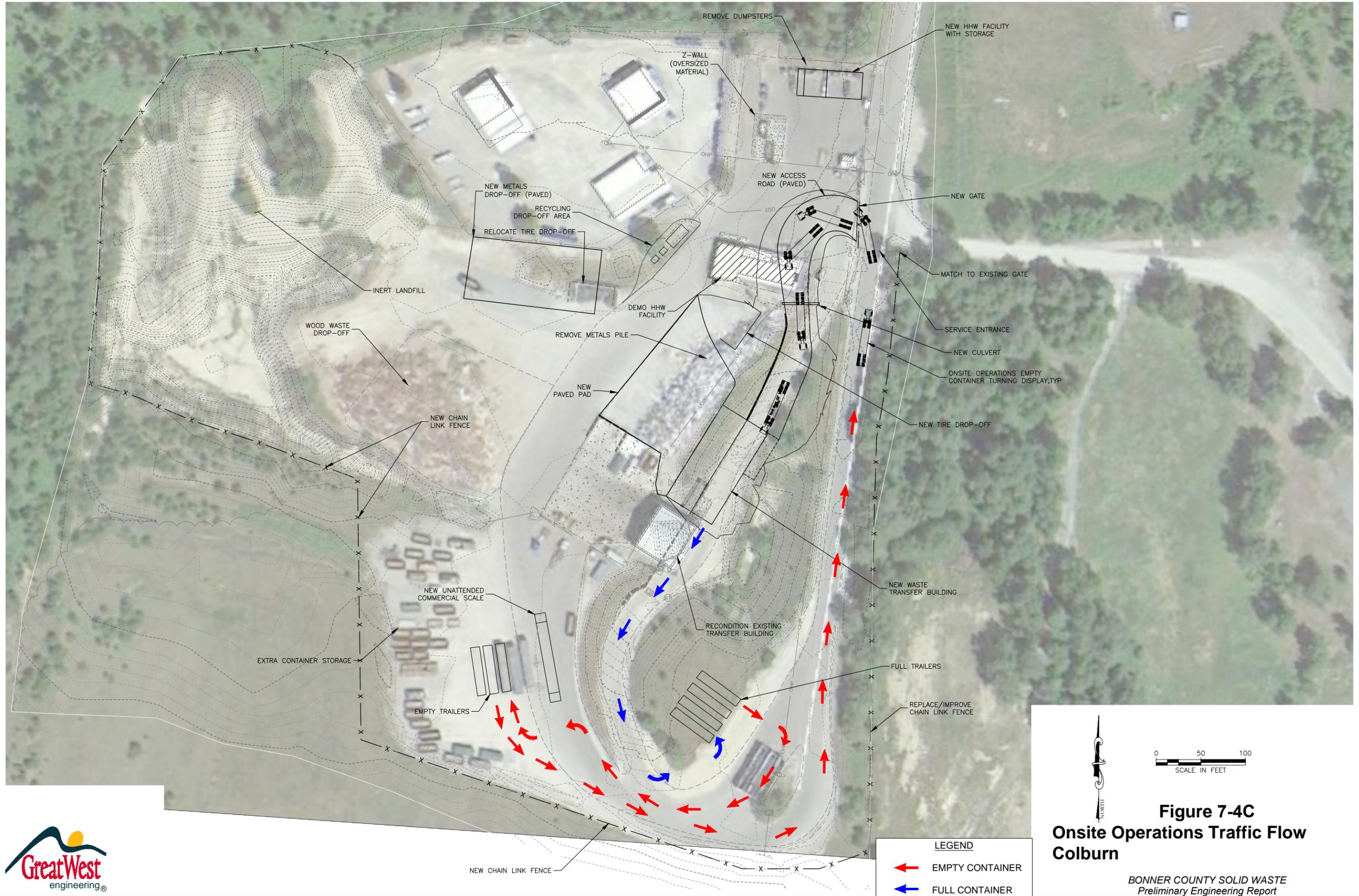


Figure 7-4B
Commercial Traffic Flow Colburn
 BONNER COUNTY SOLID WASTE
 10-YEAR CAPITAL IMPROVEMENTS PLAN



M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-03C.dwg



0 50 100
SCALE IN FEET

Figure 7-4C
Onsite Operations Traffic Flow
Colburn

LEGEND

| | |
|--|-----------------|
| | EMPTY CONTAINER |
| | FULL CONTAINER |

M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-03D.dwg

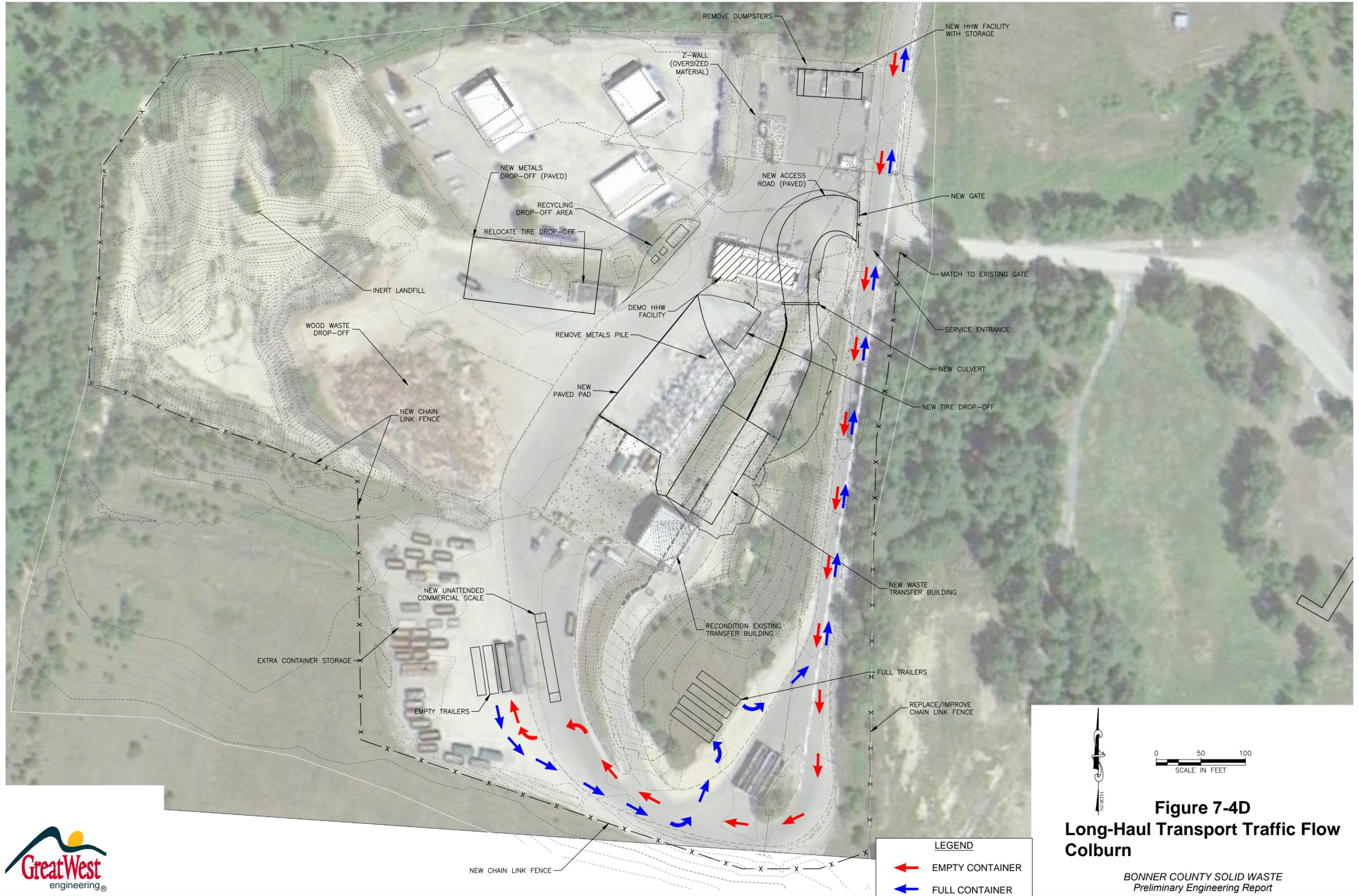


Figure 7-4D
Long-Haul Transport Traffic Flow
Colburn
 BONNER COUNTY SOLID WASTE
 Preliminary Engineering Report

APPENDIX A

Special Election Resolution 21-35

RESOLUTION NO. 21-35

AN RESOLUTION OF BONNER COUNTY, IDAHO PROVIDING FOR THE CONSTRUCTION OF IMPROVEMENTS TO THE SOLID WASTE SYSTEM OF BONNER COUNTY, IDAHO; CALLING FOR A SPECIAL ELECTION FOR THE SUBMISSION TO THE QUALIFIED ELECTORS OF THE COUNTY THE QUESTION OF INCURRING AN INDEBTEDNESS AND ISSUING REVENUE BONDS OF THE COUNTY IN AN AGGREGATE PRINCIPAL AMOUNT NOT TO EXCEED \$8,733,700 TO PAY THE COST THEREOF; ESTABLISHING THE DATE AND TIME OF ELECTION; APPROVING A FORM OF BALLOT AND PROVIDING FOR NOTICE OF THE SPECIAL BOND ELECTION; PROVIDING FOR REGISTRATION OF VOTERS; PROVIDING FOR RELATED MATTERS; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, Bonner County, Idaho (the "County"), is a municipal corporation duly organized and operating under the laws of the State of Idaho;

WHEREAS, the County owns and operates a solid waste pollution control system (the "System") and collects rates, fees, and charges for the use of the System;

WHEREAS, the System is in need of improvement, and the County Commissioners have determined it to be in the best interest of the County and its residents to improve the solid waste system related facilities;

WHEREAS, the County does not have sufficient funds available to pay the cost of the foregoing project and has determined it advisable to finance a portion of such cost through the issuance of the revenue bonds (the "Bonds") of the County in an amount not to exceed \$8,733,700, pursuant to the provisions of Idaho Pollution Control Financing Act (the "Act"), the same being 31-4501 through 31-4516, Idaho Code, and in order to do so, desires to provide for the holding of a special bond election as required by the Act;

WHEREAS, the net revenues to be derived from the operation of the solid waste system may be pledged lawfully and irrevocably to secure the repayment of such Bonds herein authorized pursuant to the Act;

WHEREAS, such Bonds shall not be a debt of the County and it shall not be liable thereon, nor shall such Bonds be payable out of any other funds other than the revenue from the System pledged to the payment thereof;

WHEREAS, said Bonds cannot be issued without the assent of a majority of the qualified electors of the County voting at an election held for the purpose of authorizing or refusing to authorize the issuance of said Bonds; and

WHEREAS, such election shall be conducted by Bonner County, Idaho as provided by law.

NOW, THEREFORE, BE IT ORDAINED BY THE COUNTY COMMISSIONERS OF BONNER COUNTY, IDAHO:

SECTION 1: THE PROJECT

The County Commissioners hereby find, determine, and declare that it is necessary and essential to the public interest, health, safety, and welfare that the County acquire and construct certain capital improvements and betterments to the System, consisting generally of, but not limited to, improvements to the existing buildings, the construction of new buildings, the addition of a scale, and site improvements at the Colburn Site, Idaho Hill Site Improvements, Dickensheet Site Improvements, and Dufort Site Improvements, together with costs of engineering, legal, accounting, and other necessary professional services, costs of bond issuance, interest on borrowed funds during construction, and costs incidental thereto (the "Project").

Subject to the approval of the incurring of indebtedness and the issuance of revenue bonds therefor by the qualified electors voting at the election for which provision is hereinafter made, revenue bonds of the County shall be issued pursuant to the provisions of the Act, in a principal amount not to exceed \$8,733,700 to pay the costs of the Project.

SECTION 2: SPECIAL ELECTION

A special municipal bond election is hereby called to be held within Bonner County on Tuesday, May 18, 2021, for the purpose of voting upon the proposition set forth in Section 4 of this Resolution. The polling place or places for the special bond election shall be determined by the Bonner County Clerk, and the election shall be conducted by the Bonner County Clerk. The Bonner County Clerk shall appoint election judges and election clerks for the polling place or places for the special bond election.

SECTION 3: ADMINISTRATION OF ELECTION

The polls of the special bond election shall open at the hour of 8:00 o'clock A.M. on May 18, 2021, and shall remain open continuously until the hour of 8:00 o'clock P.M., at which time the polls shall be closed. The administration of the election shall be conducted by Bonner County in accordance with this Resolution and Title 31, Chapter 45, and Title 34 of Idaho Code.

The ballot proposition to be voted upon at the special bond election, as set forth in Section 4 of this Resolution, shall be separate from any other proposition being voted upon at or in conjunction with any other election being held and conducted on the same date. Only those qualified electors of the County casting valid ballots upon the proposition set forth in Section 4 of this Resolution shall be counted in determining the number of qualified electors voting at or participating in the special bond election.

SECTION 4: BALLOT PROPOSITION

The ballot proposition for the special bond election shall be in substantially the following form:

SPECIAL REVENUE BOND ELECTION

BONNER COUNTY, IDAHO

May 18, 2021

SHALL BONNER COUNTY, IDAHO, BE AUTHORIZED TO INCUR AN INDEBTEDNESS AND TO ISSUE AND SELL ITS REVENUE BONDS IN AN AMOUNT NOT TO EXCEED \$8,733,700 TO PAY THE COST OF CONSTRUCTING IMPROVEMENTS TO THE SOLID WASTE SYSTEM OF THE COUNTY, SAID BONDS TO BE PAYABLE SOLELY FROM SOLID WASTE SYSTEM REVENUES, OVER A TERM WHICH MAY BE LESS THAN BUT WHICH SHALL NOT EXCEED TEN (10) YEARS, AS MORE FULLY PROVIDED IN RESOLUTION NO. 21-35?

The purpose for which the proceeds of the bonds will be used is for improvements to the solid waste system. to include improvements to meet federal requirements. The County currently has no outstanding long-term indebtedness. The interest rate anticipated on the proposed bonds is 1.75%. The total principal amount to be repaid over the life of the bonds is \$8,733,700; the total interest estimated to be paid over the life of the bonds is \$786,423; the total amount estimated to be repaid over the life of the bonds is \$9,520,123. The bonds will be paid solely from the revenues and receipts from the solid waste system. The bonds will be payable over a term which may be less than but which will not exceed ten years.

IN FAVOR OF issuing revenue bonds in an amount not to exceed \$8,733,700.....

AGAINST issuing revenue bonds in an amount not to exceed \$8,733,700.....

SECTION 5: QUALIFIED ELECTORS

Every person eighteen (18) years of age or older, who at the time of the specified bond election is a United States citizen who has been a legal and bona fide resident of the County for at least thirty (30) days immediately preceding the date of the election, if properly registered as required by law, shall be qualified to vote at said election.

All electors must be registered before being able to vote at the special bond election. The Bonner County Clerk is the registrar for the County, and voter registration shall be conducted pursuant to the provisions of Section 34-1402, Idaho Code.

Any person who is eligible to vote may register on election day by appearing in person at the polling place established for the election, by completing a registration card, making an oath

on the form prescribed by law, and providing proof of residence in the manner provided by Section 34-408A, Idaho Code, as amended.

SECTION 6: BALLOTS

The Bonner County Clerk shall cause the official ballot for the special bond election to be prepared in a sufficient quantity for the special bond election.

SECTION 7: NOTICE

Notice of the special bond election shall be given prior to the election by publishing notice of the election in the official newspaper of the County, the first publication being at least twelve (12) days prior to the election, the last publication to be not less than five (5) days prior to the special bond election. In accordance with Section 34-602, Idaho Code, as amended, the second publication of the notice of election shall be accompanied by a facsimile of the sample ballot for the special bond election.

SECTION 8: CANVASS

When the polls are closed, the election officials shall immediately proceed to count the ballots cast at the special bond election. The counting shall be continued without adjournment until completed and the result declared.

The Board of County Commissioners shall meet within ten (10) days following the election, or at such time to which said meeting is continued, for the purpose of canvassing the results of the special bond election. The County Clerk shall thereupon certify the election results to the County Clerk. The results shall then be entered in the minutes of the County Commissioners and proclaimed as final.

SECTION 9: DEBT DISCLOSURE STATEMENT

A brief official statement containing the information required by Idaho Code 34439, as amended, shall be prepared by the County Treasurer.

SECTION 10: REVENUE BONDS

If, at the special bond election, a majority of the qualified electors of the County voting upon the ballot question set forth in Section 4 of this Resolution vote in favor of incurring of indebtedness and the issuance of revenue bonds for the purposes set forth herein and designated on the aforesaid ballot, fully registered revenue bonds of the County shall be authorized, issued, sold, and delivered. The bonds shall be issued in the form and manner, shall be registered, shall mature annually over a period which may be less than but which shall not exceed forty (40) years, shall bear interest at a rate or rates to be determined by the Commissioners at the time of issuance of such bonds, and shall be payable annually or at such lesser intervals and be subject to such redemption provisions, as may be prescribed by the Resolution authorizing the issuance of the bonds, all of which shall be in accordance with the laws of the State of Idaho.

The net revenues (gross revenues minus normal expenses of maintenance and operation) of the solid waste system of the County will be pledged for the payment of principal of and interest and redemption premiums, if any, on the revenue bonds, as shall be determined by the County Commissioners. The bonds shall not be a debt of the County within the meaning of any State constitutional provision or statutory limitation, nor a charge against the general credit or taxing powers of the County, and the County shall not be liable therefor out of its general revenues, nor shall the bonds or the interest thereon be payable out of any funds other than the revenues specified above.

SECTION 11: OFFICERS AUTHORIZED

The officers of the County are hereby authorized and directed to take all action necessary or appropriate to effectuate the provisions of this Resolution.

SECTION 12: RATIFICATION

All actions heretofore taken, not inconsistent with the provisions of this Resolution, by the County Commissioners and other County officials directed toward construction and installation of the Project and the issuance of revenue bonds of the County therefor, and for the holding of a special bond election, are hereby ratified, approved, and confirmed.

PASSED this 25th day of March, 2021.

BONNER COUNTY, IDAHO

By 
Chairperson, Board of Commissioners

By 
Commissioner

By Absent
Commissioner

ATTEST:


County Clerk

(S E A L)





BONNER COUNTY SOLID WASTE

1500 Highway 2, Suite 101 • Sandpoint, Idaho 83864-1303
Phone (208) 255-5681 • Fax 844-965-9700 • www.bonnercountyid.gov

Solid Waste
Item #1

Memorandum

Date: 3-25-21

To: Commissioners

From: Bob Howard, Director

Re: Special Revenue Bond Election Resolution

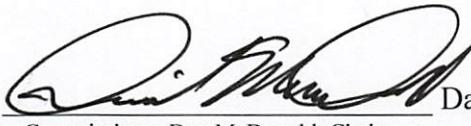
The purpose for which the proceeds of the bonds will be used is for improvements to the solid waste system. to include improvements to meet federal requirements. The County currently has no outstanding long-term indebtedness. The interest rate anticipated on the proposed bonds is 1.75%. The total principal amount to be repaid over the life of the bonds is \$8,733,700; the total interest estimated to be paid over the life of the bonds is \$786,423; the total amount estimated to be repaid over the life of the bonds is \$9,520,123. The bonds will be paid solely from the revenues and receipts from the solid waste system. The bonds will be payable over a term which may be less than but which will not exceed ten years.

Distribution: Original to BOCC
Email copy to Bob Howard, Spencer Ferguson and Melissa Libbers

Legal Review SJC

A suggested motion would be: Mr. Chairman based on the information before us I move that the County Approve Resolution # 2021-35 authorizing Solid Waste to proceed with the Special Revenue Bond Election not to exceed \$8,733,700.00 and bonds be payable over a term not to exceed 10 years and place the bond election on the ballot for May 18, 2021

Recommendation Acceptance: Yes no


Commissioner Dan McDonald, Chairman

Date: 3/25/21



BONNER COUNTY SOLID WASTE

1500 Highway 2, Suite 101 • Sandpoint, Idaho 83864-1303
Phone (208) 255-5681 • Fax 844-965-9700 • www.bonnercountyid.gov

APPENDIX B

Soil Data Reports

Custom Soil Resource Report for Bonner County Area, Idaho, Parts of Bonner and Boundary Counties

Colburn Site



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

| | |
|---|----|
| Preface | 2 |
| How Soil Surveys Are Made | 5 |
| Soil Map | 8 |
| Soil Map (Colburn Site)..... | 9 |
| Legend..... | 10 |
| Map Unit Legend (Colburn Site)..... | 12 |
| Map Unit Descriptions (Colburn Site)..... | 12 |
| Bonner County Area, Idaho, Parts of Bonner and Boundary Counties..... | 14 |
| 32—Mission silt loam, 2 to 12 percent slopes..... | 14 |
| 48—Selle fine sandy loam, 0 to 8 percent slopes..... | 15 |
| Soil Information for All Uses | 17 |
| Suitabilities and Limitations for Use..... | 17 |
| Land Classifications..... | 17 |
| Farmland Classification (Colburn Site)..... | 17 |
| References | 23 |

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

Custom Soil Resource Report

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

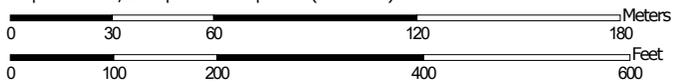
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map (Colburn Site)



Map Scale: 1:2,220 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bonner County Area, Idaho, Parts of Bonner and Boundary Counties
 Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 15, 2010—Aug 23, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Colburn Site)

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|--|--------------|----------------|
| 32 | Mission silt loam, 2 to 12 percent slopes | 14.5 | 93.2% |
| 48 | Selle fine sandy loam, 0 to 8 percent slopes | 1.1 | 6.8% |
| Totals for Area of Interest | | 15.5 | 100.0% |

Map Unit Descriptions (Colburn Site)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bonner County Area, Idaho, Parts of Bonner and Boundary Counties

32—Mission silt loam, 2 to 12 percent slopes

Map Unit Setting

National map unit symbol: 5463

Elevation: 2,000 to 2,800 feet

Mean annual precipitation: 25 to 38 inches

Mean annual air temperature: 43 to 45 degrees F

Frost-free period: 90 to 120 days

Farmland classification: Farmland of statewide importance, if drained

Map Unit Composition

Mission and similar soils: 70 percent

Minor components: 10 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mission

Setting

Landform: Lake terraces

Landform position (three-dimensional): Tread

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Volcanic ash and loess over silty glaciolacustrine deposits

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material

A - 1 to 3 inches: silt loam

Bw - 3 to 12 inches: silt loam

2Btx - 12 to 21 inches: silt loam

2E - 21 to 33 inches: silt

2Bt - 33 to 48 inches: silt loam

3C - 48 to 67 inches: fine sand

Properties and qualities

Slope: 2 to 12 percent

Depth to restrictive feature: 10 to 20 inches to fragipan

Drainage class: Somewhat poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)

Depth to water table: About 6 to 18 inches

Frequency of flooding: None

Frequency of ponding: None

Calcium carbonate, maximum content: 5 percent

Available water capacity: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): 6e

Land capability classification (nonirrigated): 6e

Hydrologic Soil Group: D

Ecological site: F043AY527WA - Warm-Frigid, Udic, Loamy Foothills/Valleys, high water table (western redcedar, moist herb) Thuja plicata / Clintonia uniflora

Other vegetative classification: western redcedar/queencup beadleily (CN530)

Hydric soil rating: No

Minor Components

Hoodoo

Percent of map unit: 5 percent
Landform: Flood plains
Hydric soil rating: Yes

Wrencoe

Percent of map unit: 5 percent
Landform: Flood plains
Microfeatures of landform position: Shorelines
Down-slope shape: Linear
Across-slope shape: Concave
Hydric soil rating: Yes

48—Selle fine sandy loam, 0 to 8 percent slopes

Map Unit Setting

National map unit symbol: 546n
Elevation: 2,000 to 3,000 feet
Mean annual precipitation: 25 to 38 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 80 to 130 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Selle and similar soils: 70 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Selle

Setting

Landform: Lake terraces, dunes
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Volcanic ash and/or loess over sandy glaciolacustrine deposits

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: ashy fine sandy loam
B_w - 6 to 21 inches: fine sandy loam
E&B_t - 21 to 60 inches: loamy fine sand

Properties and qualities

Slope: 0 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Available water capacity: Moderate (about 6.3 inches)

Interpretive groups

Land capability classification (irrigated): 4e

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: A

Ecological site: F043AY526WA - Warm-Frigid, Udic, Loamy Foothills/

Mountainsides, ashy surface (western redcedar, moist herb) Thuja plicata /
Clintonia uniflora

Other vegetative classification: western redcedar/queencup beadlily (CN530)

Hydric soil rating: No

Minor Components

Hoodoo

Percent of map unit: 5 percent

Landform: Flood plains

Down-slope shape: Linear

Across-slope shape: Concave

Hydric soil rating: Yes

Pywell

Percent of map unit: 5 percent

Landform: Flood plains

Down-slope shape: Concave

Across-slope shape: Concave

Hydric soil rating: Yes

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

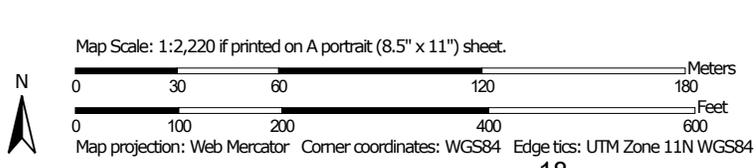
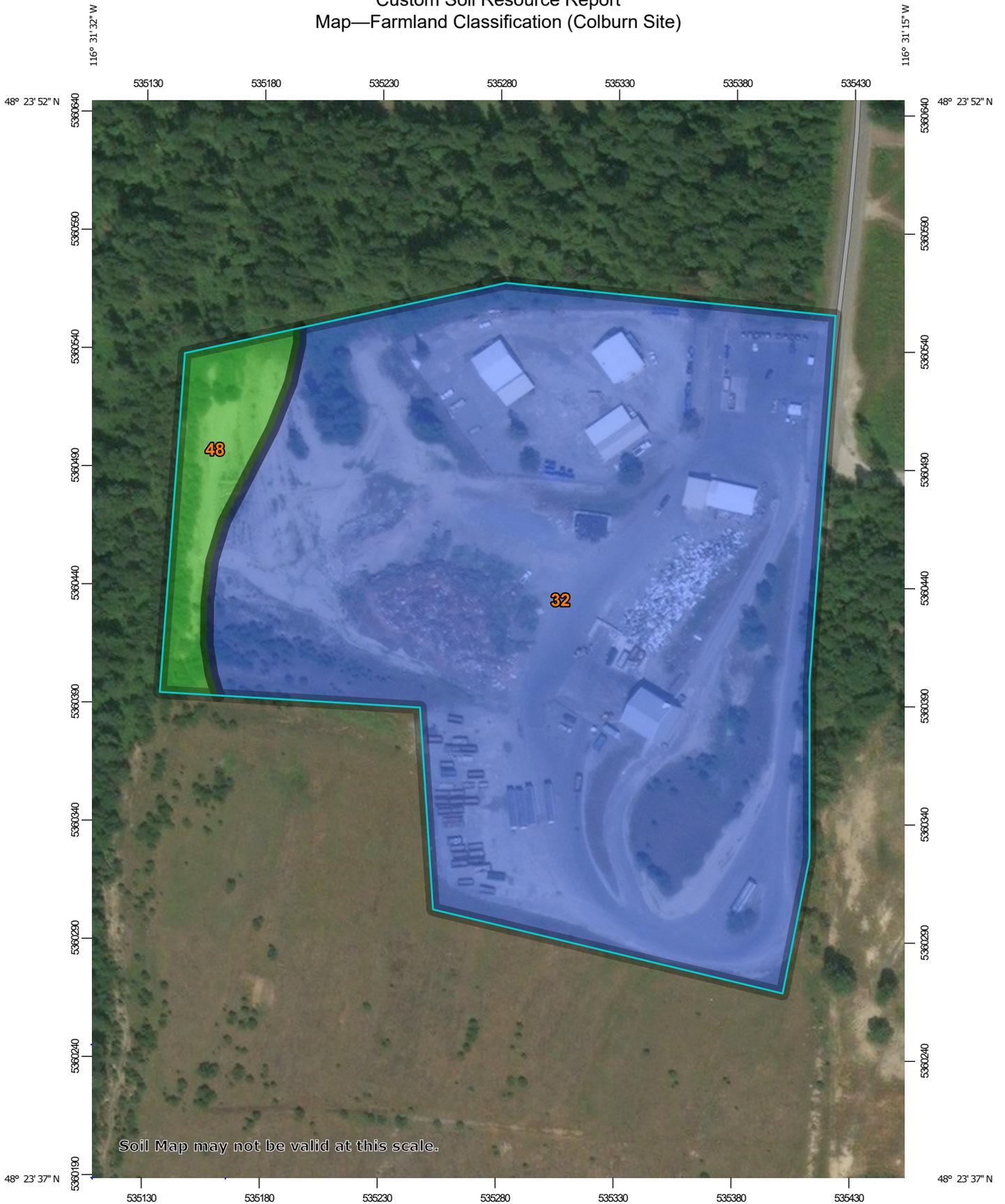
Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification (Colburn Site)

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report Map—Farmland Classification (Colburn Site)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available

Soil Rating Lines

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Custom Soil Resource Report

| | | | | | | | | | |
|---|--|---|---|---|--|---|--|---|--|
|  | Prime farmland if subsoiled, completely removing the root inhibiting soil layer |  | Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium |  | Farmland of unique importance |  | Prime farmland if subsoiled, completely removing the root inhibiting soil layer |
|  | Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |  | Farmland of statewide importance, if irrigated and drained |  | Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season |  | Not prime farmland |  | Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |
|  | Prime farmland if irrigated and reclaimed of excess salts and sodium |  | Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season |  | All areas are prime farmland |  | Prime farmland if irrigated and reclaimed of excess salts and sodium |
|  | Farmland of statewide importance |  | Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season |  | Prime farmland if protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance |
|  | Farmland of statewide importance, if drained |  | Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer |  | Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer |  | Prime farmland if irrigated |  | Farmland of statewide importance, if drained |
|  | Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |  | Farmland of statewide importance, if warm enough |  | Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season |
|  | Farmland of statewide importance, if irrigated |  | Farmland of statewide importance, if thawed |  | Farmland of statewide importance, if thawed |  | Prime farmland if irrigated and drained |  | Farmland of statewide importance, if irrigated |
| | | | Farmland of local importance |  | Farmland of local importance |  | Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season | | |
| | | | Farmland of local importance, if irrigated |  | Farmland of local importance, if irrigated | | | | |

Custom Soil Resource Report

| | | | |
|--|--|--|--|
| <ul style="list-style-type: none">  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if irrigated and drained  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 | <ul style="list-style-type: none">  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if warm enough  Farmland of statewide importance, if thawed  Farmland of local importance  Farmland of local importance, if irrigated | <ul style="list-style-type: none">  Farmland of unique importance  Not rated or not available <p>Water Features</p> <ul style="list-style-type: none">  Streams and Canals <p>Transportation</p> <ul style="list-style-type: none">  Rails  Interstate Highways  US Routes  Major Roads  Local Roads <p>Background</p> <ul style="list-style-type: none">  Aerial Photography | <p>The soil surveys that comprise your AOI were mapped at 1:24,000.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p> </div> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</p> <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: Bonner County Area, Idaho, Parts of Bonner and Boundary Counties Survey Area Data: Version 16, Jun 4, 2020</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: Aug 15, 2010—Aug 23, 2016</p> <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p> |
|--|--|--|--|

Table—Farmland Classification (Colburn Site)

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|------------------------------------|--|--|--------------|----------------|
| 32 | Mission silt loam, 2 to 12 percent slopes | Farmland of statewide importance, if drained | 14.5 | 93.2% |
| 48 | Selle fine sandy loam, 0 to 8 percent slopes | All areas are prime farmland | 1.1 | 6.8% |
| Totals for Area of Interest | | | 15.5 | 100.0% |

Rating Options—Farmland Classification (Colburn Site)

Aggregation Method: No Aggregation Necessary

Aggregation is the process by which a set of component attribute values is reduced to a single value that represents the map unit as a whole.

A map unit is typically composed of one or more "components". A component is either some type of soil or some nonsoil entity, e.g., rock outcrop. For the attribute being aggregated, the first step of the aggregation process is to derive one attribute value for each of a map unit's components. From this set of component attributes, the next step of the aggregation process derives a single value that represents the map unit as a whole. Once a single value for each map unit is derived, a thematic map for soil map units can be rendered. Aggregation must be done because, on any soil map, map units are delineated but components are not.

For each of a map unit's components, a corresponding percent composition is recorded. A percent composition of 60 indicates that the corresponding component typically makes up approximately 60% of the map unit. Percent composition is a critical factor in some, but not all, aggregation methods.

The majority of soil attributes are associated with a component of a map unit, and such an attribute has to be aggregated to the map unit level before a thematic map can be rendered. Map units, however, also have their own attributes. An attribute of a map unit does not have to be aggregated in order to render a corresponding thematic map. Therefore, the "aggregation method" for any attribute of a map unit is referred to as "No Aggregation Necessary".

Tie-break Rule: Lower

The tie-break rule indicates which value should be selected from a set of multiple candidate values, or which value should be selected in the event of a percent composition tie.

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Bonner County Area, Idaho, Parts of Bonner and Boundary Counties

Dickensheet Site



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

| | |
|---|----|
| Preface | 2 |
| Soil Map | 5 |
| Soil Map (Dickensheet Site)..... | 6 |
| Legend..... | 7 |
| Map Unit Legend (Dickensheet Site)..... | 9 |
| Map Unit Descriptions (Dickensheet Site)..... | 9 |
| Bonner County Area, Idaho, Parts of Bonner and Boundary Counties..... | 11 |
| 3—Bonner gravelly silt loam, 30 to 65 percent slopes..... | 11 |
| 4—Bonner silt loam, cool, 0 to 4 percent slopes..... | 12 |
| Soil Information for All Uses | 14 |
| Suitabilities and Limitations for Use..... | 14 |
| Land Classifications..... | 14 |
| Farmland Classification (Dickensheet Site)..... | 14 |
| References | 20 |

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map (Dickensheet Site)



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bonner County Area, Idaho, Parts of Bonner and Boundary Counties
 Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 7, 2013—Nov 4, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Dickensheet Site)

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|--|--------------|----------------|
| 3 | Bonner gravelly silt loam, 30 to 65 percent slopes | 1.0 | 7.8% |
| 4 | Bonner silt loam, cool, 0 to 4 percent slopes | 11.7 | 92.2% |
| Totals for Area of Interest | | 12.7 | 100.0% |

Map Unit Descriptions (Dickensheet Site)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however,

Custom Soil Resource Report

onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bonner County Area, Idaho, Parts of Bonner and Boundary Counties

3—Bonner gravelly silt loam, 30 to 65 percent slopes

Map Unit Setting

National map unit symbol: 5460
Elevation: 2,000 to 3,000 feet
Mean annual precipitation: 25 to 35 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 90 to 120 days
Farmland classification: Not prime farmland

Map Unit Composition

Bonner and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bonner

Setting

Landform: Escarpments
Landform position (three-dimensional): Riser
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Volcanic ash and loess over outwash derived from granite and/or schist and/or gneiss

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: gravelly ashy silt loam
Bw - 6 to 22 inches: gravelly silt loam
2BC - 22 to 30 inches: gravelly loam
3C - 30 to 60 inches: very gravelly loamy sand

Properties and qualities

Slope: 30 to 65 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F043AY521WA - Warm-Frigid, Moist- Xeric Loamy Foothills/ Mountainsides, ashy surface (Grand Fir Warm Dry Shrub) *Abies grandis* - *Pseudotsuga menziesii* / *Physocarpus malvaceus* - *Symphoricarpos albus*
Other vegetative classification: grand fir/twinflower (CN590)
Hydric soil rating: No

4—Bonner silt loam, cool, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: 546c
Elevation: 2,000 to 4,200 feet
Mean annual precipitation: 25 to 45 inches
Mean annual air temperature: 41 to 46 degrees F
Frost-free period: 60 to 120 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Bonner, cool, and similar soils: 80 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bonner, Cool

Setting

Landform: Outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Volcanic ash and loess over outwash derived from granite and/or schist and/or gneiss

Typical profile

O_i - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: ashy silt loam
B_w - 6 to 22 inches: gravelly silt loam
2BC - 22 to 30 inches: gravelly loam
3C - 30 to 60 inches: very gravelly loamy sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (K_{sat}): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F043AY524WA - Frigid, Udic, Loamy, Foothills/Mountainsides, ashy surface (Western Hemlock/Moist Forbes) *Tsuga heterophylla* / *Clintonia uniflora* , *Tsuga heterophylla* / *Asarum caudatum*
Other vegetative classification: western hemlock/queencup beadlily (CN570)

Custom Soil Resource Report

Hydric soil rating: No

Minor Components

Capehorn

Percent of map unit: 5 percent

Landform: Flood plains

Down-slope shape: Linear

Across-slope shape: Linear

Other vegetative classification: western redcedar/ladyfern (CN540)

Hydric soil rating: Yes

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

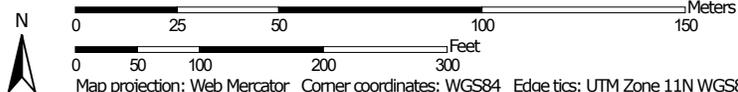
Farmland Classification (Dickensheet Site)

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report
Map—Farmland Classification (Dickensheet Site)



Map Scale: 1:1,850 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available

Soil Rating Lines

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Custom Soil Resource Report

| | | | | | | | | | |
|---|--|---|---|---|--|---|--|---|--|
|  | Prime farmland if subsoiled, completely removing the root inhibiting soil layer |  | Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium |  | Farmland of unique importance |  | Prime farmland if subsoiled, completely removing the root inhibiting soil layer |
|  | Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |  | Farmland of statewide importance, if irrigated and drained |  | Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season |  | Not prime farmland |  | Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |
|  | Prime farmland if irrigated and reclaimed of excess salts and sodium |  | Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season |  | Prime farmland if drained |  | Prime farmland if irrigated and reclaimed of excess salts and sodium |
|  | Farmland of statewide importance |  | Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season |  | Prime farmland if protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance |
|  | Farmland of statewide importance, if drained |  | Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer |  | Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer |  | Prime farmland if irrigated |  | Farmland of statewide importance, if drained |
|  | Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer |  | Farmland of statewide importance, if warm enough |  | Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season |
|  | Farmland of statewide importance, if irrigated |  | Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |  | Farmland of statewide importance, if thawed |  | Prime farmland if irrigated and drained |  | Farmland of statewide importance, if irrigated |
| | | | |  | Farmland of local importance |  | Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season | | |
| | | | |  | Farmland of local importance, if irrigated | | | | |

Custom Soil Resource Report

| | | | |
|--|--|--|--|
| <ul style="list-style-type: none">  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if irrigated and drained  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 | <ul style="list-style-type: none">  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if warm enough  Farmland of statewide importance, if thawed  Farmland of local importance  Farmland of local importance, if irrigated | <ul style="list-style-type: none">  Farmland of unique importance  Not rated or not available <p>Water Features</p> <ul style="list-style-type: none">  Streams and Canals <p>Transportation</p> <ul style="list-style-type: none">  Rails  Interstate Highways  US Routes  Major Roads  Local Roads <p>Background</p> <ul style="list-style-type: none">  Aerial Photography | <p>The soil surveys that comprise your AOI were mapped at 1:24,000.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p> </div> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</p> <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: Bonner County Area, Idaho, Parts of Bonner and Boundary Counties Survey Area Data: Version 16, Jun 4, 2020</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: May 7, 2013—Nov 4, 2016</p> <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p> |
|--|--|--|--|

Table—Farmland Classification (Dickensheet Site)

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|------------------------------------|--|------------------------------|--------------|----------------|
| 3 | Bonner gravelly silt loam, 30 to 65 percent slopes | Not prime farmland | 1.0 | 7.8% |
| 4 | Bonner silt loam, cool, 0 to 4 percent slopes | All areas are prime farmland | 11.7 | 92.2% |
| Totals for Area of Interest | | | 12.7 | 100.0% |

Rating Options—Farmland Classification (Dickensheet Site)

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

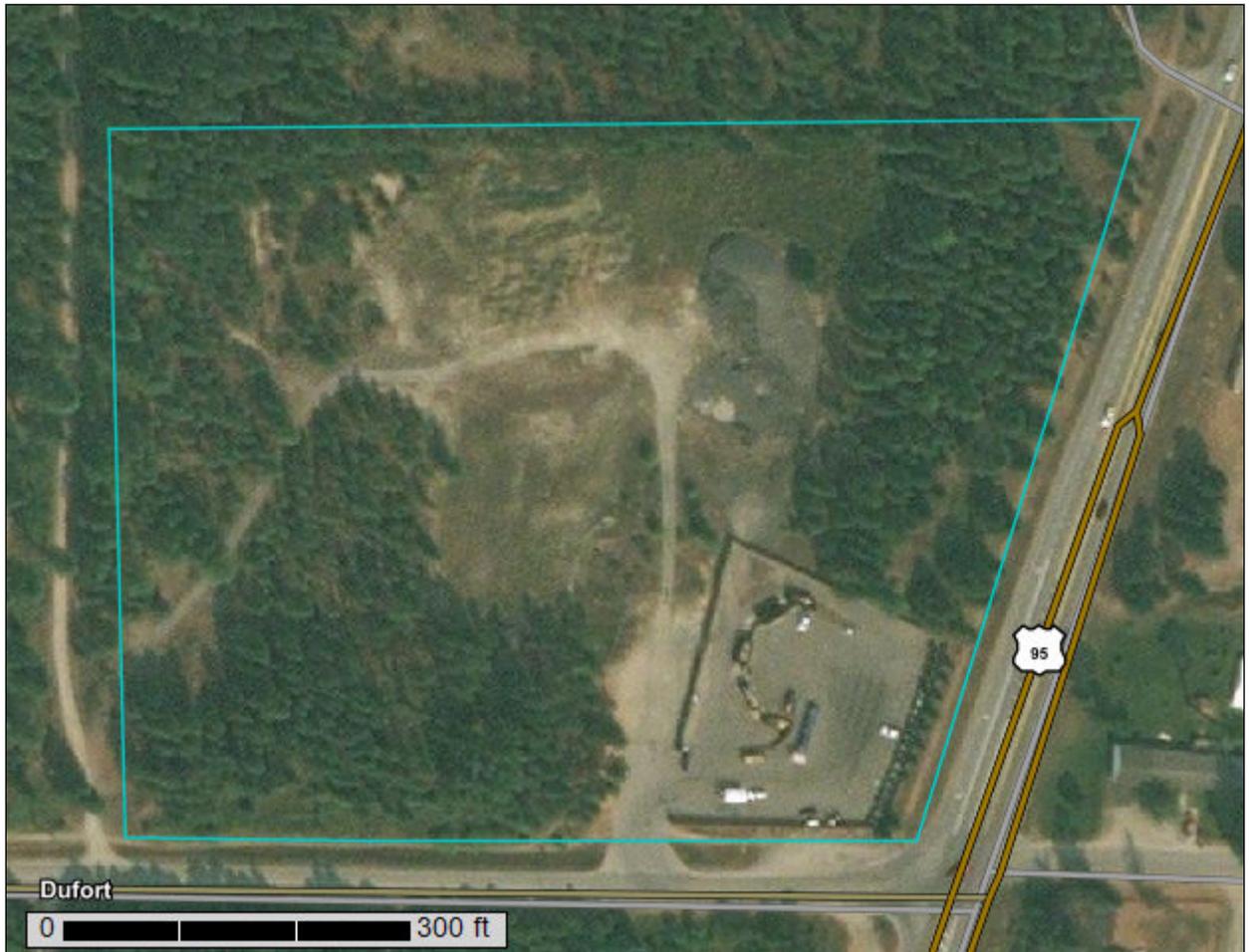
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Custom Soil Resource Report for Bonner County Area, Idaho, Parts of Bonner and Boundary Counties

Dufort Site



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

| | |
|---|----|
| Preface | 2 |
| Soil Map | 5 |
| Soil Map (Dufort Site)..... | 6 |
| Legend..... | 7 |
| Map Unit Legend (Dufort Site)..... | 9 |
| Map Unit Descriptions (Dufort Site)..... | 9 |
| Bonner County Area, Idaho, Parts of Bonner and Boundary Counties..... | 11 |
| 2—Bonner gravelly ashy silt loam, 0 to 4 percent slopes..... | 11 |
| Soil Information for All Uses | 13 |
| Suitabilities and Limitations for Use..... | 13 |
| Land Classifications..... | 13 |
| Farmland Classification (Dufort Site)..... | 13 |
| References | 19 |

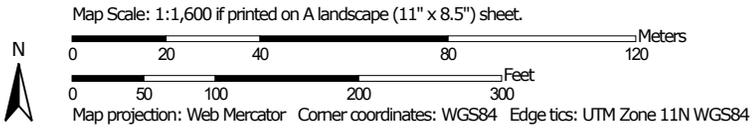
Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Dufort Site)



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bonner County Area, Idaho, Parts of Bonner and Boundary Counties
 Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Aug 15, 2010—Aug 23, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Dufort Site)

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|--|--------------|----------------|
| 2 | Bonner gravelly ashy silt loam, 0 to 4 percent slopes | 11.2 | 100.0% |
| Totals for Area of Interest | | 11.2 | 100.0% |

Map Unit Descriptions (Dufort Site)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bonner County Area, Idaho, Parts of Bonner and Boundary Counties

2—Bonner gravelly ashy silt loam, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: 545n
Elevation: 2,000 to 3,000 feet
Mean annual precipitation: 25 to 35 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 90 to 120 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Bonner and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bonner

Setting

Landform: Outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Thick mantle of volcanic ash and/or loess over outwash derived from granite and/or schist and/or gneiss

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: gravelly ashy silt loam
Bw - 6 to 22 inches: gravelly ashy silt loam
2BC - 22 to 30 inches: gravelly loam
3C - 30 to 60 inches: very gravelly loamy sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.43 to 2.13 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: B
Ecological site: F043AY521WA - Warm-Frigid, Moist- Xeric Loamy Foothills/ Mountainsides, ashy surface (Grand Fir Warm Dry Shrub) *Abies grandis* - *Pseudotsuga menziesii* / *Physocarpus malvaceus* - *Symphoricarpos albus*
Other vegetative classification: grand fir/twinflower (CN590)
Hydric soil rating: No

Custom Soil Resource Report

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

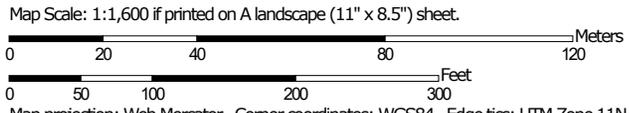
Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

Farmland Classification (Dufort Site)

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report
Map—Farmland Classification (Dufort Site)



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 11N WGS84

Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available

Soil Rating Lines

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Custom Soil Resource Report

| | | | | | | | | | |
|---|--|---|---|---|--|---|--|---|--|
|  | Prime farmland if subsoiled, completely removing the root inhibiting soil layer |  | Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium |  | Farmland of unique importance |  | Prime farmland if subsoiled, completely removing the root inhibiting soil layer |
|  | Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |  | Farmland of statewide importance, if irrigated and drained |  | Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season |  | Not prime farmland |  | Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |
|  | Prime farmland if irrigated and reclaimed of excess salts and sodium |  | Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season |  | All areas are prime farmland |  | Prime farmland if irrigated and reclaimed of excess salts and sodium |
|  | Farmland of statewide importance |  | Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season |  | Prime farmland if protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance |
|  | Farmland of statewide importance, if drained |  | Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer |  | Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer |  | Prime farmland if irrigated |  | Farmland of statewide importance, if drained |
|  | Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |  | Farmland of statewide importance, if warm enough |  | Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season |  | Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season |
|  | Farmland of statewide importance, if irrigated |  | Farmland of statewide importance, if thawed |  | Farmland of statewide importance, if thawed |  | Prime farmland if irrigated and drained |  | Farmland of statewide importance, if irrigated |
| | | | Farmland of local importance |  | Farmland of local importance |  | Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season | | |
| | | | Farmland of local importance, if irrigated |  | Farmland of local importance, if irrigated | | | | |

Custom Soil Resource Report

| | | | |
|---|--|--|---|
| <p> Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season</p> | <p> Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium</p> | <p> Farmland of unique importance</p> <p> Not rated or not available</p> | <p>The soil surveys that comprise your AOI were mapped at 1:24,000.</p> |
| <p> Farmland of statewide importance, if irrigated and drained</p> | <p> Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season</p> | <p>Water Features</p> <p> Streams and Canals</p> | <p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p> |
| <p> Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season</p> | <p> Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season</p> | <p>Transportation</p> <p> Rails</p> <p> Interstate Highways</p> <p> US Routes</p> <p> Major Roads</p> <p> Local Roads</p> | |
| <p> Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer</p> | <p> Farmland of statewide importance, if warm enough</p> | <p>Background</p> <p> Aerial Photography</p> | <p>Please rely on the bar scale on each map sheet for map measurements.</p> |
| <p> Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60</p> | <p> Farmland of statewide importance, if thawed</p> | | <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</p> |
| | <p> Farmland of local importance</p> | | <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> |
| | <p> Farmland of local importance, if irrigated</p> | | <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> |
| | | | <p>Soil Survey Area: Bonner County Area, Idaho, Parts of Bonner and Boundary Counties Survey Area Data: Version 16, Jun 4, 2020</p> |
| | | | <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> |
| | | | <p>Date(s) aerial images were photographed: Aug 15, 2010—Aug 23, 2016</p> |
| | | | <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p> |

Table—Farmland Classification (Dufort Site)

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|------------------------------------|---|------------------------------|--------------|----------------|
| 2 | Bonner gravelly ashy silt loam, 0 to 4 percent slopes | All areas are prime farmland | 11.2 | 100.0% |
| Totals for Area of Interest | | | 11.2 | 100.0% |

Rating Options—Farmland Classification (Dufort Site)

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Custom Soil Resource Report for Bonner County Area, Idaho, Parts of Bonner and Boundary Counties

Idaho Hill Site



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

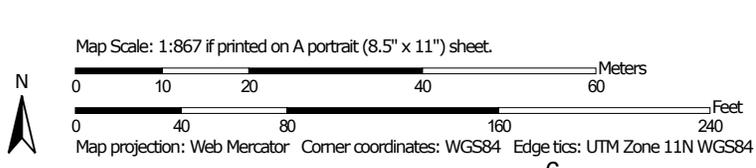
Contents

| | |
|---|----|
| Preface | 2 |
| Soil Map | 5 |
| Soil Map (Idaho Hill Site)..... | 6 |
| Legend..... | 7 |
| Map Unit Legend (Idaho Hill Site)..... | 9 |
| Map Unit Descriptions (Idaho Hill Site)..... | 9 |
| Bonner County Area, Idaho, Parts of Bonner and Boundary Counties..... | 11 |
| 2—Bonner gravelly ashy silt loam, 0 to 4 percent slopes..... | 11 |
| Soil Information for All Uses | 13 |
| Suitabilities and Limitations for Use..... | 13 |
| Land Classifications..... | 13 |
| Farmland Classification (Idaho Hill Site)..... | 13 |
| References | 19 |

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map (Idaho Hill Site)



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot

-  Spoil Area
-  Stony Spot
-  Very Stony Spot
-  Wet Spot
-  Other
-  Special Line Features

Water Features

 Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL:
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bonner County Area, Idaho, Parts of Bonner and Boundary Counties
 Survey Area Data: Version 16, Jun 4, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 7, 2013—Nov 4, 2016

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Idaho Hill Site)

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|------------------------------------|--|--------------|----------------|
| 2 | Bonner gravelly ashy silt loam, 0 to 4 percent slopes | 3.7 | 100.0% |
| Totals for Area of Interest | | 3.7 | 100.0% |

Map Unit Descriptions (Idaho Hill Site)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Custom Soil Resource Report

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bonner County Area, Idaho, Parts of Bonner and Boundary Counties

2—Bonner gravelly ashy silt loam, 0 to 4 percent slopes

Map Unit Setting

National map unit symbol: 545n
Elevation: 2,000 to 3,000 feet
Mean annual precipitation: 25 to 35 inches
Mean annual air temperature: 43 to 46 degrees F
Frost-free period: 90 to 120 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Bonner and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bonner

Setting

Landform: Outwash terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Thick mantle of volcanic ash and/or loess over outwash derived from granite and/or schist and/or gneiss

Typical profile

Oi - 0 to 1 inches: slightly decomposed plant material
A - 1 to 6 inches: gravelly ashy silt loam
Bw - 6 to 22 inches: gravelly ashy silt loam
2BC - 22 to 30 inches: gravelly loam
3C - 30 to 60 inches: very gravelly loamy sand

Properties and qualities

Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.43 to 2.13 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water capacity: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: B
Ecological site: F043AY521WA - Warm-Frigid, Moist- Xeric Loamy Foothills/ Mountainsides, ashy surface (Grand Fir Warm Dry Shrub) *Abies grandis* - *Pseudotsuga menziesii* / *Physocarpus malvaceus* - *Symphoricarpos albus*
Other vegetative classification: grand fir/twinflower (CN590)
Hydric soil rating: No

Custom Soil Resource Report

Soil Information for All Uses

Suitabilities and Limitations for Use

The Suitabilities and Limitations for Use section includes various soil interpretations displayed as thematic maps with a summary table for the soil map units in the selected area of interest. A single value or rating for each map unit is generated by aggregating the interpretive ratings of individual map unit components. This aggregation process is defined for each interpretation.

Land Classifications

Land Classifications are specified land use and management groupings that are assigned to soil areas because combinations of soil have similar behavior for specified practices. Most are based on soil properties and other factors that directly influence the specific use of the soil. Example classifications include ecological site classification, farmland classification, irrigated and nonirrigated land capability classification, and hydric rating.

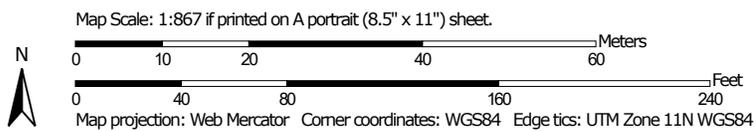
Farmland Classification (Idaho Hill Site)

Farmland classification identifies map units as prime farmland, farmland of statewide importance, farmland of local importance, or unique farmland. It identifies the location and extent of the soils that are best suited to food, feed, fiber, forage, and oilseed crops. NRCS policy and procedures on prime and unique farmlands are published in the "Federal Register," Vol. 43, No. 21, January 31, 1978.

Custom Soil Resource Report
Map—Farmland Classification (Idaho Hill Site)



Soil Map may not be valid at this scale.



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

-  Prime farmland if subsoiled, completely removing the root inhibiting soil layer
-  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60
-  Prime farmland if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance
-  Farmland of statewide importance, if drained
-  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated

-  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if irrigated and drained
-  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer
-  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60

-  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium
-  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season
-  Farmland of statewide importance, if warm enough
-  Farmland of statewide importance, if thawed
-  Farmland of local importance
-  Farmland of local importance, if irrigated

-  Farmland of unique importance
-  Not rated or not available

Soil Rating Lines

-  Not prime farmland
-  All areas are prime farmland
-  Prime farmland if drained
-  Prime farmland if protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated
-  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
-  Prime farmland if irrigated and drained
-  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season

Custom Soil Resource Report

| | | | | |
|--|---|--|--|--|
|  Prime farmland if subsoiled, completely removing the root inhibiting soil layer |  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season |  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium |  Farmland of unique importance |  Prime farmland if subsoiled, completely removing the root inhibiting soil layer |
|  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |  Farmland of statewide importance, if irrigated and drained |  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season |  Not rated or not available |  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |
|  Prime farmland if irrigated and reclaimed of excess salts and sodium |  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season |  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season | Soil Rating Points  Not prime farmland |  Prime farmland if irrigated and reclaimed of excess salts and sodium |
|  Farmland of statewide importance |  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer |  Farmland of statewide importance, if thawed |  Prime farmland if drained |  Prime farmland if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |
|  Farmland of statewide importance, if drained |  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 |  Farmland of local importance |  Prime farmland if protected from flooding or not frequently flooded during the growing season |  Farmland of statewide importance |
|  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season |  Farmland of local importance, if irrigated |  Prime farmland if irrigated |  Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season |  Farmland of statewide importance, if drained |
|  Farmland of statewide importance, if irrigated | |  Prime farmland if irrigated and drained |  Prime farmland if irrigated and either protected from flooding or not frequently flooded during the growing season |  Farmland of statewide importance, if protected from flooding or not frequently flooded during the growing season |
| | | | |  Farmland of statewide importance, if irrigated |

Custom Soil Resource Report

| | | | |
|--|--|--|--|
| <ul style="list-style-type: none">  Farmland of statewide importance, if drained and either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if irrigated and drained  Farmland of statewide importance, if irrigated and either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if subsoiled, completely removing the root inhibiting soil layer  Farmland of statewide importance, if irrigated and the product of I (soil erodibility) x C (climate factor) does not exceed 60 | <ul style="list-style-type: none">  Farmland of statewide importance, if irrigated and reclaimed of excess salts and sodium  Farmland of statewide importance, if drained or either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if warm enough, and either drained or either protected from flooding or not frequently flooded during the growing season  Farmland of statewide importance, if warm enough  Farmland of statewide importance, if thawed  Farmland of local importance  Farmland of local importance, if irrigated | <ul style="list-style-type: none">  Farmland of unique importance  Not rated or not available <p>Water Features</p> <ul style="list-style-type: none">  Streams and Canals <p>Transportation</p> <ul style="list-style-type: none">  Rails  Interstate Highways  US Routes  Major Roads  Local Roads <p>Background</p> <ul style="list-style-type: none">  Aerial Photography | <p>The soil surveys that comprise your AOI were mapped at 1:24,000.</p> <div style="border: 1px solid black; padding: 5px; margin: 10px 0;"> <p>Warning: Soil Map may not be valid at this scale.</p> <p>Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.</p> </div> <p>Please rely on the bar scale on each map sheet for map measurements.</p> <p>Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)</p> <p>Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.</p> <p>This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.</p> <p>Soil Survey Area: Bonner County Area, Idaho, Parts of Bonner and Boundary Counties Survey Area Data: Version 16, Jun 4, 2020</p> <p>Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.</p> <p>Date(s) aerial images were photographed: May 7, 2013—Nov 4, 2016</p> <p>The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.</p> |
|--|--|--|--|

Table—Farmland Classification (Idaho Hill Site)

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|------------------------------------|---|------------------------------|--------------|----------------|
| 2 | Bonner gravelly ashy silt loam, 0 to 4 percent slopes | All areas are prime farmland | 3.7 | 100.0% |
| Totals for Area of Interest | | | 3.7 | 100.0% |

Rating Options—Farmland Classification (Idaho Hill Site)

Aggregation Method: No Aggregation Necessary

Tie-break Rule: Lower

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

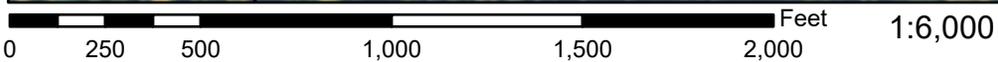
APPENDIX C

Flood and Wetlands Maps

National Flood Hazard Layer FIRMMette



116°31'39"W 48°24'N



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

| | | |
|-----------------------------|--|--|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i> |
| | | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
| | | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> |
| | | Area with Flood Risk due to Levee <i>Zone D</i> |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| | | Effective LOMRs |
| GENERAL STRUCTURES | | Area of Undetermined Flood Hazard <i>Zone D</i> |
| | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance |
| | | 17.5 Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| MAP PANELS | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |



The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

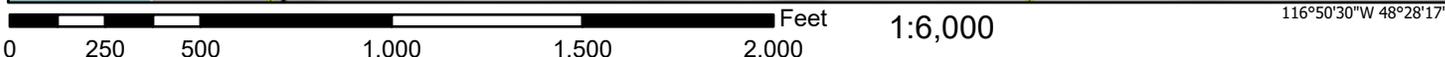
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **2/25/2021 at 3:05 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette



116°51'7"W 48°28'41"N



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|------------------------------------|--|--|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i> |
| | | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
| | | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> |
| | | Area with Flood Risk due to Levee <i>Zone D</i> |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| | | Effective LOMRs |
| | | Area of Undetermined Flood Hazard <i>Zone D</i> |
| GENERAL STRUCTURES | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance Water Surface Elevation |
| | | 17.5 Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| MAP PANELS | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |
| | | The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. |



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

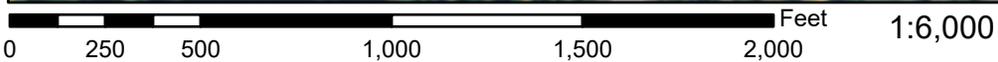
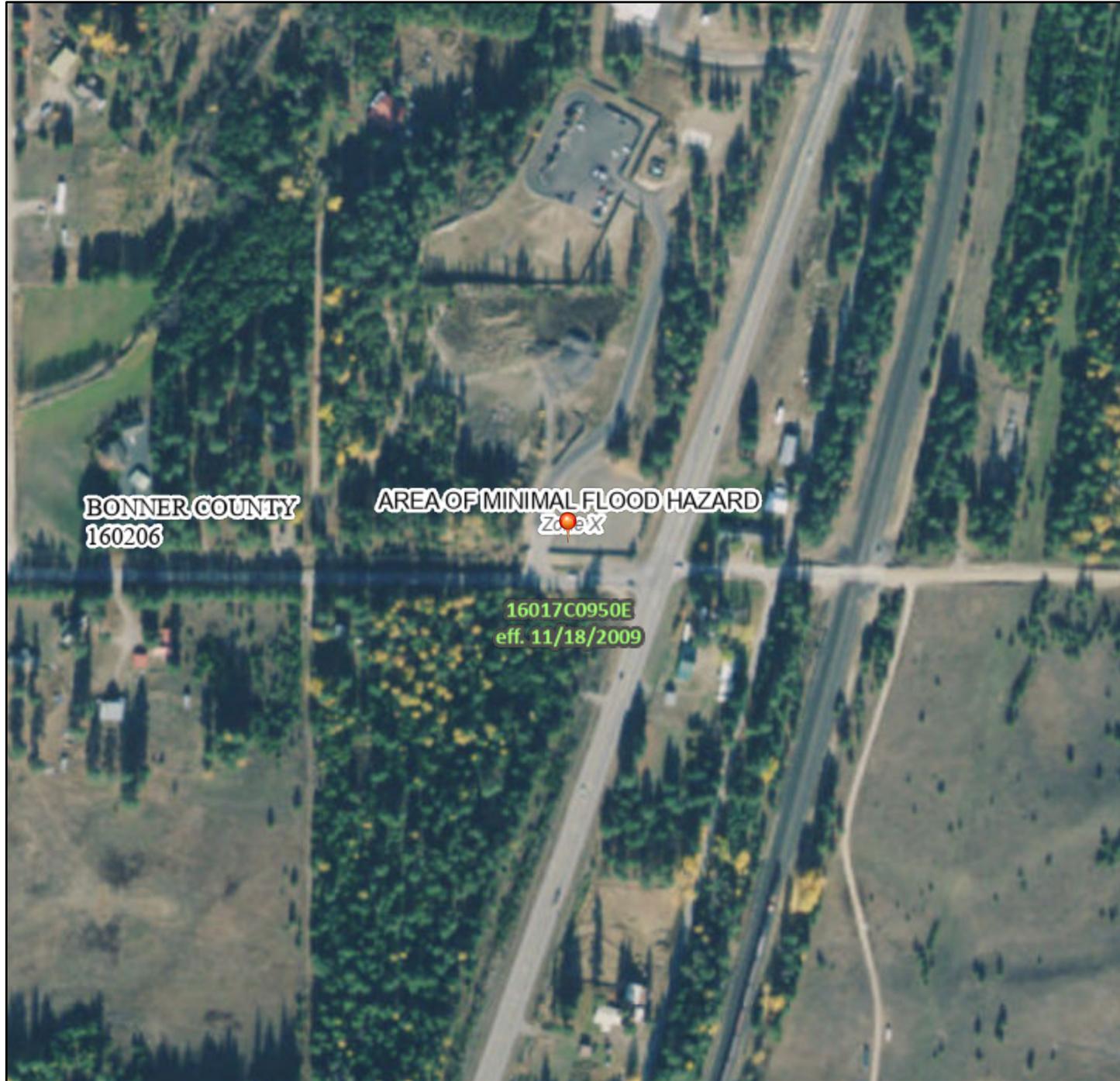
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 2/26/2021 at 2:04 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMMette



116°36'10"W 48°10'7"N



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|------------------------------------|--|--|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i> |
| | | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
| | | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> |
| | | Area with Flood Risk due to Levee <i>Zone D</i> |
| OTHER AREAS | | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| | | Effective LOMRs |
| | | Area of Undetermined Flood Hazard <i>Zone D</i> |
| GENERAL STRUCTURES | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance |
| | | 17.5 Water Surface Elevation |
| | | 8 Coastal Transect |
| | | 5.1 Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| | | Jurisdiction Boundary |
| MAP PANELS | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |
| | | The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. |



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

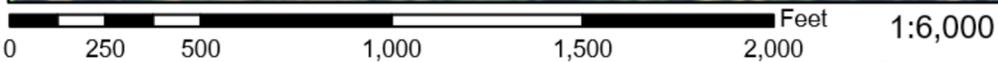
The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **2/26/2021 at 2:08 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

National Flood Hazard Layer FIRMette



117°2'21"W 48°9'29"N



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

117°1'44"W 48°9'5"N

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

- | | | |
|-----------------------------|--|--|
| SPECIAL FLOOD HAZARD AREAS | | Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i> |
| | | With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i> |
| | | Regulatory Floodway |
| OTHER AREAS OF FLOOD HAZARD | | 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i> |
| | | Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i> |
| | | Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i> |
| | | Area with Flood Risk due to Levee <i>Zone D</i> |
| | | NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i> |
| OTHER AREAS | | Effective LOMRs |
| | | Area of Undetermined Flood Hazard <i>Zone D</i> |
| GENERAL STRUCTURES | | Channel, Culvert, or Storm Sewer |
| | | Levee, Dike, or Floodwall |
| OTHER FEATURES | | 20.2 Cross Sections with 1% Annual Chance |
| | | 17.5 Water Surface Elevation |
| | | Coastal Transect |
| | | Base Flood Elevation Line (BFE) |
| | | Limit of Study |
| OTHER FEATURES | | Jurisdiction Boundary |
| | | Coastal Transect Baseline |
| | | Profile Baseline |
| | | Hydrographic Feature |
| MAP PANELS | | Digital Data Available |
| | | No Digital Data Available |
| | | Unmapped |
| | | The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. |



This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **3/15/2021 at 12:09 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



March 15, 2021

Wetlands

- | | | |
|--|---|--|
|  Estuarine and Marine Deepwater |  Freshwater Emergent Wetland |  Lake |
|  Estuarine and Marine Wetland |  Freshwater Forested/Shrub Wetland |  Other |
| |  Freshwater Pond |  Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



March 15, 2021

Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
| | |  | Freshwater Pond |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



March 15, 2021

Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
| | |  | Freshwater Pond |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.



March 15, 2021

Wetlands

- | | | | | | |
|---|--------------------------------|---|-----------------------------------|---|----------|
|  | Estuarine and Marine Deepwater |  | Freshwater Emergent Wetland |  | Lake |
|  | Estuarine and Marine Wetland |  | Freshwater Forested/Shrub Wetland |  | Other |
|  | Freshwater Pond |  | |  | Riverine |

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

APPENDIX D

Public Involvement Information

**OPEN 6
DAYS A WEEK!**

HOURS
Mon-Fri 8am - 6pm
Sat 9am - 4pm
Closed on Sundays

**Walk-In
Medical &
X Ray Clinic**

**MOST MAJOR
INSURANCES
ARE ACCEPTED**

Sandpoint
**URGENT
CARE**

208-265-4383
302 S. First Avenue,
Sandpoint ID
Corner of First
and Superior

Michael Boge

Kudos to Michael Boge, owner of Burger Express, who helped the Sandpoint Car Injectors and Sandpoint Senior Center with helping purchase much of the food items for their recent barbecue fundraiser. Sometimes the behind the scenes people get forgotten and we didn't want that to happen.

BRIEFLY

County mulls solid waste fee hike

By KEITH KINNAIRD
News editor

SANDPOINT — Bonner County is considering raising its solid waste fees after a 10-year capital improvements plan identified several areas in need of improvement throughout the system.

Bonner County Solid Waste will be conducting a public hearing on the rate increases on Wednesday, Sept. 4. The hearing starts at 5:30 p.m. at the Bonner County Administration

Building's first-floor conference room.

The call for a public hearing follows a July 10 workshop with solid waste officials to discuss capital improvement projects.

High on the list of projects is a series of improvements to the county's Colburn facility, the place where all solid waste in Bonner County is destined before being shipped out to a Waste Management landfill in Oregon. Wood waste stays here

See FEES, A7



Garbage piles up on the tipping floor at the Colburn transfer station.

(Photo courtesy MELISSA LIBBERS)

AND THEY'RE OFF ...



Miles named SHS principal

SANDPOINT — David Miles has been hired as the new Sandpoint High School principal.

The hiring comes after a very thorough interview process involving five quality candidates, Lake Pend Oreille School District Superintendent Tom Albertson said in an email to the Daily Bee.

Miles has served as principal at Boundary County Middle School for the last six years and previously taught social studies at Sandpoint High School.

The posting for the position, which came open after Albertson was hired to lead

although it is
ary in Bonner
for such a charge
ought if an
d driver is travel-
n a child.
idler's breath-al-
oncentration was
ed at 0.14 and
ll over the legal

limit-to drive of 0.08,
according to court docu-
ments.
Chandler posted \$1,300
in bail and Judge Lori
Meulenberg appointed a
public defender to repre-
sent him.
Chandler pleaded
guilty to driving under

the influence in Kootenai
County in 2017, accord-
ing to Idaho's iCourt
database.

*Keith Kinnaird can be
reached by email at kkin-
naird@bonnercountydaily-
bee.com and follow him on
Twitter @KeithDailyBee.*

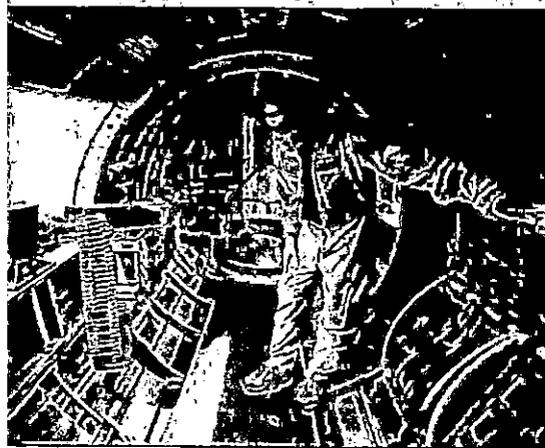
MILES

from A1

With 25 responses,
Albertson told the Lake
Pend Oreille School
Board last week that he
planned to interview five

or six of the applicants,
rather than two or three
as would be typical, in
order to honor the staff's
input.

That process cul-
minated in Monday's
announcement of Miles
being named to the SHS
post.



(LOREN BENOIT/Hagadone News Network)

ental Journey" crew member Bill Croutch
it of one of the gunner windows inside a B17
ortress at the Coeur d'Alene Airport. The plane
een .50 caliber machine guns, from nose to
plane will be on display this weekend at the
Alene Air Expo.

hilippines
he war. One of
an 48,000 Flying
es at the time,
raft is now one
10 B-17s in the
ill able to fly.
exhilarating,"
said. "As many
I've flown, it's
rill for me to
just to see it
They're incredi-
hines."
nasters — like
and Croutch —
ed with a variety
ight responsibil-
e first of which
fety of their pas-
and crew. They
p watch over the
ach engine, and
as a rearview
keeping an eye
ny air traffic in
's blindspots.
t nice, serene
ming in here
tiction [British
a] like we did
Roberts said.
en you imagine
one of these,

sit in the tail on eight-to-
10-hour missions when
it's 50 degrees below
zero. But that's what
they did. When they got
back — if they got back
— they sacked out, woke
up the next morning and
did it again."

The two vintage
bombers arrived Monday
as part of a week-long
stop in Hayden, one of
the last legs on a North
American tour that will
eventually lead back to
their home base in Mesa.
"After World War II,"
Croutch said, "they were
scrapping most of these
planes. Their numbers
kept dwindling down;
eventually, someone real-
ized, 'If somebody doesn't
do anything to save
them, pretty soon they
won't be there.' Slowly,
over the years, more
and more planes were
restored. Interest grew,
and soon, there were
requests for air shows."

The Commemorative
Air Force is made of 70
wings made up of 170

10,000 support staff,
almost all of whom serve
as volunteers.

Today through Sunday
this week, people can
visit the bombers and
can take pictures from
the outside of the plane
for free. For \$15 per per-
son or \$25 per family,
visitors can get an inside
look at the "Sentimental
Journey" and the "Maid
In The Shade," complete
with an up-close-and-per-
sonal tour.

Visitors can also buy
airborne experience on
Friday, Saturday and
Sunday: \$325 gets you a
ticket in the middle seats
— or "waist seats," as
they're known — of the
B-25, while \$625 gets an
opportunity to fly from
the bombardier's seat.
For \$425, passengers can
ride in the "waist seats"
of the B-17, with the
opportunity to sit in the
waist gunner's position
and the radio room. For
\$825, aircraft enthusiasts
can sit in the B-17's bom-
bardier section.

Roberts and Croutch
agreed their stop in the
Coeur d'Alene area is a
week-long opportunity
for a new generation to
experience a dying his-
tory.

"[The bombers are] flying museum pieces,"
Croutch said. "That's
what they represent ...
Inside the planes are the
signatures of just about
everyone we've come
across who've served in
that war. It's a badge of
honor, and I'm proud
just to be part of it."

"I think people who've
never heard the stories
from this era need to
come out with the vet-
erans who've served
and just listen to them"

FEES

from A1

to be ground into hog
fuel, while metal is baled
and sold to Pacific Steel
& Recycling, according
to Bob Howard, the
county's director of solid
waste.

"It's the kind of nucle-
us of the whole system,"
Howard said of Colburn.

The capital improve-
ment plan, which was
drawn up by Great West
Engineering, identified
notable concerns and
issues at Colburn. It
determined that waste
transfer building, where
garbage is pushed into
trailers for shipment, is
antiquated and under-
sized. It was constructed
by Waste Management
in 1994 and ownership
was subsequently turned
over to the county,
although it was origi-
nally supposed to be a
temporary structure,
according to the plan.

The limited space on
the tipping floor also
requires double-han-
dling of public waste.
Residents dump trash
in standard 8-yard
Dumpsters; but those too
have been dumped so
the garbage can be pre-
pared for shipment.

The existing transfer-
building will be recondi-
tioned and paired with
a new building where
the public will place
their trash on the tip-
ping floor, eliminating
the need for double-han-
dling.

"We're going to cre-
ate some efficiencies,"

Howard said.

The site's household
hazardous waste build-
ing, meanwhile, is dor-
mant due to ventilation
issues, which costs the
county to have those
materials processed
by contractors. A new
household waste build-
ing would be erected
where the Dumpsters
are currently located.

If adopted by the
county, the annual
household solid waste
fee would increase from
\$115 to up to \$185.

The county collected
26.3 tons of garbage in
2017 and 27.75 tons in
2018. Since the start of
this year, the county has
already collected 25.28
tons of trash, according
to tallies kept by Bonner
County Solid Waste.

Historically, residen-
tial fees from as low as
\$70 in 1992 to \$140 in
1994 and 1995. Fees were
\$75 in the early 2000s,
although they surpassed
the \$100 mark in 2006
and have largely stayed
there ever since.

Howard said solid
waste infrastructure has
lagged as the county
grows.

"This infrastructure
has not grown with the
population for many,
many years," he said.

The county's capital
improvement plan can
be viewed on the solid
waste section of the
county's website (bonner-
countyid.gov).

*Keith Kinnaird can be
reached by email at kkin-
naird@bonnercountydaily-
bee.com and follow him on
Twitter @KeithDailyBee.*



PUBLIC HEARING NOTICES REGARDING FEE CHANGES 9/4/2019

PUBLICATIONS OF THE PUBLIC HEARING NOTICE:

Bonner County Daily Bee 8/8/2019 and 8/22/2019 (confirmed)

Newport Miner 8/7/2019 and 8/21/2019 (confirmed)

Sandpoint Reader Will publish 8/8/2019 (confirmed)

The Beacon publish 8/6/2019 and 8/20/2019 (confirmed)

Bonner County Website 8/6/2019

Facebook

POSTED THE PUBLIC HEARING NOTICE:

All collection sites 8/20/2019

Front Admin Building 8/19/2019

City of Sandpoint Office 08/21/2019

POST OFFICE LOBBYS:

KOOTENAI 08/21/2019

PONDERAY 08/21/2019

SANDPOINT 08/21/2019

Dover 08/21/2019

SAGLE 08/21/2019

COCOLALLA 08/21/2019

Clark Fork 08/21/2019

Hope 08/21/2019

Priest River 8/22/2019

AFFIDAVIT OF PUBLICATION

STATE OF IDAHO)
) ss.
County of Bonner)

Danielle Ruhmshottel, being first duly sworn on oath, deposes and states:

1. I am a citizen of the United States of America, over the age of 18 years, a resident of Bonner County, Idaho, and am not a party to the proceedings referred to in the attached Public Hearing Notice. My business address is P.O. Box 159, Sandpoint, Idaho.

2. I am the bookkeeper of the Bonner County Daily Bee, a newspaper of general publication in Bonner County, Idaho;

3. Said newspaper has been continuously and uninterruptedly published in Bonner County, Idaho during a period of 12 months prior to the first publication of said Notice, and thereafter.

4. The attached Notice was published in the regular and entire issue of the Bonner County Daily Bee for a period of 2 ^{TIMES} consecutive weeks, commencing on the 8 day of August, 2019, and ending on the 22 day of August, 2019.

Danielle Ruhmshottel

State of Idaho, county of Bonner ss.

On this 22 day of August, in the year of 2019, before me, Katrina George, Notary Public, personally appeared Danielle Ruhmshottel known or identified to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he (or they) executed the same.

Katrina George
Notary Public
Residing at: Kootenai County



MY COMMISSION EXPIRES 8/29/23

PUBLIC HEARING NOTICE

The Bonner County Commissioners will hold a Public Hearing on Wednesday, September 4, 2019 at 5:30 p.m. in the Bonner County Administrative Offices located at 1500 Hwy 2, Sandpoint in the first floor conference room to hear public comment regarding the proposed Solid Waste fee changes. Written comments may be submitted to Bonner County Commissioners, 1500 Hwy 2 Ste. 308, Sandpoint, Idaho 83864.

Proposed new rate changes effective 10/1/2019:

RESIDENTIAL

Dispose of up to 3 yards per day with sticker

(IN COUNTY RESIDENT)

| | |
|------------------------|---|
| Annual Solid Waste Fee | \$185.00 |
| No sticker | \$5.00 minimum charge for first 3 yards, \$18.00 for each additional yard |

| | |
|--------------------------------|----------------------------------|
| Refrigerator/Freezer/AC Unit | First unit no fee (per day) |
| Additional refrigeration units | \$30.00 each decommissioning fee |

*Note any commercial style refrigerators will be charged the \$30.00 decommissioning fee

| | |
|-----------------------------------|--|
| Tires: | |
| Passenger and pickup | First 4 tires no fee (per day) \$ 2.00 each \$ 5.00 each |
| Additional Tires | |
| Additional Tire (With rim) | |
| Large Tires (Semi/Trailer) | First 2 tires no fee (per day) \$ 10.00 each \$ 20.00 each |
| Additional Tires | |
| Large Tires (With Rim) | |
| Oversized Tires (Skidder/Tractor) | First tire no fee (per day) |
| Additional Tires | \$ 50.00 each |
| Oversized Tires (With Rim) | \$125.00 each |
| Televisions/Monitors | First television no fee (per day) |
| Additional Television/Monitors | \$5.00 each |
| Household Hazardous Waste | 10 gallons per collection event (MUST SHOW STICKER) |

(OUT OF COUNTY RESIDENT)

| | |
|------------------------|-----------------------------------|
| Annual Solid Waste Fee | \$500.00 |
| No sticker | \$40.00 per yard (minimum charge) |

SNP LEGAL 7051
AD# 316771
AUGUST 8, 22, 2019

MY COMMISSION EXPIRES 12/31/2023

PUBLIC HEARING NOTICE: The Bonner County Commissioners will hold a Public Hearing on Wednesday, Sept. 4, 2019 at 5:30 p.m. in the Bonner County Administrative Offices called at 1500 Hwy. 2, Sandpoint, in the first-floor conference room to hear public comment regarding the proposed Solid Waste fee changes. Written comments may be submitted to Bonner County Commissioners, 1500 Hwy. 2, Ste. 308, Sandpoint, Idaho 83864.

Proposed new rate changes effective 10/1/2019:

RESIDENTIAL

Dispose of up to 3 yards per day with sticker

IN COUNTY RESIDENT)

Annual Solid Waste Fee **\$185.00**
 No sticker **\$5.00** minimum charge for first 3 yards, **\$18.00** for each additional yard

Refrigerator/Freezer/AC Unit **First unit no fee (per day)**
 Additional refrigeration units **\$30.00** each decommissioning fee

**Note any commercial style refrigerators will be charged the \$30.00 decommissioning fee*

Tires:
 Passenger and pickup **First 4 tires no fee (per day)**
 Additional Tires **\$2.00** each
 Additional Tire (With rim) **\$5.00** each

Large Tires (Semi/Trailer) **First 2 tires no fee (per day)**
 Additional Tires **\$10.00** each
 Large Tires (With Rim) **\$20.00** each
 Oversized Tires (Skidder/Tractor) **First tire no fee (per day)**
 Additional Tires **\$50.00** each
 Oversized Tires (With Rim) **\$125.00** each

Televisions/Monitors **First television no fee (per day)**
 Additional Television/Monitors **\$5.00** each
 Household Hazardous Waste **10 gallons** per collection event (MUST SHOW STICKER)

(OUT OF COUNTY RESIDENT)

Annual Solid Waste Fee **\$500.00**
 No sticker **\$40.00** per yard (minimum charge)

COMMERCIAL
 Commercial waste.

Commercial waste by weight **\$18.00** per cubic yard (minimum fee **\$9.00** for ½ yard or less)
 Inert (Colburn-Dickensheet-Idaho Hill) **\$128.00** per ton (.06 per lb.)
 Metal **\$10.00** per cubic yard
 Wood/Brush **\$10.00** per cubic yard (minimum fee **\$9.00** for ½ yard or less)
 Single Stream/Cardboard Recycling **\$18.00** per cubic yard (minimum fee **\$9.00** for ½ yard or less)

Televisions and computer monitors
 under 75 lbs. **\$10.00** each
 over 75 lbs. **\$25.00** each
 Refrigerators, Freezers, AC units **\$30.00** decommissioning fee per unit

Tires:
 Passenger and pickup **\$2.00** each
 Additional Tire (With rim) **\$5.00** each

Large Tires (Semi/Trailer) **\$10.00** each
 Large Tires (With Rim) **\$20.00** each
 Oversized Tires (Skidder/Tractor) **\$50.00** each
 Oversized Tires (With Rim) **\$125.00** each

Published in The River Valley Beacon on Aug. 6 & Aug. 20 2019.

FUR-LEGGED FRIENDS OF THE WEEK

FIND YOUR FOREVER LOVE AT PRIEST RIVER ANIMAL RESCUE. STOP BY OR CALL 208-448-0699.

Angel



Angel is a very sweet girl, a bit shy at first and can be a little scared of new things. She came in as a stray so little is known about her at this point. She is scheduled for spay Aug 13 and can go home the next day. Angel is pre-adoptable so stop by and meet her today.

Mags



Mags is a sweet little female orange kitten. She likes to sleep on her shelf, she enjoys playing with her siblings and her motor starts going when you pick her up! Mags is spayed, vaccinated and microchipped. Come on down and see if Mags is your new forever friend.

Blue



Blue is a 5-year-old neutered male. He came into the rescue as a stray but was possibly dumped. He is good with some dogs. He does not do well with cats or chickens. Older kids are okay. He loves to go for walks and play fetch. Stop in to meet the handsome Blue.

See Angel, Mags, Blue & other great cats & dogs at Priest River Animal Rescue at 5538 Hwy. 2.

| | |
|----------------------------------|---------|
| County tax payments | 23,500 |
| Donation/grants/interest/service | 374,385 |
| TOTAL INCOME | |

EXPENSES

| | |
|--------------------------------------|----------------|
| Bond Capital outlay Station 3 & 4 | 98,500 |
| Capital outlay - equip/vehicle/other | 72,000 |
| Payroll & PR Taxes | 50,000 |
| Administrative and office | 84,400 |
| Maintenance/supplies/fuel/misc | 69,485 |
| TOTAL EXPENSE | 374,385 |

A hearing of the proposed budget will take place at 7 p.m. on Tuesday, Aug. 27, 2019 at West Pend Oreille Fire District Station No. 1 at 61 Airfield Way, Priest River, ID 83856. Any interested person who resides in the district may appear and present comment upon said budget not to exceed five minutes per speaker.

Published in The River Valley Beacon on Aug. 20, 2019.

Construction as heavy equipment mechanic operator. He also worked on the Elk Creek Dam with Ohbayashi Corp. He retired from Brotherton Pipeline as a crusher mechanic.

He met his life partner, Jeannie Smith in 1991 and they moved to Priest River, Idaho in May 2004. In 2008 Kenny put Vay/Priest River on the national map by posting a controversial political sign on his property which attracted local and eventually national news media and even the secret service.

Kenny was a past member of the Happy Agers and a member of the Priest River Lions Club where he refurbished the Lions Trailer that is now used for fireworks and Christmas tree sales. He was an avid builder and built several barns in the area.

Kenny (Kenny) ... Jr., Medford, Ore., (Wyatt and Camy); Keith (Anne) Germana, Somerville, Ohio (Lacey and Luke); Nephew Mike (Cristyl) Germana, Oneata, Alabama (Jamie and Caitlyn.). He was preceded in death by his mother, father, younger brother Chris, older brother Ronald, and his youngest son Kris.

Kenny was cremated by Advantage Funeral & Cremation Service on the South Hill in Spokane, Wash. His ashes were buried with Military honors at the Eagle Point National Cemetery in Oregon on Aug. 16, 2019.

Kenny was one of a kind and if you knew him you would never forget him. God has one hell of a worker up there. Keep him busy, he would like that.

Get The Beacon in your mailbox! Call today! 208-448-1949

PUBLIC NOTICE

PUBLIC HEARING NOTICE: The Bonner County Commissioners will hold a Public Hearing on Wednesday, Sept. 4, 2019 at 5:30 p.m. in the Bonner County Administrative Offices located at 1500 Hwy. 2, Sandpoint, in the first-floor conference room to hear public comment regarding the proposed Solid Waste fee changes. Written comments may be submitted to Bonner County Commissioners, 1500 Hwy. 2, Ste. 308, Sandpoint, Idaho 83864.

Proposed new rate changes effective 10/1/2019:

RESIDENTIAL

Dispose of up to 3 yards per day with sticker

(IN COUNTY RESIDENT)

| | |
|------------------------|---|
| Annual Solid Waste Fee | \$185.00 |
| No sticker | \$5.00 minimum charge for first 3 yards, \$18.00 for each additional yard |

| | |
|--------------------------------|----------------------------------|
| Refrigerator/Freezer/AC Unit | First unit no fee (per day) |
| Additional refrigeration units | \$30.00 each decommissioning fee |

**Note any commercial style refrigerators will be charged the \$30.00 decommissioning fee*

| | |
|----------------------------|--------------------------------|
| Tires: | |
| Passenger and pickup | First 4 tires no fee (per day) |
| Additional Tires | \$2.00 each |
| Additional Tire (With rim) | \$5.00 each |

| | |
|--|-----------------------------|
| Large Tires (Semi/Trailer) | |
| Additional Tires | \$10.00 each |
| Large Tires (With Rim) | \$20.00 each |
| Oversized Tires (Skidder/Tractor) | |
| Additional Tires | First tire no fee (per day) |
| Additional Tires | \$50.00 each |
| Oversized Tires (With Rim) | \$125.00 each |

| | |
|--------------------------------|--|
| Televisions/Monitors | First television no fee (per day) |
| Additional Television/Monitors | \$5.00 each |
| Household Hazardous Waste | 10 gallons per collection event (MUST SHOW STICKER) |

(OUT OF COUNTY RESIDENT)

| | |
|------------------------|-----------------------------------|
| Annual Solid Waste Fee | \$500.00 |
| No sticker | \$40.00 per yard (minimum charge) |

COMMERCIAL

| | |
|--|--|
| Commercial waste | \$18.00 per cubic yard (minimum fee \$9.00 for ½ yard or less) |
| Commercial waste by weight | \$128.00 per ton (.06 per lb.) |
| Inert (Colburn-Dickensheet-Idaho Hill) | \$10.00 per cubic yard |
| Metal | \$10.00 per cubic yard |
| Wood/Brush | \$18.00 per cubic yard (minimum fee \$9.00 for ½ yard or less) |
| Single Stream/Cardboard Recycling | \$18.00 per cubic yard (minimum fee \$9.00 for ½ yard or less) |

| | |
|--|--------------------------------------|
| Televisions and computer monitors | |
| under 75 lbs. | \$10.00 each |
| over 75 lbs. | \$25.00 each |
| Refrigerators, Freezers, AC units | \$30.00 decommissioning fee per unit |

| | |
|----------------------------|-------------|
| Tires: | |
| Passenger and pickup | \$2.00 each |
| Additional Tire (With rim) | \$5.00 each |

| | |
|-----------------------------------|---------------|
| Large Tires (Semi/Trailer) | |
| Large Tires (With Rim) | \$10.00 each |
| Large Tires (With Rim) | \$20.00 each |
| Oversized Tires (Skidder/Tractor) | \$50.00 each |
| Oversized Tires (With Rim) | \$125.00 each |

Published in The River Valley Beacon on Aug. 6 & Aug. 20 2019.

I'm sure you're wondering, "what does this dude have against Meatloaf?" "Why are we even talking about Meatloaf?" and "how do I get this stupid Meatloaf song out of my head?"

Well first of all I have to say that he started it by leaving me in suspense wondering to this day what that one thing is he was unwilling to do for love. His song also sprang back to life for me this weekend after I realized that while I would do anything to get a great photo, there is one thing I am unwilling to do.

I came to grips with this realization while shooting the rodeo events in Newport over the weekend.

Typically I'm the type of photographer who follows two basic rules, take a ton of photos and get as close to the action as possible. During gatherings I can work my way into a cramped setting with the best of them and I'm willing to contort my six-foot, three-inch frame for longer than my joints would like.

In the outdoors I always look for what's around the next bend and have put myself in more than a few unsafe situations. On the sidelines I stay into the shot until the last possible second before escaping a collision with athletes.

But when it comes to capturing the rodeo I'm more than happy to remain safely behind the arena fence. At first I thought being on the inside would be cool for photos, but then I realized the only real difference between me and the photographer inside was the risk of being trampled by a 2,000 pound beast.

So I guess you can say I would do anything to get the shot, but I won't do that.

- Nick
Publisher

McDonald's remarks bear no resemblance to the facts

Re: Letter to the Editor, Article in the July 9 Beacon on Solid Waste.

In the July 9 River Valley Beacon, Commissioner Dan McDonald was quoted as saying, "We are working to move solid waste forward as the county has not invested any money in the system in 25 years so we are behind the ball." Nothing could be further from the truth.

When I was Commissioner 2015-17, the county opened three new sites. One was on Highway 95 at Duford Road. As commissioners we could see the state would want the land back under the existing site due to future Highway 95 expansion. As a result, we bought a new piece of property and built a new site with room to expand.

The county opened another new site on Highway 41 near the Kootenai County line to relieve pressure on the Oldtown site and make it more convenient to residents in south Bonner County.

The county opened another new site on East Side Road just past East Side Cutoff. After the Laclede site was forced to close, the county attempted to buy another piece of property just off Berry Lane south of Wrenco Loop to be close the Wrenco Loop site due to all of the problems with the unmanned site.

Local residents did not want it in "their back yard." This will become more of a problem down the line. So Commissioner McDonald's remarks bear no resemblance to

the facts.

McDonald has proposed a 60 percent increase in solid waste fees based on a "study." I find that unnecessary and usurious. As the population increases, pressure on solid waste facilities becomes a problem.

When I was commissioner, I recognized the problem and made every attempt to invest in solid waste for the long term. McDonald's dismissal of all of that work and of the efforts of those managing solid waste over the last 25 years is disingenuous and unfortunate.

Todd Sudick
Priest River

MILITARY QUIPS

HONORABLE MEN

President Trump awarded two medals of honor. First to retired Marine Corps Sergeant Major John Canley, an African American, for January 1968 action in Vietnam.

His company commander was wounded and Sgt. Canley rallied his troops. On the first day of the battle he, rushed across the fire swept terrain and carried several wounded soldiers to safety.

Two days later, he was wounded for the second time, and he leaped over a wall in view of the enemy which were firing at him. He picked up several wounded soldiers and

took them back over the wall, one at a time. By the end of the day, his company of less than 150 men had pushed into the city of Hue, held by at least 6,000 communist fighters.

The second medal of honor was awarded to former Green Beret Ronald Shurer for actions Shok Valley, Afghanistan, more than 10 years prior.

He was a medic with two jobs, treat the wounded and return fire. During a big fire fight, he moved among the wounded providing life-saving efforts as the fire fight raged on. He fought his way up

the mountainside, under intense enemy fire, to his lead element's position.

"With complete disregard for his own safety, he moved through enemy fire treating severely wounded soldiers. For more than six hours, Sgt. Shurer bravely faced down the enemy," President Trump said in the award ceremony.

No American died in that brutal battle, thanks in great measure to Sgt. Shurer's heroic efforts.

Roger Gregory
Vietnam Vet

require applying online and many jobs require online training.

Thank you for taking the time to read this and consider the importance of voting yes Aug. 6 on the library levy.

Lynna Scheller
Uk

Maintain right-of-way

The City of Priest River has passed Ordinance No. 597. Section F - Maintenance of the City right-of-way: Rights-of-ways next to property shall be the responsibility of the property owners whose property abuts (is next to) the right-of-way.

In the case of alleyways, maintenance will be required by the adjoining land owners so that all alleys are free and clear of debris (trash), vehicles, weeds and all other obstructions. So when you mow, take it to the curb, and don't forget the alleys.

Thank you for your cooperation.

Wendy Bulling,
Code Enforcement Officer
Priest River

LAUGHING WITH JOHN LINCH

Why couldn't the astronaut book a room on the moon?
It was full.

What did the glue say?
Stick to it.

Why do bees have sticky hair?
Because they use honey combs.

Why did the girl set her watch?

She wanted to be on time.

Submit Letters to news@rivervalleybeacon.com

of the action taken on this application should contact the Pend Oreille County Community Development Department. The submitted application and related file documents may be examined by the public between 8:00 AM & 4:30 PM at the Pend Oreille County Courthouse, Annex Building, 418 South Scott Ave., Newport, WA 99156, (509) 447-4821. Contact: Alexa Polasky, Community Development Department Natural Resource Planner, (509) 447-6931, apolasky@pendoreille.org. Written comments from the public may be submitted to Pend Oreille County no later than August 22, 2019. Required Permits: Shoreline Substantial Development Permit (Pend

Fargo Bank, N.A. Reference number of the deed of trust: 20100305988. Parcel number(s): 443001549099. Abbreviated legal description: L1.0 Diamond Lk Cottage Sites Commonly known as: 1282 Southshore Diamond Lake Rd (Shown on DOT as 1282 S. Shore Road), Newport, WA 99156. NOTICE IS HEREBY GIVEN that the undersigned Trustee, AZTEC FORECLOSURE CORPORATION OF WASHINGTON will on September 6, 2019, at the hour of 9:00am at Old City Courthouse, at the main stairs, 625 W. Fourth Street, Newport, WA, State of Washington, sell at public auction to the highest and best bidder, payable at time of sale, the following described real

title, possession, or encumbrances on September 6, 2019. The default(s) referred to in paragraph III, together with any subsequent payments, late charges, advances, costs and fees thereafter due, must be cured by August 26, 2019 (11 days before the sale date), to cause a discontinuance of the sale. The sale will be discontinued and terminated if at any time on or before August 26, 2019 (11 days before the sale date), the default(s) as set forth in paragraph III, together with any subsequent payments, late charges, advances, costs and fees thereafter due, is/are cured and the Trustee's fees and costs are paid. The sale may be terminated any time after August 26,

following the sale the purchaser has the right to evict occupants who are not tenants by summary proceedings under Chapter 59.12 RCW. For tenant-occupied property, the purchaser shall provide a tenant with written notice in accordance with RCW 61.24.60. XI. THIS NOTICE IS THE FINAL STEP BEFORE THE FORECLOSURE SALE OF YOUR HOME. You have only 20 DAYS from the recording date on this notice to pursue mediation. DO NOT DELAY. CONTACT A HOUSING COUNSELOR OR AN ATTORNEY LICENSED IN WASHINGTON NOW to assess your situation and refer

Continued on 10B

2019222
PUBLIC NOTICE
PUBLIC HEARING NOTICE

The Bonner County Commissioners will hold a Public Hearing on Wednesday, September 4, 2019 at 5:30 p.m. in the Bonner County Administrative Offices located at 1500 Hwy 2, Sandpoint in the first floor conference room to hear public comment regarding the proposed Solid Waste fee changes. Written comments may be submitted to Bonner County Commissioners, 1500 Hwy 2 Ste. 308, Sandpoint, Idaho 83864.

Proposed new rate changes effective 10/1/2019:

RESIDENTIAL

Dispose of up to 3 yards per day with sticker

(IN COUNTY RESIDENT)

Annual Solid Waste Fee \$185.00
No sticker \$5.00 minimum charge for first 3 yards
\$18.00 for each additional yard

Refrigerator/Freezer/AC Unit First unit no fee (per day)
Additional refrigeration units \$30.00 each decommissioning fee

*Note any commercial style refrigerators will be charged the \$30.00 decommissioning fee

Tires:

Passenger and pickup First 4 tires no fee (per day)
Additional Tires \$ 2.00 each
Additional Tire (With rim) \$ 5.00 each
Large Tires (Semi/Trailer) First 2 tires no fee (per day)
Additional Tires \$ 10.00 each
Large Tires (With Rim) \$ 20.00 each
Oversized Tires (Skidder/Tractor) First tire no fee (per day)
Additional Tires \$ 50.00 each
Oversized Tires (With Rim) \$125.00 each

| | |
|--|--|
| Televisions/Monitors | First television no fee (per day) |
| Additional Television/Monitors | \$5.00 each |
| Household Hazardous Waste | 10 gallons per collection event (MUST SHOW STICKER) |
| (OUT OF COUNTY RESIDENT) | |
| Annual Solid Waste Fee | \$500.00 |
| No sticker | \$40.00 per yard (minimum charge) |
| COMMERCIAL | |
| Commercial waste | \$18.00 per cubic yard (minimum fee \$9.00 for 1/2 yard or less) |
| Commercial waste by weight | \$128.00 per ton (.06 per lb.) |
| Inert (Colburn-Dickensheet-Idaho Hill) | \$ 10.00 per cubic yard |
| Metal | \$ 10.00 per cubic yard |
| Wood/Brush | \$18.00 per cubic yard (minimum fee \$9.00 for 1/2 yard or less) |
| Single Stream/Cardboard Recycling | \$18.00 per cubic yard (minimum fee \$9.00 for 1/2 yard or less) |
| Televisions and computer monitors | |
| under 75 lbs. | \$10.00 each |
| over 75 lbs. | \$25.00 each |
| Refrigerators, Freezers, AC units | \$30.00 decommissioning fee per unit |
| Tires: | |
| Passenger and pickup | \$2.00 each |
| Additional Tire (With rim) | \$5.00 each |
| Large Tires (Semi/Trailer) | \$10.00 each |
| Large Tires (With Rim) | \$20.00 each |
| Oversized Tires (Skidder/Tractor) | \$50.00 each |
| Oversized Tires (With Rim) | \$125.00 each |

Published in The Gem State Miner August 7 and 21, 2019 (43,45)

(We had a facelift also)

The **MINER** Online
www.pendoreillerivervalley.com

Dee Opp

NEWPORT

Dee Opp, former Newport Mayor, passed away Aug. 19 at Newport Hospital. She was 77. A graveside service will be held Thursday, Aug. 29, at 11 a.m. at the Newport Cemetery, with a potluck to follow at State Line Tavern in Oldtown.

PUBLIC NOTICES

Continued from 9B

2019222

**PUBLIC NOTICE
PUBLIC HEARING NOTICE**

The Bonner County Commissioners will hold a Public Hearing on Wednesday, September 4, 2019 at 5:30 p.m. in the Bonner County Administrative Offices located at 1500 Hwy 2, Sandpoint in the first floor conference room to hear public comment regarding the proposed Solid Waste fee changes. Written comments may be submitted to Bonner County Commissioners, 1500 Hwy 2 Ste. 308, Sandpoint, Idaho 83864.

Proposed new rate changes effective 10/1/2019:

RESIDENTIAL

Dispose of up to 3 yards per day with sticker

(IN COUNTY RESIDENT)

- Annual Solid Waste Fee \$185.00
 - No sticker \$5.00 minimum charge for first 3 yards, \$18.00 for each additional yard
 - Refrigerator/Freezer/AC Unit First unit no fee (per day)
 - Additional refrigeration units \$30.00 each decommissioning fee
- *Note any commercial style refrigerators will be charged the \$30.00 decommissioning fee

Tires:

- Passenger and pickup First 4 tires no fee (per day)
- Additional Tires \$ 2.00 each
- Additional Tire (With rim) \$ 5.00 each
- Large Tires (Semi/Trailer) First 2 tires no fee (per day)
- Additional Tires \$ 10.00 each
- Large Tires (With Rim) \$ 20.00 each
- Oversized Tires (Skidder/Tractor) First tire no fee (per day)
- Additional Tires \$ 50.00 each

- Oversized Tires (With Rim) \$125.00 each
- Televisions/Monitors First television no fee (per day)
- Additional Television/Monitors \$5.00 each
- Household Hazardous Waste 10 gallons per collection event (MUST SHOW STICKER)
- (OUT OF COUNTY RESIDENT)
- Annual Solid Waste Fee \$500.00
- No sticker \$40.00 per yard (minimum charge)
- COMMERCIAL**
- Commercial waste \$18.00 per cubic yard (minimum fee \$9.00 for 1/2 yard or less)
- Commercial waste by weight \$128.00 per ton (.06 per lb.)
- Inert (Colburn-Dickensheet-Idaho Hill) \$ 10.00 per cubic yard
- Metal \$ 10.00 per cubic yard
- Wood/Brush \$18.00 per cubic yard (minimum fee \$9.00 for 1/2 yard or less)
- Single Stream/Cardboard Recycling \$18.00 per cubic yard (minimum fee \$9.00 for 1/2 yard or less)
- Televisions and computer monitors
- under 75 lbs. \$10.00 each
- over 75 lbs. \$25.00 each
- Refrigerators, Freezers, AC units \$30.00 decommissioning fee per unit
- Tires:**
- Passenger and pickup \$2.00 each
- Additional Tire (With rim) \$5.00 each
- Large Tires (Semi/Trailer) \$10.00 each
- Large Tires (With Rim) \$20.00 each
- Oversized Tires (Skidder/Tractor) \$50.00 each
- Oversized Tires (With Rim) \$125.00 each

Published in The Gem State Miner August 7 and 21, 2019.(43,45)



BONNER COUNTY SOLID WASTE

1500 Highway 2, Suite 101 • Sandpoint, Idaho 83864-1303
Phone (208) 255-5681 • Fax 844-965-9700 • www.bonnercountyid.gov

PRESS RELEASE

On May 1, 2019 Great West Engineering completed a 10-year Capital Improvements Plan for Bonner County Solid Waste. Great West identified several areas in need of improvement throughout the solid waste system. The County has not made a major investment in our solid waste transfer system for over 25 years. In an effort to get back on track with an eye toward environmental protection, the Bonner County Commissioners are entertaining a fee increase for the purpose of financing these improvements.

While focusing on designing our solid waste system to handle future challenges to both protect the environment and the ever increasing responsibility of handling of the County's waste, steps need to be taken as soon as financially possible. Fee increases have been shown, through financial modeling provided by Great West, to be a necessary step in addressing our challenges. These investments will allow Solid Waste to improve efficiency, improve employee and customer safety, and allow for waste handling in a more environmentally friendly manner.

On July 10, 2019 Bonner County Commissioners and Bonner County Solid Waste staff held a workshop to discuss the status of the Solid Waste System with the primary focus on options for moving forward on the Capital Improvements Plan recommendations.

Bonner County Solid Waste will be holding a public hearing on Wednesday, September 4, 2019 at 5:30 p.m. at 1500 Hwy 2, Sandpoint, ID in the first floor conference room, to solicit public comment, and answer any questions,

To view the Capital Improvements Plan visit <https://www.bonnercountyid.gov/departments/SolidWaste> and click on the Capital Improvements Plan 2019 link.



Bonner County

Board of Commissioners

Jeff Connolly

Daniel McDonald

Steve Bradshaw

Special Meeting Minutes

Solid Waste Hearing

Date: September 4, 2019
Location: 1500 Hwy 2, Suite 338
Sandpoint, ID 83864
Convene at: 5:30 p.m.
Commissioners Present: Connolly, McDonald & Bradshaw

Purpose/Topic Summary: Solid Waste Hearing
Present: Solid Waste Director & Staff – Bob Howard, Melissa Libbers, Spencer Ferguson

* * * * *

The Chairman called the meeting to order at 5:30 p.m.

- 1) Call to Order
- 2) Solid Waste and the BOCC received several mail in and email comments, all of which have been entered into the record
- 3) Solid Waste Staff presented a power point and other various information regarding these changes
- 4) Action Item: Discussion/Decision Regarding Fee Changes:
Proposed new rate changes effective 10/1/2019:

RESIDENTIAL

Dispose of up to 3 yards per day with sticker
(IN COUNTY RESIDENT)
Annual Solid Waste Fee \$185.00
No sticker \$5.00 minimum charge for first 3 yards, \$18.00 for each additional yard

Refrigerator/Freezer/AC Unit First unit no fee (per day)
Additional refrigeration units \$30.00 each decommissioning fee
*Note any commercial style refrigerators will be charged the \$30.00 decommissioning fee

Tires:
Passenger and pickup First 4 tires no fee (per day)
Additional Tires \$ 2.00 each
Additional Tire (With rim) \$ 5.00 each
Large Tires (Semi/Trailer) First 2 tires no fee (per day)
Additional Tires \$ 10.00 each
Large Tires (With Rim) \$ 20.00 each
Oversized Tires (Skidder/Tractor) First tire no fee (per day)
Additional Tires \$ 50.00 each
Oversized Tires (With Rim) \$125.00 each
Televisions/Monitors First television no fee (per day)
Additional Television/Monitors \$5.00 each
Household Hazardous Waste 10 gallons per collection event (MUST SHOW STICKER)

(OUT OF COUNTY RESIDENT)

Annual Solid Waste Fee \$500.00
No sticker \$40.00 per yard (minimum charge)

COMMERCIAL

Commercial waste \$18.00 per cubic yard (minimum fee \$9.00 for 1/2 yard or less)

Commercial waste by weight \$128.00 per ton (.06 per lb.)

Inert (Colburn-Dickensheet-Idaho Hill) \$ 10.00 per cubic yard

Metal \$ 10.00 per cubic yard

Wood/Brush \$18.00 per cubic yard (minimum fee \$9.00 for 1/2 yard or less)

Single Stream/Cardboard Recycling \$18.00 per cubic yard (minimum fee \$9.00 for 1/2 yard or less)

Televisions and computer monitors

under 75 lbs. \$10.00 each

over 75 lbs. \$25.00 each

Refrigerators, Freezers, AC units \$30.00 decommissioning fee per unit

Tires:

Passenger and pickup \$2.00 each

Additional Tire (With rim) \$5.00 each

Large Tires (Semi/Trailer) \$10.00 each

Large Tires (With Rim) \$20.00 each

Oversized Tires (Skidder/Tractor) \$50.00 each

Oversized Tires (With Rim) \$125.00 each

Commissioner Connolly opened the hearing for public comment at 5:53 p.m. See attached sign in sheets. Many people provided written statements. Audio available upon request from the Bonner County Commissioner's Office.

Commissioner Connolly closed public comment at 7:12 p.m.

Commissioner McDonald made a motion to approve Resolution #19-81 to establish the annual Solid Waste disposal fees effective October 1, 2019. Commissioner Bradshaw seconded the motion. All in favor. The motion passed.

Commissioner Connolly adjourned the meeting at 7:15 p.m.

Deputy Clerk: Jessi Webster

RESOLUTION NO. 19- 81

SOLID WASTE DISPOSAL FEES

WHEREAS Bonner County operates a solid waste disposal system pursuant to the provisions of Idaho Code Title 31 Chapter 44; and

WHEREAS Idaho Code 31-4403 requires the Board of County Commissioners in each county to acquire sites or facilities, and maintain and operate a solid waste disposal system; and

WHEREAS Idaho Code 31-4404 provides that each county may finance solid waste disposal facilities by user fees, taxes or other appropriate charges.

NOW, THEREFORE, BE IT RESOLVED, that Resolution 18-114 is rescinded; and

BE IT FURTHER RESOLVED, by the Bonner County Board of Commissioners, that the following fees and requirements are hereby established:

RESIDENTIAL

1. Residential solid waste disposal fees shall be calculated as set forth in the attached "Schedule A" and will be effective October 1, 2019.
2. A residential solid waste disposal fee in the amount of \$185.00 per year is hereby established for each occupiable dwelling unit in Bonner County.
3. All property owners who pay the required \$185.00 fee shall be issued two (2) facility stickers for each solid waste fee applied.
4. Landlords are responsible for distributing the issued stickers to their tenants. Stickers must be used in order to dispose of debris at the Bonner County Solid Waste Transfer Stations. Contact the Solid Waste office for additional stickers at 208-255-5681 ext. 2.
5. Solid waste disposal fees may be applied and collected as residents apply for Building Location Permits. Property owners would do this to have access to the transfer sites for disposing of household trash while building a dwelling.
6. Any household qualifying for "Circuit Breaker" relief on their 2019 property tax bill shall be billed in accordance with the attached "Schedule B" which is hereby incorporated into this Resolution in its entirety. Furthermore, property with a residential usage in a non-

permanent structure will be assessed a residential fee as determined by establishment of utilities, and/or addressing, and/or contributing space for residential use.

7. Residents applying for solid waste stickers will be charged \$185.00. Stickers are valid for a calendar year; from January 1st to December 31st. Stickers purchased as of July 1st or later will have an adjusted rate of \$92.50.
8. Out of county users applying for a solid waste sticker will be charged \$500.00. Stickers are valid for a calendar year; from January 1st to December 31st. Stickers purchased as of July 1st or later will have an adjusted rate of \$250.00.
9. Stickers are for the disposal of household trash only and are not to be used for any commercial disposal. (See commercial section below)
10. Use of an unattended site without a sticker shall be classified as a violation and will be subject to the penalties as described in Bonner County Solid Waste Ordinance No. 212.
11. Bonner County Solid Waste is responsible for determining if a load is acceptable. Certain types of debris or hazardous materials may be referred to another facility.

COMMERCIAL

1. Commercial solid waste disposal fees shall be calculated as set forth in the attached "Schedule A" and will be effective October 1, 2019.
2. As per Bonner County Code Title 7-202 and the Idaho Constitution, Article XII Section 4, a county approved solid waste disposal and collection system must be used by all commercial, non-profit and public entities.
3. All commercial, non-profit and public establishments in Bonner County including but not limited to motels, hotels, resorts, automobile repair garages, churches, schools, office buildings, recreational vehicle parks, restaurants, campgrounds, bars, taverns, grocery stores, gas stations, retail stores, and commercial buildings shall have their municipal waste collected by an authorized commercial hauler. The frequency of collection for commercial and public establishments shall be such that a public health hazard or nuisance does not result. (Ord. 212, 1-9-1992)
3. Mobile/RV Parks in Bonner County must arrange with the current waste disposal contract holder, a collection system that is suitable to the size and number of spaces within their park. If you have questions contact Bonner County Solid Waste Department at 208-255-5681 ext. 2.
4. Bonner County Solid Waste is responsible for determining if a load is acceptable. Certain types of debris or hazardous materials may be referred to another facility.

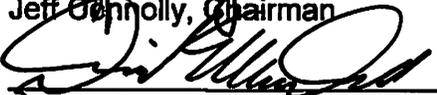
5. All commercial fees billed pursuant to this Resolution shall be due and payable within thirty (30) days. Past due accounts will be subject to suspension and/or cancellation.

APPROVED THIS 4th day of September 2019, as a Resolution of the Bonner County Board of Commissioners.

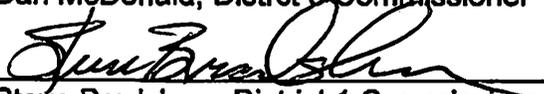
Bonner County Board of Commissioners



Jeff Connolly, Chairman



Dan McDonald, District 3 Commissioner



Steve Bradshaw, District 1 Commissioner

ATTEST: Michael Rosedale

By: 

Deputy Clerk

SOLID WASTE FEE SCHEDULE
Effective 10-1-2019 as per Resolution 19-8 |

RESIDENTIAL

Customers with a **SW sticker** may dispose of up to three (3) yards per day at no charge, any overage will be charged at the posted commercial rates (see below). The annual solid waste fee is \$185.00 per occupiable dwelling unit.

Bonner County residential customers **without a sticker** pay a \$5 fee to dispose of up to three (3) yards; over three (3) yards will be charged at the posted commercial rates.

Non-county customers **without at sticker** pay a \$40 fee per yard with a minimum of \$40.00; over one (1) yard will be charged at the posted commercial rates.

(IN COUNTY RESIDENT)

| | |
|------------------------|---|
| Annual Solid Waste Fee | \$185.00 |
| No sticker | \$5.00 minimum charge for first 3 yards, \$18.00 for each additional yard |

| | |
|--|----------------------------------|
| Refrigerator/Freezer/AC Unit | First unit no fee (per day) |
| Additional refrigeration units | \$30.00 each decommissioning fee |
| *Note any commercial style refrigerators will be charged the \$30.00 decommissioning fee | |

Tires:

| | |
|-----------------------------------|--------------------------------|
| Passenger and pickup | First 4 tires no fee (per day) |
| Additional Tires | \$ 2.00 each |
| Additional Tire (With rim) | \$ 5.00 each |
| Large Tires (Semi/Trailer) | First 2 tires no fee (per day) |
| Additional Tires | \$ 10.00 each |
| Large Tires (With Rim) | \$ 20.00 each |
| Oversized Tires (Skidder/Tractor) | First tire no fee (per day) |
| Additional Tires | \$ 50.00 each |
| Oversized Tires (With Rim) | \$125.00 each |

| | |
|--------------------------------|--|
| Televisions/Monitors | First television no fee (per day) |
| Additional Television/Monitors | \$5.00 each |
| Household Hazardous Waste | 10 gallons per collection event (MUST SHOW STICKER) |

(OUT OF COUNTY RESIDENT)

Annual Solid Waste Fee \$500.00
No sticker \$40.00 per yard (minimum charge)

COMMERCIAL

Commercial waste \$18.00 per cubic yard (minimum fee \$9.00 for ½ yard or less)
Commercial waste by weight \$128.00 per ton (.06 per lb.)
Inert (Colburn-Dickensheet-Idaho Hill) \$ 10.00 per cubic yard
Metal \$ 10.00 per cubic yard
Wood/Brush \$18.00 per cubic yard (minimum fee \$9.00 for ½ yard or less)
Single Stream/Cardboard Recycling \$18.00 per cubic yard (minimum fee \$9.00 for ½ yard or less)

Televisions and computer monitors
under 75 lbs. \$10.00 each
over 75 lbs. \$25.00 each
Refrigerators, Freezers, AC units \$30.00 decommissioning fee per unit

Tires:
Passenger and pickup \$2.00 each
Additional Tire (With rim) \$5.00 each
Large Tires (Semi/Trailer) \$10.00 each
Large Tires (With Rim) \$20.00 each
Oversized Tires (Skidder/Tractor) \$50.00 each
Oversized Tires (With Rim) \$125.00 each

**WE DO NOT ACCEPT THE FOLLOWING ITEMS WITHOUT A STICKER:
TIRES, APPLIANCES, TELEVISIONS/MONITORS, HOUSEHOLD HAZARDOUS WASTE.
THIS DOES NOT APPLY TO OUT OF COUNTY RESIDENTS WHO HAVE PAID THE
ANNUAL SOLID WASTE FEE AND MUST SHOW THEIR STICKER AT TIME OF DROP**

SCHEDULE "B"

**2018 CIRCUIT BREAKER
SOLID WASTE FEE REDUCTION SCHEDULE**

2019 Solid Waste Residential Fee - \$185

| Schedule Amount From | To | Adjusted Fee | % of Fee |
|-------------------------|--------------|-----------------|-------------|
| \$990..... | \$2,640..... | \$ 92.50..... | 50% |
| \$660..... | \$989..... | \$124.00..... | 67% |
| \$330..... | \$659..... | \$154.00..... | 83% |
| \$0.00..... | \$329..... | \$185.00..... | 100% |



BONNER COUNTY SOLID WASTE

1500 Highway 2, Suite 101 • Sandpoint, ID 83864 • Phone: (208) 255-5681

September 4, 2019

Memorandum

SOLID
WASTE
Item #1

To: Commissioners

From: Bob Howard, Director

Re: Solid Waste Resolution Establishing Fees

The attached resolution is provided for your review and has been revised to establish Solid Waste fees effective October 1, 2019.

Distribution: Original to BOCC
Email copy to Bob Howard, and Melissa Libbers

A suggested motion would be: Mr. Chairman based on the information before us I move that the County approve Resolution 19- 81 to establish the annual Solid Waste disposal fees effective October 1, 2019.

Recommendation Acceptance: yes no


Commissioner Jeff Connolly, Chairman

Date: 9-5-19



BONNER COUNTY BOARD OF COMMISSIONERS
PUBLIC COMMENT SIGN-IN SHEET

Solid Waste Hearing: September 4, 2019

Pursuant to Ordinance 408 (5-31-2001) the Chairman will not entertain under any circumstance comments derogatory in nature toward any board member, staff member, elected official or member of the public.

Procedures PLEASE **PRINT** YOUR NAME AND CHECK BOX "FOR," "OPPOSED" OR "NEUTRAL"

| | | | | |
|-------------------------------|-------------------------------|------------------------------|---|---|
| / Kris Sabo | / Kris Sabo | <input type="checkbox"/> FOR | <input type="checkbox"/> OPPOSED | <input checked="" type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| / Anne Chamberlain | / Anne Chamberlain | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| / Ron Spears | / Ron Spears | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| / STEVE BARTON | / Steve Barton | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| / Grace McCoy | / Grace McCoy | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| / ROBERT BROWN | / Robert Brown | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| / ERIN BROWN | / Erin Brown | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| / Scott Clark | / Scott Clark | <input type="checkbox"/> FOR | <input type="checkbox"/> OPPOSED | <input checked="" type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| / [REDACTED] | / [REDACTED] | <input type="checkbox"/> FOR | <input type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| / Kathy Rose | / Kathy Rose | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| / SHARON SEARLE | / Sharon Searle | <input type="checkbox"/> FOR | <input type="checkbox"/> OPPOSED | <input checked="" type="checkbox"/> NEUTRAL |
| Name | Signature | | | |



BONNER COUNTY BOARD OF COMMISSIONERS
PUBLIC COMMENT SIGN-IN SHEET

Solid Waste Hearing: September 4, 2019

Pursuant to Ordinance 408 (5-31-2001) the Chairman will not entertain under any circumstance comments derogatory in nature toward any board member, staff member, elected official or member of the public.

Procedures PLEASE **PRINT** YOUR NAME AND CHECK BOX "FOR," "OPPOSED" OR "NEUTRAL"

| | | | | |
|--------------------------|--------------------------|------------------------------|---|---|
| <i>PAUL CRISO</i> | <i>Paul Criso</i> | <input type="checkbox"/> FOR | <input type="checkbox"/> OPPOSED | <input checked="" type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| <i>Alexandre Adeir</i> | <i>Alexandre Adeir</i> | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| <i>Tom Adeir</i> | <i>Tom Adeir</i> | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| <i>Tom Wolf</i> | <i>Tom Wolf</i> | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| <i>Kim Souza</i> | <i>Kim E. Souza</i> | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| <i>Lindsay Edwards</i> | <i>Lindsay Edwards</i> | <input type="checkbox"/> FOR | <input type="checkbox"/> OPPOSED | <input checked="" type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| <i>Connie Grannantmo</i> | <i>Connie Grannantmo</i> | <input type="checkbox"/> FOR | <input checked="" type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| | | <input type="checkbox"/> FOR | <input type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| | | <input type="checkbox"/> FOR | <input type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| | | <input type="checkbox"/> FOR | <input type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |
| | | <input type="checkbox"/> FOR | <input type="checkbox"/> OPPOSED | <input type="checkbox"/> NEUTRAL |
| Name | Signature | | | |

**Bonner County Solid Waste Advisory Committee
Meeting Minutes**

Monday, June 17, 2019, 9:00 A.M.

Third Floor, Bonner County Administration Building
1500 Hwy 2, Ste. 338, Sandpoint, Idaho

Pledge of Allegiance

Members present: Bob Howard, Carl Wright, Dawn Schatz, Patrick Reinbold, Sherrel Rhys, Sandi Hampton

Others Present:

1. Approval of SWAC Meeting Minutes
-Sherrel made a motion to approve the previous SWAC Meeting minutes from 5/28/2019. Patrick seconded the motion. All in favor. The motion passed.
2. Public Comment to the Board

Chairman Howard recessed the meeting at 10:00 a.m.

Chairman Howard reconvened the meeting at 10:13 a.m.

3. Old Business

-Discussion Regarding BOCC Agenda Items on 6/11/2019

-Discussion of the letter received from Selkirk Fire highlighting the issue at the Wrenco site

4. New Business

-Discussion/Recommendation Regarding Ordinance Regarding Tarping Loads

-Securing loads, and how this can be enforced

-Dawn spoke to the need for more public education and more communication to the staff

-Carl suggested signage at the sites that speaks to securing your loads

-Sherrel made a motion for staff to bring an example of a resolution as to what a "securing loads ordinance" may look like for the next meeting. Sandi seconded the motion. All in favor. The motion passed.

-Discussion/Recommendation Regarding Solid Waste Fee Structure

-Discussion of what the CIP will look like

-Discussion of accurately charging people from out of state

-Carl spoke about Pend Orielle County residents coming into our county because they have to pay by the ton where they live

-Patrick suggested a flat \$20 fee for commercial instead of \$18 so you don't have to deal with change and also instead of a percent raise every year, just jumping it up to where the fee needs to be to carry out the CIP

-Carl made a motion to make the residential fee to \$185.00 and raise commercial from \$18 to \$20. Patrick seconded the motion. All in favor. The motion passed.

5. Miscellaneous Business

-Sandi made a motion to establish the SWAC meetings for the second Monday of the month at 9:00 a.m. with the exception of the July. Sherrel seconded the motion. All in favor. The motion passed.

-Patrick would like to discuss potentially a waiver for a fee for government entities for next agenda

-Update on single-stream

6. Adjournment of SWAC Meeting

Chairman Howard adjourned the meeting at 10:53 a.m.

Next Meeting August 12, 2019 at 9:00 a.m.

Clerk: Claire May

Approved:



Date: 9/9/2019

APPENDIX E

10-Year Capital Improvements Plan

Bonner County Solid Waste 10-Year Capital Improvements Plan

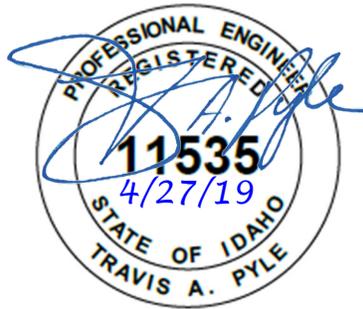
April 2019

Prepared for
Bonner County Solid Waste Division



Prepared by





This document was prepared under the direct supervision of Travis A. Pyle, a registered Professional Engineer in the State of Idaho, employed at Great West Engineering, Inc.

Table of Contents

| | | |
|------------|---|-----------|
| 1.0 | Executive Summary | 1 |
| 2.0 | Introduction | 2 |
| 2.1 | General Information | 2 |
| 2.1.1 | Collection Sites and Transfer Station | 2 |
| 2.1.2 | Rates and Fees | 2 |
| 2.1.3 | Population and Solid Waste Growth | 4 |
| 2.1.4 | Seasonal Fluctuations in Waste Generation Rates | 6 |
| 2.1.5 | Waste Tonnage Estimates..... | 8 |
| 2.1.6 | Center of Waste Mass | 8 |
| 3.0 | Existing Site Conditions Review Summary | 11 |
| 3.1 | Approach and Methodology..... | 11 |
| 3.2 | Western Priority Sites | 11 |
| 3.2.1 | 11-Mile..... | 11 |
| 3.2.2 | Blanchard | 12 |
| 3.2.3 | Dickensheet | 13 |
| 3.2.4 | Idaho Hill | 13 |
| 3.3 | Eastern Priority Sites | 14 |
| 3.3.1 | Careywood..... | 14 |
| 3.3.2 | Colburn | 15 |
| 3.3.3 | Wrenco | 18 |
| 3.4 | Western Non-Priority Sites | 18 |
| 3.4.1 | Prater Valley..... | 18 |
| 3.5 | Eastern Non-Priority Sites | 19 |
| 3.5.1 | Clark Fork..... | 19 |
| 3.5.2 | Dufort..... | 20 |
| 3.5.3 | Garfield Bay..... | 20 |
| 3.5.4 | Lakeview | 21 |
| 3.5.5 | Schweitzer | 22 |
| 3.5.6 | Upland..... | 22 |
| 4.0 | Site Assessments Summary..... | 23 |
| 4.1 | Approach and Methodology..... | 23 |
| 4.2 | Colburn Site | 23 |

| | | |
|------------|---|-----------|
| 4.2.1 | Existing Operations | 23 |
| 4.2.2 | Proposed Improvements | 24 |
| 4.3 | Proposed Improvements at Other Collection Sites | 28 |
| 4.3.1 | Idaho Hill..... | 29 |
| 4.3.2 | Dickensheet | 29 |
| 4.3.3 | Dufort..... | 30 |
| 4.3.4 | Wrenco..... | 30 |
| 4.3.5 | Careywood | 30 |
| 4.4 | Engineer’s Opinion of Costs..... | 30 |
| 4.4.1 | Colburn | 31 |
| 4.4.2 | Idaho Hill..... | 31 |
| 4.4.3 | Dickensheet | 32 |
| 4.4.4 | Dufort..... | 32 |
| 5.0 | Project Prioritization | 33 |
| 5.1 | Approach and Methodology..... | 33 |
| 5.1.1 | Selection Criteria..... | 33 |
| 5.1.2 | Scoring and Ranking..... | 33 |
| 5.1.3 | Results..... | 34 |
| 6.0 | Funding Options and Considerations..... | 36 |
| 6.1 | Community Development Block Grant..... | 36 |
| 6.2 | State Revolving Fund | 36 |
| 6.3 | USDA Rural Development Water and Waste Disposal Loan & Grant Program..... | 36 |
| 6.4 | Economic Development Administration Public Works Program | 37 |
| 7.0 | Capital Outlay Schedule | 38 |
| 8.0 | Summary | 40 |

List of Exhibits

| | | |
|-----------|--|----|
| Exhibit 1 | – Location Map of Bonner County Solid Waste Collection Sites..... | 3 |
| Exhibit 2 | – Bonner County Solid Waste and Population Growth (1994 - 2018) | 5 |
| Exhibit 3 | – Bonner County 20-Year Waste Projections (2019 - 2038) | 6 |
| Exhibit 4 | – Seasonal Fluctuations for the West Side Collection Sites | 6 |
| Exhibit 5 | – Season Fluctuations/East Side Collection Sites (without Dufort and Colburn)..... | 7 |
| Exhibit 6 | – Seasonal Fluctuations for Dufort and Colburn Collection Sites..... | 7 |
| Exhibit 7 | – Bonner County Center of Waste Mass..... | 10 |
| Exhibit 8 | – 11-Mile Site | 12 |

| | |
|---|----|
| Exhibit 9 – Blanchard Site | 12 |
| Exhibit 10 – Dickensheet Site | 13 |
| Exhibit 11 – Idaho Hill Site | 14 |
| Exhibit 12 – Careywood Site | 14 |
| Exhibit 13 – Colburn Collection Site – Public Entry Area | 16 |
| Exhibit 14 – Colburn Transfer Site – Waste Transfer Building Exterior | 17 |
| Exhibit 15 – Colburn Transfer Site – Waste Transfer Building Interior | 17 |
| Exhibit 16 – Wrenco Site | 18 |
| Exhibit 17 – Prater Valley Site Photograph | 19 |
| Exhibit 18 – Clark Fork Site Photograph | 19 |
| Exhibit 19 – Dufort Site Photograph | 20 |
| Exhibit 20 – Garfield Bay Site Photograph | 21 |
| Exhibit 21 – Lakeview Site Aerial Photograph | 21 |
| Exhibit 22 – Schweitzer Site Photograph | 22 |
| Exhibit 23 – Upland Site Photograph | 22 |

List of Tables

| | |
|--|----|
| Table 1 – Bonner County Solid Waste Capital Improvements Timeline..... | 1 |
| Table 2 – Summary of Bonner County Solid Waste Collection Sites..... | 3 |
| Table 3 – Cost Estimates for Proposed Colburn Site Improvements (2019\$)..... | 31 |
| Table 4 – Cost Estimates for Proposed Idaho Hill Site Improvements (2019\$) | 31 |
| Table 5 – Cost Estimates for Proposed Dickensheet Site Improvements (2019\$) | 32 |
| Table 6 – Cost Estimates for Proposed Dufort Site Improvements (2019\$) | 32 |
| Table 7 – Selection Criteria Listed by Level of Significance | 33 |
| Table 8 – Capital Improvements Evaluation Scorecard..... | 34 |
| Table 9 – Capital Improvements Evaluation Scores | 34 |
| Table 10 – Bonner County Solid Waste – Capital Outlay Cost Schedule | 39 |

List of Figures (Attached)

| |
|---|
| Figure 1 – Colburn Existing Site Plan |
| Figure 2 – Proposed Site Plan |
| Figure 3A – Public Traffic Flow |
| Figure 3B – Commercial Traffic Flow |
| Figure 3C – Onsite Operations Traffic Flow |
| Figure 3D – Long-Haul Transport Traffic Flow |
| Figure 4 – Idaho Hill Proposed Site Improvements |
| Figure 5 – Proposed Dickensheet Site Improvements |
| Figure 6 – Proposed Dufort Site Improvements |

List of Appendices

| |
|--|
| Appendix A – Engineer’s Opinion of Costs |
|--|

1.0 Executive Summary

Bonner County’s solid waste system consists of 14 collection sites, one of which, Colburn, also operates as the main transfer station. All of the waste generated in Bonner County is processed through the Colburn transfer station. Waste Management holds the contract for collection and transport of the wastes at each of the 14 collection sites, as well as, operating the Colburn transfer station and long-haul and disposal to Waste Management’s landfill in Arlington, Oregon.

The County’s population is growing steadily, as is waste generation. In order to accommodate future demands, capital improvements are required at several of the County’s solid waste sites. The County has decided to retain Colburn as the main transfer station and make the necessary upgrades and improvements in order to collect and consolidate waste in an efficient and safe manner. Several other sites are also scheduled to receive improvements in the next 10 to 20 years – Idaho Hill, Dickensheet and Dufort.

Table 1 presents the estimated timeline for the proposed capital improvements in the fiscal year.

Table 1 – Bonner County Solid Waste Capital Improvements Timeline

| Project | A&E Design Fiscal Year | Construction/ CM Services Fiscal Year |
|--|---------------------------|--|
| Colburn HHW Building | 2020 | 2021 |
| New Transfer Building at Colburn | 2022 | 2023 |
| Colburn Site Improvements | 2022 | 2023 |
| Existing Transfer Building Improvements at Colburn | 2024 | 2025 |
| Idaho Hill Site Improvements | 2026 | 2027 |
| Dickensheet Site Improvements | 2027 | 2028 |
| Commercial Scale at Colburn | 2028 | 2029 |
| Dufort Site Improvements | 2029 | 2030 |

2.0 Introduction

Bonner County retained Great West Engineering, Inc. to prepare a 10-year Capital Improvements Plan (CIP) for the solid waste system that is managed by Bonner County Solid Waste (BCSW), a division of the County. Specifically, this project focuses on developing a 10-year capital schedule for renovating and improving existing solid waste facilities and infrastructure.

2.1 General Information

2.1.1 Collection Sites and Transfer Station

Bonner County is located in the northern panhandle of Idaho, and includes the City of Sandpoint, the County seat, and most populous community in the County. The County also includes the towns of Clark Fork, Dover, East Hope, Hope, Kootenai, Oldtown, Ponderay, and Priest River, and the unincorporated communities of Careywood, Cocolalla, Colburn, Coolin, Laclede, Lamb Creek, Nordman, Outlet Bay, Sagle, Schweitzer, Vans Corner, and Westmond.

The solid waste system includes operation of 14 collection sites. See **Exhibit 1** for a County map showing the 14 collection site locations, and **Table 2** for information on each site. Of the 14 sites, 10 are supervised. Eight of these supervised sites are open from 7AM – 5PM, seven days per week, except for certain holidays, when the hours may differ. The Garfield and Careywood Sites' hours are seasonal. They follow regular supervised site hours, except between Labor Day to Memorial Day when the hours are 7AM – 3PM, Thursday through Monday. One of the sites, 11-Mile, is temporarily closed, and three of the sites, Lakeview, Schweitzer and Wrenco, are unsupervised.

2.1.2 Rates and Fees

Each household pays \$115 per year as an assessment fee on their property taxes for operation of the collection sites and the waste transport and disposal that the County pays Waste Management. This allows the public to dispose of a maximum of six cubic yards (cy) per day at a collection site. Commercial waste disposal is charged \$14 per cubic yard at the sites.

Most towns in the County offer curbside collection, but participation is voluntary except for Sandpoint where it is mandatory. Residents pay for this added convenience in addition to the yearly assessment fee.

Waste from all of the collection sites is transported to the Colburn transfer station, located north of Sandpoint, which also serves as a collection site. Waste that is received at the site for transfer is then unloaded on the tipping floor of the transfer building or outside pad, top-loaded into long-haul trailers, and hauled by Waste Management roughly 300 miles to their landfill in Arlington, Oregon.



Exhibit 1 – Location Map of Bonner County Solid Waste Collection Sites

Table 2 – Summary of Bonner County Solid Waste Collection Sites

| Site Name | Site Type | Supervised |
|-----------------------------------|--------------|--------------------|
| West Side Collection Sites | | |
| 11-Mile | Kitchen-Only | Temporarily Closed |
| Blanchard | Full-Service | ✓ |
| Dickensheet | Full-Service | ✓ |
| Idaho Hill | Full-Service | ✓ |
| Prater Valley | Full-Service | ✓ |
| East Side Collection Sites | | |
| Careywood | Kitchen-Only | ✓ |
| Clark Fork | Full-Service | ✓ |
| Colburn | Full-Service | ✓ |
| Dufort | Full-Service | ✓ |
| Garfield Bay | Kitchen-Only | ✓ |
| Lakeview | Kitchen-Only | |
| Schweitzer | Kitchen-Only | |
| Upland | Kitchen-Only | ✓ |
| Wrenco | Kitchen-Only | |

Notes:

a. Supervised sites are open from 7AM – 5PM, seven days a week, except for certain holidays. The Garfield and Careywood Sites' hours are seasonal. They follow regular supervised site hours, except for between Labor Day to Memorial Day when the hours are 7AM – 3PM, Thursday through Monday.

b. The Idaho Hill, Colburn, and Dickensheet Sites also have inert waste pits.

c. The Colburn Site has a transfer station where Waste Management's long-haul trailers are loaded to transport waste to Waste Management's Arlington Landfill.

2.1.3 Population and Solid Waste Growth

Established in 1907, Bonner County grew slowly for approximately the first 60 years. Beginning around 1970, the population boomed and has been on an upward trend ever since. The United States Census Bureau estimates the population of Bonner County at approximately 44,000 people in 2017.

Exhibit 2 provides a graphical illustration of both the County population and solid waste growth trends from 1994 to 2018. Population for the year 2018 has been projected, based on the current growth trend. For the last almost 25 years, the population in the County has been growing at an average rate of approximately 1.36% per year.

Solid waste tonnage data were provided by the County (from Waste Management). Starting at approximately 19,000 tons in 1994, the waste tonnage has grown to nearly 42,000 tons in 2018.

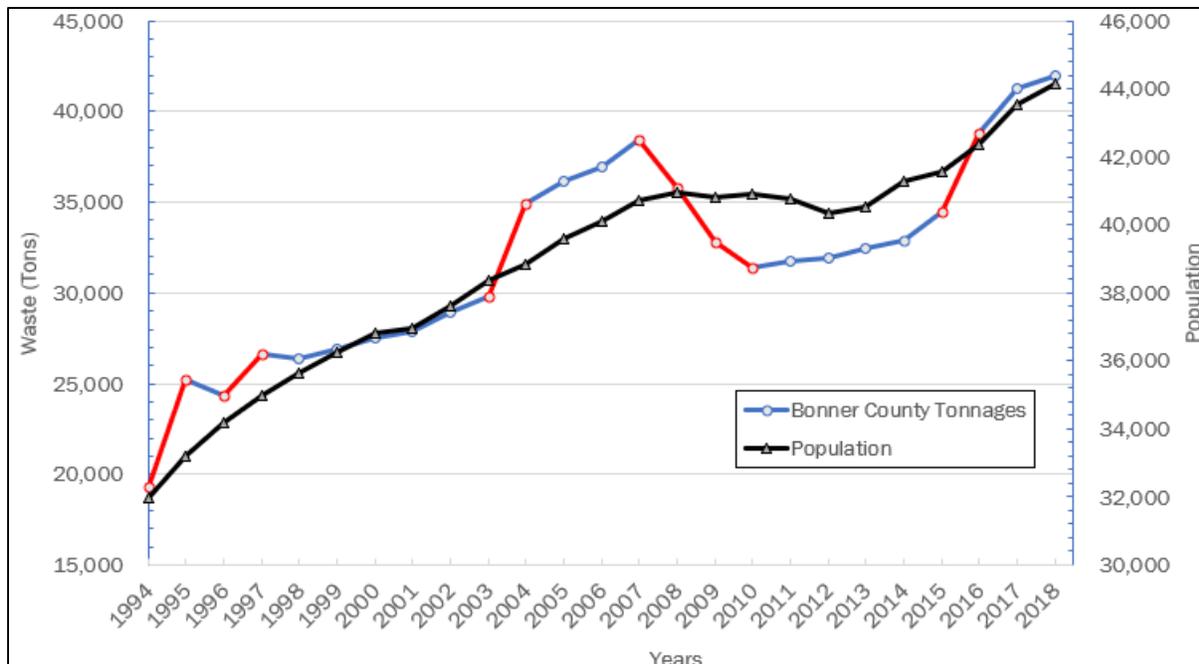


Exhibit 2 – Bonner County Solid Waste and Population Growth (1994 - 2018)

The average waste growth rate over this period is 3.55% per year. The graph shows certain outliers, with periods of unprecedented growth or decline. These outliers are shown in red on the chart (**Exhibit 2**). When these outliers are removed from the data set, the interquartile range¹ yields a value of approximately 2.08%.

Solid waste growth has been slightly higher than that of the population, by 0.72%, with the outliers removed. This difference is likely driven by the economy. When the economy was booming in the mid-2000's, the waste tonnage spiked while the population was experiencing a steady growth. Then the waste tonnage receded coincident with the recession occurring in 2007/2008 and the population growth leveled off. If the population growth during the recession is excluded (2007–2012) from the dataset, then the average population growth is 1.70%, and the difference between population growth rate and waste growth rate drops to 0.37%.

The key in predicting future waste tonnages is to differentiate between spikes and sustainable growth over the long-term horizon. **Exhibit 3** shows a range for the 20-year solid waste projection between 2.08% and a conservative high of 3.00%. For the 10-year horizon (year 2028), the amount of waste that is projected is between approximately 51,600 and 56,400 tons. For the longer-term 20-year horizon (year 2038), the amount of waste is projected to be between 63,300 and 75,800 tons.

¹ The interquartile range (IQR) is a measure of statistical dispersion. In essence, it is a measure of the range in which the majority of the values lie. Mathematically, it is the subtraction of the first quartile from the third quartile. Outliers are any numbers outside of the IQR. If no outliers exist, such as in the Bonner County population growth data (**Exhibit 2**), then the interquartile range encompasses the entire data range.

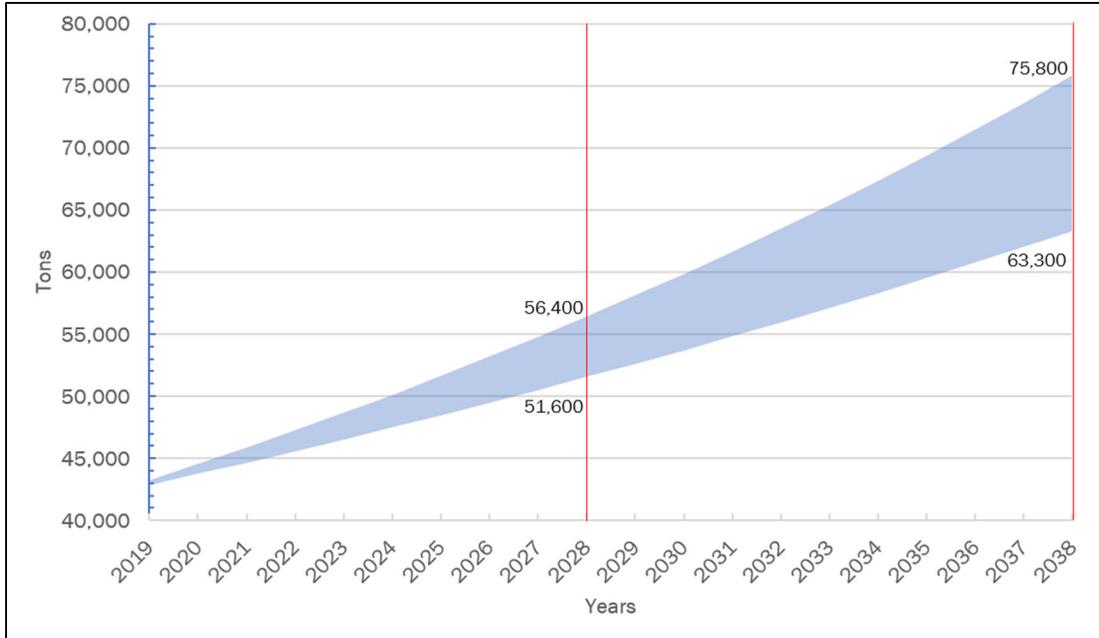


Exhibit 3 – Bonner County 20-Year Waste Projections (2019 - 2038)

2.1.4 Seasonal Fluctuations in Waste Generation Rates

Waste volumetric data provided by the County, when plotted, reveals seasonal fluctuations at each of the collection sites (2018 data). Exhibits 4-6 show the monthly waste generation rates for the West Side collection site, the East Side collection sites, and the two larger sites of Dufort and Colburn, respectively. Dufort and Colburn are charted separately because waste volumes for these two sites are much larger than the other East Side collection sites.

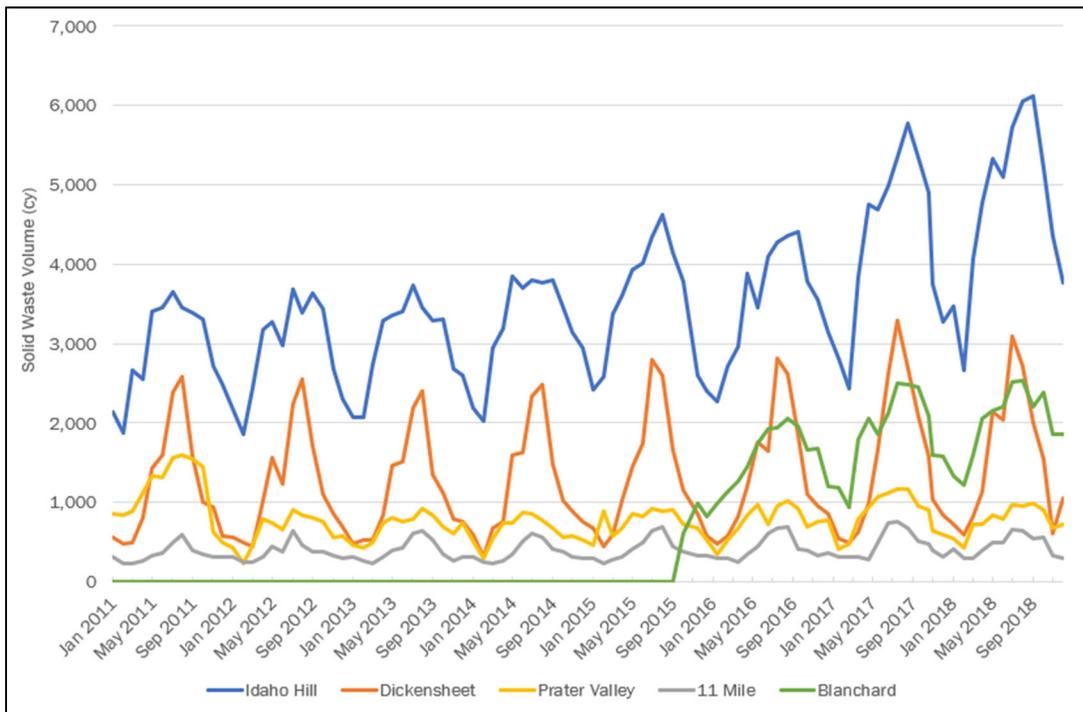


Exhibit 4 – Seasonal Fluctuations for the West Side Collection Sites

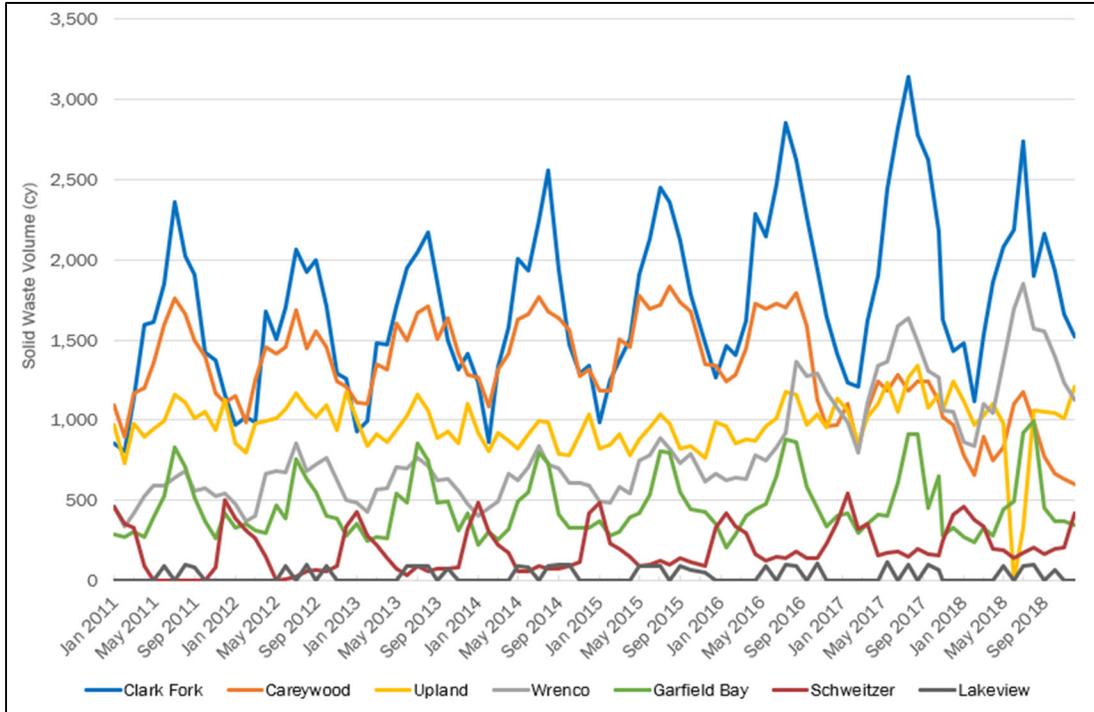


Exhibit 5 – Seasonal Fluctuations for the East Side Collection Sites (without Dufort and Colburn)

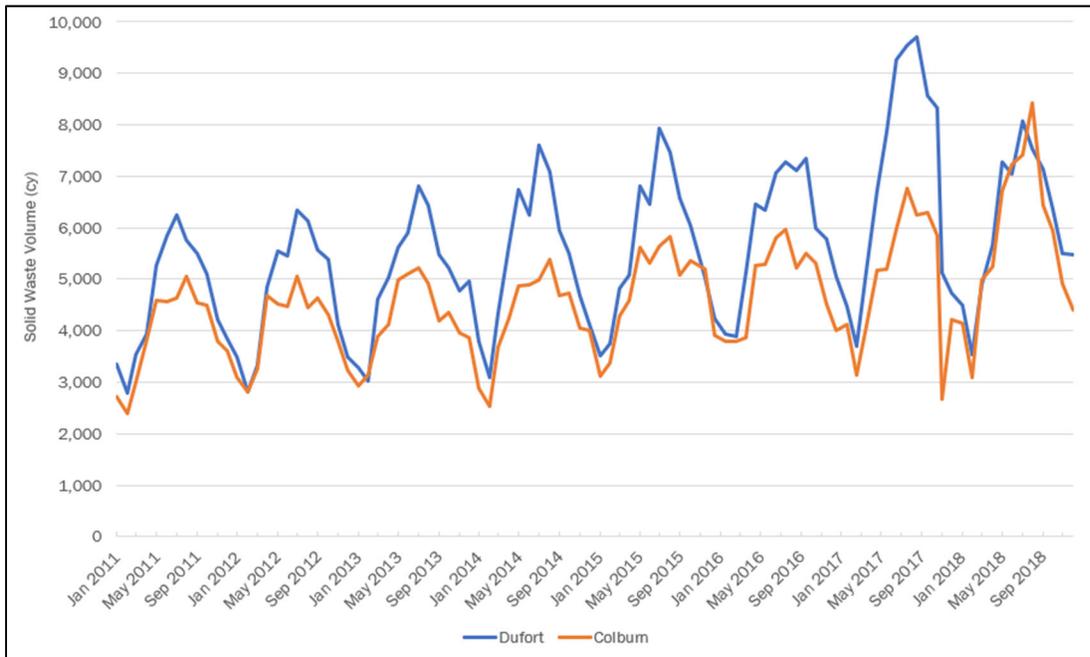


Exhibit 6 – Seasonal Fluctuations for Dufort and Colburn Collection Sites

The summer months show a large spike in waste production, likely due to tourists and seasonal occupants. Only one site, Schweitzer, is the exact opposite with large increases during the winter months, given it is a ski resort (refer to **Exhibit 5**).

Volumetric waste data for the Colburn site, shown in **Exhibit 6**, only includes public waste dropped off at the collection bins. All other waste that comes into the site and is unloaded

directly on the tipping floor, which includes waste from commercial garbage haulers and curbside collection, is not tracked volumetrically.

2.1.5 Waste Tonnage Estimates

The County provided volumetric data for each of the collection sites and mass data for the amount of waste hauled by Waste Management to their regional landfill. The mass of waste from each of the sites is unknown as well as the volumetric amount that is directly unloaded on the transfer station tipping floor at Colburn. The total volume of waste that was collected in 2018 for all of the 14 collection sites was 323,206 cy. The total waste mass hauled by Waste Management was 41,973 tons.

A simple equation was set up to calculate the unknown waste volume:

$$M_T = (V_k + V_u)\rho_w$$

Where,

M_T = Total Waste Mass (tons)

V_k = Known Volume (cy)

V_u = Unknown Volume (cy)

ρ_w = waste density [138 pounds per cubic yards (pcy)]².

Then, solving for V_u ,

$$V_u = \left(\frac{M_T}{\rho_w}\right) - V_k$$

Therefore,

$$V_u = 285,095 \text{ cy (or 19,672 tons).}$$

2.1.6 Center of Waste Mass

A center of mass analysis was completed using the amount of solid waste that is generated at the various collection sites around the County. The center of mass in physics is the unique point where the weighted relative position of the distributed mass sums to zero. In other words, the distribution of mass is balanced around the center of mass and the average of the weighted position coordinates of the distributed mass defines the coordinates.

In applying this concept to waste mass collection points (or points of generation) in Bonner County, this analysis can be useful to determine where an ideal location for a second transfer station might be located. Selecting an arbitrary point of origin to be the southeast corner of the County, the calculation is done in two steps. First the east-west distance (or x-coordinate) is found, followed by the north-south (y-coordinate).

² Environmental Protection Agency's (EPA's) *Volume-to-Weight Conversion Factors* report (EPA 2016) for commercial - all waste, uncompacted.

The x-coordinate for the center of mass is calculated using the following equation:

$$X_{CM} = \frac{\sum_{i=1}^n (X_i)(M_i)}{\sum_{i=1}^n M_i}$$

Where,

X_{CM} = X-Coordinate to the Center of Mass

X_i = X-Distance to Mass (i)

M_i = Mass (i) for X_i

Similarly, the y-coordinate for the center of mass is calculated using the following equation:

$$Y_{CM} = \frac{\sum_{i=1}^n (Y_i)(M_i)}{\sum_{i=1}^n M_i}$$

where,

Y_{CM} = Y-Coordinate to the Center of Mass

Y_i = Y-Distance to Mass (i)

M_i = Mass (i) for Y_i

The resulting calculation shows that the center of waste mass in the County is located just northwest of the Upland disposal site (refer to **Exhibit 7**), near Sandpoint, the County's most populous city.

This calculation, however, artificially shifts the center of mass toward the Colburn site by assuming that all of the waste in Sandpoint and other towns that have curbside collection and direct haul to Colburn is generated at Colburn. If that fraction of waste is removed from the equation, the center of mass shifts between Wrenco and Dufort.

Future growth in the County will likely change this center of mass as well. Based on conversations with the County staff, growth seems to be occurring around the southeastern part of Lake Pend Oreille. This would then tend to shift the center of mass south and slightly east. This location is further supported with the major waste volumes that is currently experienced at Dufort, which is the busiest collection site besides Colburn.

The current and future center of mass should be considered when deciding on a location for a second transfer site in the County, although other factors will weigh-in to the decision such as availability of land, access, and future development plans in the area

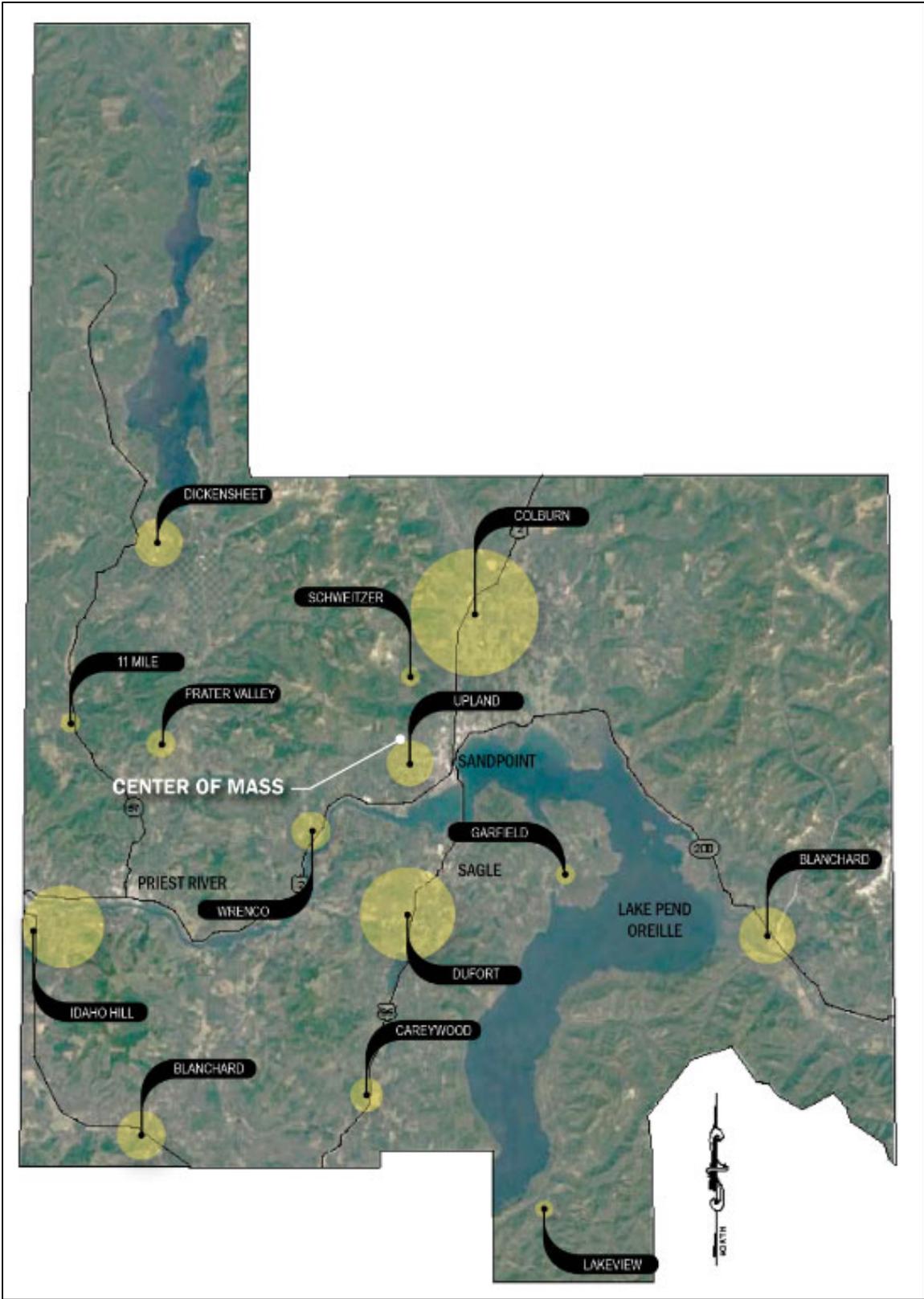


Exhibit 7– Bonner County Center of Waste Mass

3.0 Existing Site Conditions Review Summary

This section summarizes the existing site conditions for the 14 collection sites that the County operates.

3.1 Approach and Methodology

Of the 14 collection sites, 7 sites were prioritized by BCSW for needing improvements or expansion. Most all of these sites were visited on January 17, 2019, as part of the project kickoff meeting, with the exception of 2 sites (Blanchard and Careywood). These two sites were not visited as a result of weather and time constraints. Site pictures and data were provided by BSCW for these sites and all other sites that were not visited.

In the following sections, the fourteen sites are listed in alphabetic order and separated by western and eastern locations, as well as priority and non-priority sites. Those that were visited by the Great West team are also noted.

3.2 Western Priority Sites

3.2.1 11-Mile

The 11-Mile Site is an attended/supervised site, located almost half way between Dickensheet and Idaho Hill site off of Highway 57. A drive-by of this site was made during the site visits. Only household waste is accepted at this site. As a result of carbon monoxide complaints from staff using generators/heaters during the winter months, the site is temporarily closed. The property is undeveloped with a gate, attendant shack and several small 8-cy dumpsters. The property is permitted by a special use permit from the Forest Service, with limited means of improvement. A dirt lot allows for large hauling trucks to turn around. **Exhibit 8** is a photograph of 11-Mile Site.

Notable Concerns and Issues

- **Temporary Closure** – The site is temporarily closed as a result of complaints about carbon monoxide from generator/heaters used to heat the attendant shack.
- **Leased Property** – The land is permitted by a special use permit from the Forest Service and no improvements, such as running utilities to the site, are allowed.
- **Redundant Site** – The Prater Valley site is within a few miles of this site and has been recently improved and updated.



Exhibit 8 – 11-Mile Site (photograph courtesy of BCSW)

3.2.2 Blanchard

The Blanchard Site is an attended/supervised site, located in Blanchard, south of the Idaho Hill site off of Highway 41. This site was not visited. It is a full-service site but does not accept dirt, concrete, or asphalt since it does not have an inert pit. Tires, refrigerators, TVs and more are accepted on site. The Blanchard site was recently built in 2015. It is paved and includes many recycling and garbage dumpsters, as well as a z-wall for the larger roll-off containers. **Exhibit 9** is a photograph of the Blanchard site.

Notable Concerns and Issues

At this time, there are no known notable concerns or issues at Blanchard, as it was recently built in 2015. However, there may be land available at Blanchard for a future transfer station, per County staff.

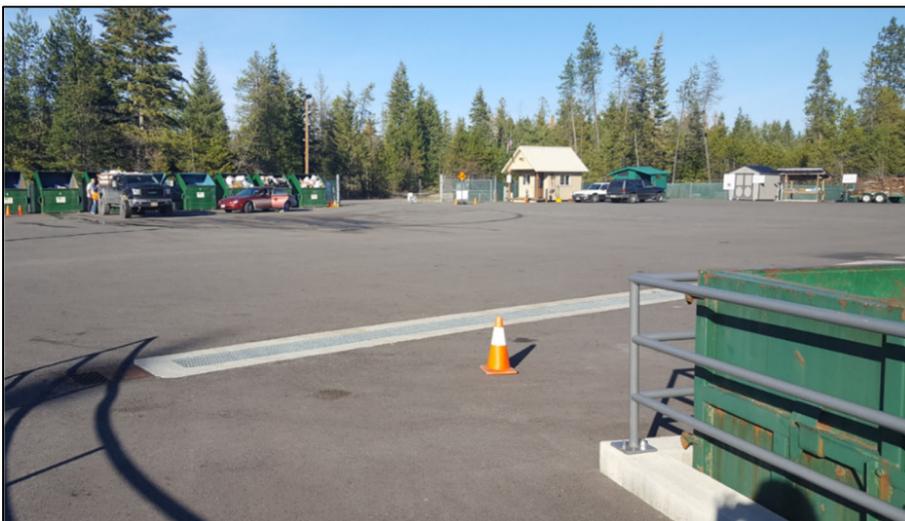


Exhibit 9 – Blanchard Site (photograph courtesy of BCSW)

3.2.3 Dickensheet

Dickensheet is an attended/supervised, full-service site that accepts dirt, concrete, and asphalt, as well as scrap metal, yard and wood waste, and TVs. There is also an inert waste pit on site. It is located in Coolin, Idaho. This site is part of the household hazardous waste (HHW) rotation. **Exhibit 10** is a photograph of the Dickensheet site.

Notable Concerns and Issues

- **Z-Wall** – The z-wall is comprised of stacked ecology blocks. Staff have indicated concerns with the integrity of the wall. During the busy summer months, the small number of z-walls causes congestion.
- **Roll-Off Containers** – Collection could be more efficient if all containers were upgraded to roll-offs. Multiple trips from Waste Management must be made to collect the smaller containers.
- **Paving** – Roads and the site are unpaved.



Exhibit 10 – Dickensheet Site (photograph courtesy of BCSW)

3.2.4 Idaho Hill

Idaho Hill is an attended/supervised site, located on the far east side of the County, off of Highway 41. It is a full-service site that accepts scrap metal, refrigerators, TVs, and tires as well as having an inert pit for dirt, concrete, and asphalt. This site is also part of the rotation for collecting household hazardous waste once per month.

The Idaho Hill Site is under consideration for a future conversion to a long-haul transfer station. The County is considering the possibility of entering into a land swap agreement with the Department of Public Lands to gain additional property next to the existing site. Although not within the 10-year planning horizon, the County has developed a concept layout for the site's conversion to a transfer station. In the meantime, the County would like to expand and improve the site gaining some adjacent ground and retaining it as a collection site. **Exhibit 11** is a photograph of the Idaho Hill site.

Notable Concerns and Issues

- **Z-Wall** – The z-wall is comprised of stacked ecology blocks. Staff have indicated concerns of their stability and integrity.
- **Sewer and Water** – No sewer or water lines currently service the site.

- **Paving** – Onsite roads and the site yard areas are unpaved.



Exhibit 11 – Idaho Hill Site (photograph courtesy of BCSW)

3.3 Eastern Priority Sites

3.3.1 Careywood

Careywood is an attended/supervised site, located in Careywood, Idaho. Accessed by Highway 95, it is a small, fenced-in site that accepts household trash only. Several 8-cy dumpsters and recycling containers are located at the site. **Exhibit 12** is a photograph of the site.

Notable Issues/Deficiencies

The following are notable issues/deficiencies with Careywood:

- **Future Highway Expansion** – The future expansion of Highway 95 will require the relocation of the Careywood site.



Exhibit 12 – Careywood Site (photograph courtesy of BCSW)

3.3.2 Colburn

Colburn is an attended/supervised site, located north of Sandpoint, Idaho. It is a full-service site that also accepts scrap metal and wood waste. Accessed by Pinecone Road off of Highway 95, it is the only transfer station in Bonner County. The site also has an inert pit that accepts dirt, concrete, and asphalt. It formerly had an operating HHW facility but was shut down by the fire department because of a lack of ventilation. This site is part of the mobile HHW collection program. The public drops off waste in bins located on site.

The site seems to have adequate room for staging materials and servicing public customers. There seems to be sufficient room for the scrap metal pile and wood waste pile, which was recently paved.

The leachate drain system (contact water drain) from the transfer building had some issues in the past that were corrected within the last year. The 3,500-gallon tank is dipped routinely and usually emptied about once a year. The liquid is then hauled and dumped at the Newport, Washington wastewater treatment plant.

Exhibit 13 is a photograph of the Colburn site entry area. **Exhibit 14** is a photograph of the exterior of the transfer building and **Exhibit 15** is a photograph of the interior of the transfer building.

Notable Concerns and Issues

The following list identifies the notable concerns and issues with the Colburn site and sets the stage for the necessary improvements to enhance safety and through-put capacity of the facility:

- **Antiquated and Undersized Waste Transfer Building** – The existing waste transfer building was constructed in 1994 by Waste Management. Although it was originally built as a temporary structure to last between 5-7 years (as reported by County staff), it is still in operation today. Ownership was eventually turned over to the County, but operation is still done under contract with Waste Management. The building is generally dilapidated with sections of damaged metal siding and areas with siding panels completely missing. There are four widow-type cutouts in the walls of the building that are missing the original chain link. In addition to several cosmetic issues, the building is undersized. Oftentimes waste is piled up on a concrete pad in a fenced-in area in front (west) of the building until the waste can be pushed into the building and top-loaded into trailers. Short metal push-walls line the edges of the tipping floor and are offset several feet from the building walls. They are made of relatively low-strength (gauge) steel welded to metal posts. The tipping floor was reported to be repaired several years ago with an overlay that has since worn through, as evidenced by eroded concrete and aggregate at the surface. The load-out tunnel has raised scales in the pit with lots of debris and waste around them.
- **Inoperable HHW Facility** – As a result of inadequate ventilation, the HHW facility was shut down by the fire department. The County currently uses portions of the building for storage and removing refrigerants from white goods. The County currently hires a contractor to circulate on weekends around each of the main transfer sites in the County to collect HHW materials.

- **Double-Handling of Public Waste** – Because of the limited tipping floor space, the public dumps their garbage into containers at the northeast end of the facility. Garbage trucks bringing waste into the site will periodically dump the containers and unload the waste on the tipping floor or outside pad.
- **Comingled Traffic Flow** – All vehicles share the main access road (Pinecone Road) into and out of the facility. The public enters the facility on the north side through a gate and drops off waste in containers at the northern edge of the site. Contractors (trucks and trailers) enter with the public and drop off waste on the tipping floor of the transfer station or the tipping pad in front of the transfer building. Commercial trucks (garbage and roll-off container trucks) and long-haul transfer trucks enter the facility through the service entrance gate and use the service road. Long-haul transfer trucks stay within the southern portion of the site, dropping off empty trailers and picking up full ones before leaving. Operations pull empty trailers into the transfer station loading tunnel and then pull loaded trailers out through the main yard before staging them for the long-haul transfer trucks to hitch-up, comingling with general site operations and also contractors accessing the tipping floor.
- **No Commercial Truck Scaling** – The only scales at the site are the pit scales in the loading bay of the waste transfer building. There are no other means to weigh the incoming waste before it is dumped on the tipping floor and comingled with the rest of the trash. Other than waste volumes, garbage is not tracked from the collection sites and curbside collection routes.



Exhibit 13 – Colburn Collection Site – Public Entry Area



Exhibit 14 – Colburn Transfer Site – Waste Transfer Building Exterior (photograph courtesy of BCSW)



Exhibit 15 – Colburn Transfer Site – Waste Transfer Building Interior

3.3.3 Wrenco

Wrenco is an unattended site located off of Highway 2, west of Sandpoint. The site accepts household trash only. It is a small site with only dumpsters. The Fire Department owns the property. **Exhibit 16** is a photograph of Wrenco.

Notable Concerns and Issues

- **Cleanliness** – The site occasionally becomes dirty and requires maintenance.
- **Location** – The County does not like the location and is considering a new site, somewhere between Sandpoint and Priest River, pending land availability.
- **Land Use Agreement** – The Fire Department owns that land and allows BCSW to use a small area.



Exhibit 16 – Wrenco Site (courtesy of BCSW)

3.4 Western Non-Priority Sites

3.4.1 Prater Valley

Prater Valley is an attended/supervised site located east of the 11-Mile site. It is a full-service site but does not have an inert pit to accept dirt, concrete, or asphalt. The site was built in 2011, replacing an unattended site within 5 miles of it, and is in great condition. It appears to have plenty of space for current and future needs. **Exhibit 17** is a photograph of the site.

Notable Concerns and Issues

At the time, there are no notable concerns or issues at Prater Valley.



Exhibit 17 – Prater Valley Site Photograph

3.5 Eastern Non-Priority Sites

3.5.1 Clark Fork

Clark Fork is an attended/supervised site, located in Clark Fork, Idaho. Accessed off of Highway 200, it is a full-service site. This site was not visited. It does not have an inert pit so it does not accept dirt, concrete, or asphalt. Refrigerators are accepted on site. It is a paved site and has a z-wall for easy disposal. Clark Fork is part of the HHW rotation. **Exhibit 18** is a photograph of Clark Fork.

Notable Concerns and Issues

At the time, there are no notable concerns or issues at Clark Fork.



Exhibit 18 – Clark Fork Site Photograph (courtesy of BCSW)

3.5.2 Dufort

Dufort is an attended/supervised site located south of Sandpoint in Sagle, Idaho. Accessed via Highway 95, it is a full-service site. It does not have an inert pit so it does not accept dirt, concrete, and asphalt. The site was renovated in the last 5 years. It is paved and has a z-wall for easy disposal. The site is seasonally busy (summer) but still has plenty of room for queuing of vehicles and does not get congested at this time, even though it is the busiest site. It is part of the HHW rotation.

If desired, there is room for an expansion to construct another set of z-walls, to mitigate possible congestion. A tipping wall for a long-haul trailer may also be an option to be placed at the site, to relieve Colburn in case of a scheduled or unscheduled shutdown of the current transfer station. **Exhibit 19** is a photograph of Dufort.

Notable Concerns and Issues

Portions of the site are unpaved.



Exhibit 19 – Dufort Site Photograph (courtesy of BCSW)

3.5.3 Garfield Bay

Garfield Bay is an attended/supervised site, located in Sage, Idaho. The site is unpaved, small, and fenced. It accepts household trash only. **Exhibit 20** is a photograph of the site.

Notable Concerns and Issues

At this time, there are no notable concerns or issues at Garfield Bay.



Exhibit 20 – Garfield Bay Site Photograph (courtesy of BCSW)

3.5.4 Lakeview

Lakeview is an unattended site, located in Lakeview, Idaho. Only household waste is accepted. Lakeview sees the lowest rates of waste drop off out of all fourteen sites. The County pays a part-time private contractor to maintain the site. **Exhibit 21** is an aerial photograph of the site.

Notable Concerns and Issues

At the time, there are no notable concerns or issues at Lakeview.

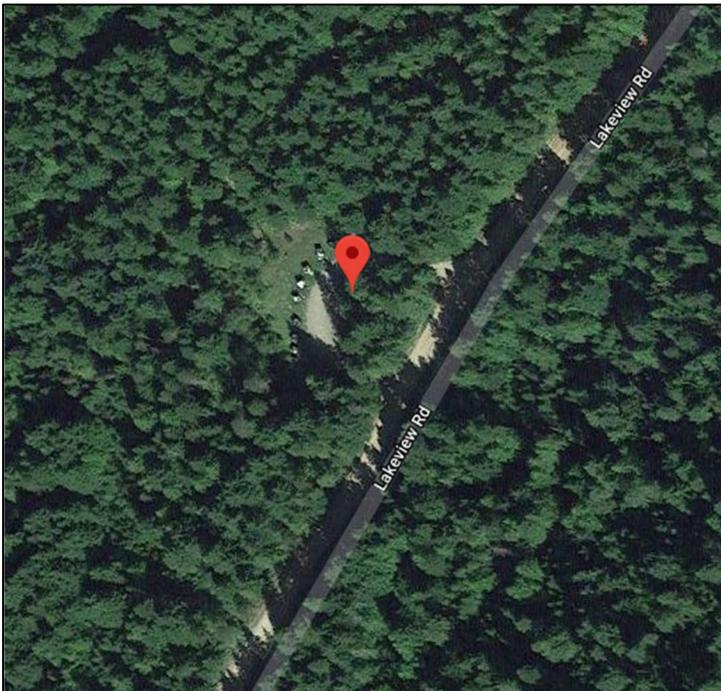


Exhibit 21 – Lakeview Site Aerial Photograph (Courtesy of Google Maps)

3.5.5 Schweitzer

Schweitzer is an unattended site, located near the Schweitzer ski resort. It accepts household trash only. The County pays the Schweitzer Fire District to maintain the site.

Exhibit 22 is a photograph of the site.

Notable Concerns and Issues

At the time, there are no notable concerns or issues at Schweitzer.



Exhibit 22 – Schweitzer Site Photograph (courtesy of BCSW)

3.5.6 Upland

Upland is an attended/supervised site, located near Sandpoint. It was renovated in 2018.

Exhibit 23 is a photograph of the site.

Notable Concerns and Issues

At the time, there are no notable concerns or issues at Upland.



Exhibit 23 – Upland Site Photograph (courtesy of BCSW)

4.0 Site Assessments Summary

This section summarizes the assessments that were conducted for each of the priority sites progressing forward to the existing site conditions review and input provided by BCSW staff.

4.1 Approach and Methodology

Following the preparation of the site conditions assessment work, the consensus among BCSW staff was to focus attention on improving and expanding the Colburn site to be retained as the main transfer facility for the County. Although there is a strong possibility to acquire a large piece of property next to the existing Idaho Hill site through a land swap with the Idaho Department of Lands, the Idaho Hill site does not offer the same level of immediate service improvement to the solid waste system. The site is generally remote and outside of the center of waste mass. Conversely, the Colburn site is already the main transfer site for the County and continues to offer a centralized location for waste consolidation in the County close to the center of waste mass. The Colburn site also offers plenty of space to provide both waste collection and transfer operations over the planning horizon.

4.2 Colburn Site

4.2.1 Existing Operations

Refer to **Section 3.3.2** for a description of the existing site conditions, as well as notable concerns and issues, at Colburn. **Figure 1** (attached) shows the existing conditions.

Waste from all of the other 13 collection sites are transported to Colburn in commercial trucks (garbage trucks and roll-off container trucks), unloaded on the tipping floor of the transfer building or the outside tipping pad, and then loaded into long-haul transfer trailers for transportation to Waste Management's landfill in Arlington, Oregon. The Arlington Landfill is located roughly 300 miles away, and the haul and disposal charge to the County is \$73.44/ton. Waste Management also operates the waste transfer building under contract with the County at a rate of \$8.72/ton.

Construction contractors also unload waste on the tipping floor or pad of the transfer building. All trucks and vehicles share Pinecone Road, the main access road into the facility, but then split off at the public entrance gate. Commercial trucks continue to the service gate entrance and along the service road. Public customers turn right into the main entrance gate and dump either at the dumpsters or roll-off containers for oversized materials. Contractors with trailers also enter through the public gate but are directed to haul and dump on the tipping floor/pad at the transfer building.

Operations includes a yard goat which pulls the long-haul transfer trailers into the loading bay of the waste transfer building facing north, and then once the trailers are full, the yard goat loops around into the main yard area next to the public and then drops full trailers south of the transfer building next to Waste Management's extra dumpsters and containers.

The yard goat then picks up an empty trailer off the service road corner and then pulls it north and around to the loading bay of the building.

Long-haul trucks share the service road with commercial trucks and operations but have a lower level access into the loading tunnel at the basement level. They drop off empty trailers east of the transfer building and pick up the loaded trailers south of the transfer building in the yard next to all of Waste Management's extra dumpsters and containers.

4.2.2 Proposed Improvements

The following subsections present the proposed improvements to the Colburn site. **Figure 2** (attached) shows the general plan for the location and arrangement of the new facilities and site improvements.

Constructing a New Waste Transfer Building

A new waste transfer building will be constructed next to (northeast of) the existing transfer building. It will be a two-level pre-engineered metal structure with dimensions of 120 feet wide by 60 feet deep (or 7,200 sf). It is assumed that this size of the building will not require sprinklers. The Fire Marshal will ultimately need to decide what, if any, fire protection will be required.

The tipping level (main level) of the building will feature high-strength concrete floors with 8-ft tall metal-cladded concrete push walls on the edges and steel-plate armoring surrounding the pit openings. The building will be arranged in the same general orientation as the existing building, opening to the northwest.

Two 15-ft wide mixed-use unloading stalls (demarked with floor paint) will be provided on the south end of the new building for commercial trucks to use during the weekdays in addition to the existing transfer building that will be reconditioned. Approximately seven 12-ft wide unloading stalls (also demarked with floor paint) will be provided for the public to use during the weekdays plus the two 15-ft wide mixed-use stalls on the weekends. Commercial vehicles will enter the building on the southwest end using the service road. The public will enter from the north through the main entrance gate. The commercial area in front of the new building will be separated from the public area using removable traffic barricades. This arrangement will separate public from commercial vehicles and maximize efficiency and safety of the operations.

After waste is dumped on the new tipping floor, it will be pushed to the rear of the facility toward two loading pits (chutes) using a rubber-tire loader with cutting blades to protect the floor. A stationary knuckle-boom crane will be located between the pit openings to pull waste off the floor and compact waste in the transfer trailer parked beneath. The crane will also be used to balance the trailer payload. The lower (basement) level will feature a pull-through tunnel for the existing building drive-through and a new loading tunnel with pit scales to weigh the trailers while they are loaded. A third loading bay can be added as a provision to the building as a future "bump-out" (further east) depending on the capital budget and future needs of the facility.

Building a New HHW Facility

The existing HHW facility will be demolished since it is not functional any longer as an HHW facility and will be in the way of the new loop road for operations. A new HHW facility will be

built on the north end of the facility where the recycling and dumpsters are currently located. The HHW facility will be a slab-on-grade, 1,200-sf pre-engineered metal structure with a 200-sf covered receiving area and an adjacent 750 sf dry storage area. The building will be placed on a concrete slab (monolithic pour with a central sump for secondary containment). The floor will have an inset (pit) for a hazardous waste locker to use for storing and bulking materials. The facility will feature general building ventilation, explosion-proof electrical and lighting systems, a flammable fixed gas monitoring system, and a safety shower/eye wash station with tepid water supply. It is assumed that this size of the facility will not require fire protection. Waste material storage will be inside the hazardous waste locker and possibly around the exterior of the building in metal storage containers. The Fire Marshal will need to ultimately decide if building sprinklers will be required.

Reconditioning the Existing Waste Transfer Building

The overall assumption for reconditioning the existing waste transfer building is that the building concrete footings/foundation and pre-engineered metal structure are structurally intact and safe. A structural analysis was not performed as part of this assessment. With that in mind, the following improvements are recommended to recondition the existing building: completely replacing the metal siding with heavier gauge paneling, installing translucent paneling in the window openings, repairing 1,500 sf of the tipping floor with a high-strength material overlay in heavy wear areas, upgrading the interior and exterior lighting, and replacing the push-wall and metal armoring around the pit opening.

Adding an Automated Commercial Truck Scale

A new 80-ft aboveground, low-profile platform scale will be installed along the service access road before the waste transfer buildings. The primary purpose of the scale will be to weigh commercial trucks entering the facility. Secondarily, it can be used to weigh long-haul trucks for cross-checking the pit scales. A radio-frequency identification (RFID) system will be provided that can be monitored remotely from the attendant building at the public entrance gate. Video cameras will be used to monitor traffic pulling on and off the scale with monitors in the attendant building. The scale will also include inbound and outbound kiosks and an intercom system for the driver to communicate with the attendant. Commercial trucks will be tared and read with RFID cards or window tags requiring only inbound scaling. Vehicles that are not tared, such as roll-off container trucks with multiple truck/container combinations, will require both inbound and outbound scaling. Traffic control onto and off the scale will be done by an automatic light that is activated by transactions.

Relocating Drop-Off Facilities

The metals collection pile will be relocated north of the wood waste pile area, near the existing location of the tire drop-off area. The tire drop-off area will be relocated south of the existing (former) HHW Facility and north of the future transfer station building. The recycle bins, near the public dumpsters and z-wall will be relocated to a new recycling drop-off area across from the old HHW facility. The cardboard recycling container will also be relocated at the new recycling drop-off location. The new waste transfer building will allow for direct waste unloading on the floor of the building and use of the z-wall for overflow (busy periods) and for oversized materials such as furniture.

Site/Yard Improvements

Several grading and drainage improvements will be needed to accommodate the new buildings and site infrastructure. The new waste transfer building will be constructed next to (northeast) of the existing building. The existing road, for the length of the new building, will need to be re-graded (flattened), at the same elevation of the existing building tunnel.

The existing stairs and a portion of the concrete retaining wall on the northeastern side of the existing building will be demolished, and the hillside excavated and then backfilled to construct the new transfer building.

Portions of the paved road leaving the basement level of the two transfer buildings will also be re-graded to approximately 7% slope, and then re-paved to meet the existing road/ yard grades. A retaining wall will be needed on the north side of the new building until the yard grade is reached as the road climbs out of the basement level of the buildings. The yard area will be paved where the former HHW facility was for the turnaround area for operations (yard goat pulling empty containers into the loading bays).

On the east side of the two transfer buildings at the basement level, the road will be extended further east making room for the new tunnel and bypass road (and possible “bump-out” for a future, third bay). A new (second) buried tank (approximately 5,000 gallons) will be needed to collect and store contact water from the new transfer building floor and pit area. The existing swale, further east will be enlarged. Drainage improvements such as catch basins and culverts will be necessary to ensure stormwater flows to the re-graded swale.

The new scrap metal drop-off area will be paved, as well as the new recycling and cardboard drop-off location. Six-foot fencing will be installed around the perimeter of the site. The existing fence, east of the service road will be upgraded to chain link, to match the new installation. A new entrance gate will be installed northwest of the existing service gate for on-site operations to access the waste transfer buildings.

Improving Site Access and Traffic Circulation

Reversing the traffic flow for the onsite transfer trailer loading operations will create a more efficient traffic pattern and eliminate the comingling of traffic in the yard area. As previously mentioned, this will also require demolishing the existing HHW building and relocating the metals pile next to the wood waste pile.

Site Traffic Flow and Control

Signs and pavement markings (striping) will be used throughout the facility to direct and control traffic. There are four main types of traffic utilizing the site: public (including contractors), commercial trucks (garbage trucks and roll-off container trucks), onsite operations (yard goat pulling empty and loaded trailers around the site), and long-haul transport trucks dropping off empty containers and picking up full containers. Each traffic type is discussed below (refer to the referenced figures).

- ***Public Traffic (refer to Figure 3A - attached):*** Public traffic will continue to enter the facility by taking a right off of Pinecone Road through the main gate on the northern

end of the site. The destinations and access routes for public customers using the site include:

- **Waste Transfer Building** – Public customers dropping off MSW at the new waste transfer building will enter the site by taking a right turn off of Pinecone Road into the main gate and then drive through the northern portion of the yard to the new building and then back into one of the unloading stalls, delineated with floor paint. Removeable traffic barricades will separate public from commercial stalls during the weekdays. On the weekends, all of the stalls will be available to the public. After dropping off waste, the public customer will return via the same path they entered and exit the site through the main gate. The customers can also visit the other facilities as they leave but it will be recommended to the public that they do this before they unload their MSW at the new building to keep traffic flow and pull-outs to the right-hand-side for safety and efficiency.
- **Z-Wall** – During periods of heavy traffic (use), some public customers will be sent to the existing z-wall to drop-off MSW in order to mitigate congestion and drop-off oversized materials such as furniture. The z-wall is located on the northernmost section of the site, west of the public entrance gate.
- **HHW Facility** – Customers dropping off HHW or refrigerators will be directed to the new HHW facility located on the north end of the site. Customers dropping off materials will pull in through the customer entrance gate and make a right turn to reach the facility. After dropping off materials, the customers can loop around and exit the site or continue south to the recycling drop-off area and/or transfer building to drop off MSW.
- **Recyclables Drop-Off Area** – The existing recycling bins and the cardboard bin will be relocated, west of the existing (former) HHW Facility. Customers will drive as if visiting the waste transfer building but stop at the bins along the way. After dropping off recyclables, they can then turn around and exit the site or visit the other locations.
- **Wood Waste Drop-off Area**– To access the wood waste drop-off area, customers will follow a similar route as if driving to the waste transfer building, but instead, turn right after passing the recyclables drop-off area. The wood waste pile is located on the southern end of a large paved pad. Customers may use this area to turn around and exit the site via the same path they entered or visit the other drop-off locations.
- **Scrap Metal Drop-Off Area**– The scrap metal/large appliance (non-refrigerants) drop-off area will be north of the wood waste drop-off area. To access the scrap metal drop-off area, customers will take a slight right after passing by the recyclables drop-off area. Customers may use the area south of the drop-off to turn around and exit via the same path they entered or visit the other locations
- **Tire Drop-Off Area** –The new tire drop-off area will be south of the existing (former) HHW Facility and north of the new transfer station building. The area will be delineated by a low-wall of ecology blocks. Customers may use the open area in front of the tire drop-off location to turn around and exit via the same path they entered, or to visit the other drop-off locations.
- **Inert Landfill** – To access the inert landfill, customers will follow a similar route as if accessing the wood waste drop-off area but will continue driving past the piles to the landfill, which is located northwest of the scrap metal drop off area. After

unloading their waste, customers will turn around and exit via the same path they entered.

- **Commercial Traffic (refer to Figure 3B):** Commercial trucks will continue to access the facility through the service entrance gate. The only destination for commercial customers using the site is the waste transfer buildings. To access the two buildings, commercial trucks (garbage trucks and roll-off container trucks) will drive past the public entrance gate, through the service entrance gate, down the service road and then pass over the new commercial truck scale with their RFID card or tag. Afterwards, they will drive into one of the two transfer buildings to unload. The existing transfer building will be available for commercial waste drop-off, and during the weekdays, two unloading stalls at the south end of the new building, delineated by floor paint and separated from public stalls by removeable traffic barriers, will be available to commercial trucks as well. After backing in and unloading waste, the commercial vehicles will exit via the same route they entered; however, this time being able to pass by the automatic scale without weighing if they are tared. If the vehicles are not tared, they will be required to pass back over the scale to be weighed before leaving the site.
- **Onsite Operations Traffic (refer to Figure 3C):** A yard goat will be used onsite to move empty and loaded trailers into and out of the trailer loading bays of the two transfer buildings and park them in designated areas. The yard goat will hook-up to empty containers sitting in the container parking area, located southwest of the existing transfer building, where the full trailers are currently placed. They will travel out along the service road and then turn left through a new entrance gate. The yard goats will loop around south within the open, paved area, east of the entrance gate, and travel down the ramp road to the basement level (loading level) of the transfer buildings. They will enter the loading bay tunnels of the transfer buildings from the northeast, and after being loaded, exit via the southwest and park the full trailers in the full trailer lot, located next to where the empty trailers are currently placed. From there, the yard goats can turn, rounding the island if necessary, and pick up another empty trailer and take it to one of the transfer building loading bays.
- **Long-Haul Transport Traffic (refer to Figure 3D):** Long-haul transfer trucks entering the facility will follow a similar route as commercial vehicles using the service gate and road but after rounding the corner, will drop off empty trailers in the empty trailer parking area. They will then use the yard area where all the spare containers are currently located to turn around and drive to the full container parking area, attach the trailer, and then exit the site via the same route they entered. Occasionally, on an as-needed basis, to check the calibrations of the transfer station pit scales, a long-haul truck may need to be weighed with a fully loaded trailer. The truck would load the trailer at the full container parking area and then turn right to access the scale. Spotters will be needed to navigate the truck through the site, passing the transfer station tipping floors, and exit via the public access gate.

4.3 Proposed Improvements at Other Collection Sites

The following subsections present the proposed improvements for the other Priority collection sites.

4.3.1 Idaho Hill

Refer to **Section 3.2.4** for a description of Idaho Hill and notable concerns and issues.

Proposed Improvements

Proposed improvements to the Idaho Hill site include the following (refer to **Figure 4**):

- **Z-Wall** – The z-wall will be upgraded with cast-in-place walls and an additional roll-off bay to accommodate future demand.
- **District Manager Shop Building** – An approximate 2,300 sf shop building will be built on the northern portion of the existing site, between the existing site area and the access road. This building would allow for the servicing of equipment in the shop area and also contain an office and bathroom.
- **Sewer and Water** – Sewer and water lines will be placed to service the site and the District Manager Shop building, as currently no sewer or water lines exist at the site. Frost-free spigots will be installed on site. A domestic water well will be installed onsite approximately 200 ft deep, and a septic tank with a drain field, east of the shop building, will provide sewer services. The water well will be positioned upgradient from the closed landfill, septic tank, and drain field.
- **Grading/Paving** – Approximately 47,500 sf of area will be paved. This will include the main yard area, wood pile area and the existing tire trailer/cardboard roll-off area.
- **Fencing** – Six-foot fencing will surround the entire site to prevent break-ins and collect blowing litter. Gates will be installed at the access point to District Manager Shop Building, the main site, and the inert landfill.

4.3.2 Dickensheet

Refer to **Section 3.2.3** for a description of Dickensheet and notable concerns and issues.

Proposed Improvements

Proposed improvements to the Dickensheet site include the following (refer to **Figure 5**):

- **Z-Wall** – The z-wall will be upgraded with cast-in-place walls and expanded to add an additional unloading bay.
- **Roll-Off Containers** – As a consideration (not included in the cost estimate), all of the waste containers could be upgraded to roll-off containers, to improve collection efficiency. This would need to be discussed with Waste Management. Currently, multiple trips are made by Waste Management to dump the smaller dumpster containers.
- **Grading/Paving** – The main yard area, wood waste pile area, and access road will be paved (approximately 76,700 sf).
- **Water** – A domestic water well will be installed on the site to service the attendant shack and several frost-free yard spigots. The well will be approximately 200 feet deep and located on the northeastern portion of the site. Frost-free spigots will be placed on the site, near the attendant shack, the inert pit, and the z-wall, for a total of three spigots.
- **Fencing** – Six-foot fencing with privacy slats will surround the entire site to prevent break-ins and collect blowing litter.

4.3.3 Dufort

Refer to **Section 3.5.2** for a description of Dufort and notable concerns and issues.

Proposed Improvements

Proposed improvements to the Dufort site include the following (refer to **Figure 6**):

- **Z-Walls** – Space is available for the construction of another z-wall with three slots. This would mitigate the congestion experienced at Dufort during the busy season. The z-wall would be cast-in-place mirroring the existing wall at this site
- **Grading/Paving** – The remaining unpaved area within the site boundary will be paved, including the location of the proposed z-wall (approximately 60,410 sf).
- **Site Drainage Improvements** – A new swale will be excavated at the southwestern corner of the site. Drainage improvements will be implemented to ensure stormwater drains to the swale.

4.3.4 Wrenco

Wrenco is an unattended site located off of Highway 2, east of Sandpoint. The site accepts household trash only. It is a small site with only dumpsters. The Fire Department owns the property.

Identified / Known Issues

- **Cleanliness** – The site occasionally becomes dirty and requires maintenance.
- **Location** – The County is not fond of the location and is considering a new site, somewhere between Sandpoint and Priest River, pending land availability.
- **Land Use Agreement** – The Fire Department owns that land and allows BCSW to use a small area.

Proposed Improvements

Closure or relocation of the Wrenco site is in question. The site has been problematic in the past with cleanliness. This is not currently within the 10-year planning horizon.

4.3.5 Careywood

Careywood is an attended/supervised site, located in Careywood, Idaho. Accessed by Highway 95, it is a small, fenced-in site that accepts household trash only. Several 8-cy dumpsters and recycling containers are located at the site.

Identified / Known Issues

The future expansion of Highway 95 will require the relocation of the Careywood site.

Proposed Improvements

Due to the future expansion of Highway 95, the Careywood site will need to be relocated. This is not currently within the 10-year planning horizon.

4.4 Engineer's Opinion of Costs

The engineer's cost opinions are considered bottom rolled-up-type estimates with identified cost items. The estimates include cost allowances and costs per square foot for certain

components of the estimates. The estimates assume the projects will be done on a competitive bid basis; contractors will have a reasonable amount of time to complete the work given a reasonable project schedule with no liquidated damages; and the project will be constructed under a single contract. The actual cost of the projects will depend on competitive market conditions, actual labor and material costs, actual site conditions (e.g., suitability of subsurface soils), productivity, project scope, schedule, final design, and other factors. As a result, the actual costs of the projects will vary. The costs will also vary if LSI has the capability to perform work in-house. Because of these factors, funding needs must be carefully reviewed prior to making specific financial decisions or establishing final budgets.

These cost estimates are in 2019 dollars (2019\$) and have not been escalated to the year of expenditure. The timeframe for phasing and implementation will need to be decided as the improvements are needed. **Appendix A** provides more detailed breakdowns. Note that the costs for the possible relocations of Wrenco and Careywood are not included. Those costs will depend upon the market availability and prices of lots in the area, as well as future site development and access requirements.

4.4.1 Colburn

The cost estimates for the proposed improvements at the Colburn site are shown in **Table 3**.

Table 3 – Cost Estimates for Proposed Colburn Site Improvements (2019\$)

| Facility/Improvement | Low Range -30% | ESTIMATE RANGE Base* | High Range +50% |
|--|--------------------|-------------------------|--------------------|
| Site Work | \$441,000 | \$630,000 | \$945,000 |
| New Commercial Scale | \$243,000 | \$347,000 | \$521,000 |
| New Waste Transfer Building | \$2,309,000 | \$3,298,000 | \$4,947,000 |
| Recondition Existing Waste Transfer Building | \$451,000 | \$644,000 | \$966,000 |
| New HHW Building | \$434,000 | \$620,000 | \$930,000 |
| Total | \$3,878,000 | \$5,539,000 | \$8,309,000 |

**Includes 20% contingency, 6% taxes on materials (est.), 12% A&E Design Fee, and 4% limited A&E CM support fee.*

4.4.2 Idaho Hill

The cost estimates for the proposed improvements at the Idaho Hill are shown in **Table 4**.

Table 4 – Cost Estimates for Proposed Idaho Hill Site Improvements (2019\$)

| Facility/Improvement | Low Range -30% | ESTIMATE RANGE Base* | High Range +50% |
|--|-------------------|-------------------------|--------------------|
| Idaho Hill Site Proposed Improvements | \$631,000 | \$901,000 | \$1,352,000 |

**Includes 20% contingency, 6% taxes on materials (est.), 12% A&E Design Fee, and 4% limited A&E CM support fee.*

4.4.3 Dickensheet

The cost estimates for the proposed improvements at the Dickensheet are shown in **Table 5**.

Table 5 – Cost Estimates for Proposed Dickensheet Site Improvements (2019\$)

| Facility/Improvement | Low Range -30% | ESTIMATE RANGE Base* | High Range +50% |
|---|---------------------------|---------------------------------|----------------------------|
| Dickensheet Site Proposed Improvements | \$644,000 | \$920,000 | \$1,380,000 |

**Includes 20% contingency, 6% taxes on materials (est.), 12% A&E Design Fee, and 4% limited A&E CM support fee.*

4.4.4 Dufort

The cost estimates for the proposed improvements at the Dufort site are shown in **Table 6**.

Table 6 – Cost Estimates for Proposed Dufort Site Improvements (2019\$)

| Facility/Improvement | Low Range -30% | ESTIMATE RANGE Base* | High Range +50% |
|--|---------------------------|---------------------------------|----------------------------|
| Dufort Site Proposed Improvements | \$216,000 | \$308,000 | \$462,000 |

**Includes 20% contingency, 6% taxes on materials (est.), 12% A&E Design Fee, and 4% limited A&E CM support fee.*

5.0 Project Prioritization

This section describes the evaluation process prioritizing the capital improvements projects over the next 10-year planning horizon, and beyond.

5.1 Approach and Methodology

A workshop was held by teleconference call on March 7, 2019, with BCSW staff, Commissioner Dan McDonald, and Great West Engineering. The purpose of the Workshop was to review each of the proposed capital improvements projects at each of the priority sites and develop a strategy to prioritize the projects over the 10-year planning horizon.

5.1.1 Selection Criteria

Six selection criteria were identified in the workshop for evaluating the proposed capital improvement projects. The criteria were then organized in order of significance from most significant to least significant, with assigned numeric weights ranging from 6 to 1 (refer to Table 7).

Table 7 – Selection Criteria Listed by Level of Significance

| Numeric Weight | Criterion | Description |
|----------------|------------------------------------|--|
| 6 | Financial Impacts/Economics | Relative cost of the project versus financial benefits and economics, including the rate of return on investment, if applicable. |
| 5 | Level of Service | Anticipated service level increase as it pertains to transaction times, efficiency, and convenience to the public |
| 4 | Liability/Risk | Known or perceived risk of potential environmental issues and associated risks and liabilities of continuing to operate without the capital project. |
| 3 | Public Perception (Social Factors) | Social attitudes, public expectations and/or public perceptions of the proposed capital project. |
| 2 | Regulatory Compliance/Permitting | Possible current and/or anticipated future regulations considering what impacts they may have on the proposed capital project. |
| 1 | County Land Use Compatibility | Potential issues or concerns of the compatibility of the land with the proposed project. |

5.1.2 Scoring and Ranking

The selection criteria within each of the proposed projects were then scored by applying a numeric value ranging from 1 (least important) to 5 (most important).

Table 8 shows the scorecard that was used.

Table 8 – Capital Improvements Evaluation Scorecard

| Component/System | VI. Financial Impacts/Economics | V. Level of Service | IV. Liability/Risk | III. Public Perception (Social Factors) | II. Regulatory Compliance/Permitting | I. County Land Use Compatibility |
|--|---------------------------------|---------------------|--------------------|---|--------------------------------------|----------------------------------|
| Colburn HHW Building | | | | | | |
| New Transfer Building at Colburn | | | | | | |
| Colburn Site Improvements | | | | | | |
| Existing Transfer Building Improvements at Colburn | | | | | | |
| Idaho Hill Site Improvements | | | | | | |
| Dickensheet Site Improvements | | | | | | |
| Commercial Scale at Colburn | | | | | | |

5.1.3 Results

The scores from each participant were averaged within each criterion and then the weighting factors were applied and rounded to the nearest tenth (for example, Criterion 1 – Financial Impacts/Economics for the New Waste Transfer Building at Colburn had an average score of 2.5 amongst the group, and ended up with a weighted score of 15, or 2.5 times 6). The weighted scores were then tallied and ranked for each project. The results of the evaluation process are shown in **Table 9**.

Table 9 – Capital Improvements Evaluation Scores

| Component/System | | VI. Financial Impacts/Economics | V. Level of Service | IV. Liability/Risk | III. Public Perception (Social Factors) | II. Regulatory Compliance/Permitting | I. County Land Use Compatibility | Weighted Score | Rank |
|--|------------------|---------------------------------|---------------------|--------------------|---|--------------------------------------|----------------------------------|----------------|------|
| New Transfer Building at Colburn | Average | 3 | 5 | 4 | 4 | 3 | 1 | 75 | 2 |
| | Weighted Average | 15 | 25 | 17 | 11 | 5 | 2 | | |
| Existing Transfer Building Improvements at Colburn | Average | 3 | 4 | 4 | 2 | 3 | 2 | 66 | 3 |
| | Weighted Average | 15 | 20 | 17 | 7 | 5 | 2 | | |
| Commercial Scale at Colburn | Average | 3 | 2 | 3 | 2 | 1 | 1 | 54 | 6 |
| | Weighted Average | 19 | 11 | 12 | 7 | 3 | 2 | | |
| HHW Building at Colburn | Average | 5 | 5 | 4 | 4 | 4 | 1 | 91 | 1 |
| | Weighted Average | 29 | 23 | 17 | 11 | 9 | 2 | | |
| Idaho Hill Improvements | Average | 2 | 4 | 4 | 4 | 2 | 2 | 62 | 4 |
| | Weighted Average | 10 | 18 | 17 | 11 | 4 | 2 | | |
| Dickensheet Improvements | Average | 2 | 3 | 3 | 4 | 2 | 2 | 57 | 5 |
| | Weighted Average | 11 | 16 | 13 | 11 | 4 | 2 | | |
| Dufort Improvements | Average | 2 | 3 | 2 | 3 | 2 | 2 | 51 | 7 |
| | Weighted Average | 11 | 17 | 9 | 9 | 3 | 2 | | |

The results rank the HHW Building first (score of 91 points) followed by the two other major improvements identified at the Colburn Site – New Waste Transfer Building (score of 75 points) and Existing Transfer Building Reconditioning (score of 66). Improvements at the Idaho Hill site ranked fourth (score of 62) followed by Dickensheet (score of 57), the scale at Colburn (score of 54), and finally the improvements at Dufort (score of 51).

6.0 Funding Options and Considerations

The following section provides a brief description of the potential funding sources and whether Bonner County would be eligible.

6.1 Community Development Block Grant

A community development block grant (CDBG) is a federally funded program that is administered by the Idaho Department of Commerce (IDC). The primary purpose of CDBG funds is to benefit low to moderate income (LMI) families and individuals. To be eligible for CDBG funds 51% or more of a community's population of must be LMI. The IDC uses census data to determine a community's LMI. However, under certain circumstances, the IDC may allow an income survey to be completed (e.g., if there have been significant economic changes since the census or if a community is only slightly under the required LMI population percentage).

An amount of \$500,000 is the maximum CDBG grant for a public facilities project. The use of CDBG funds requires a 25% local match that can be provided through cash, loans, grants or a combination thereof.

Bonner County's population is currently 38% LMI, which makes it ineligible for CDBG funding. For more information about Idaho's CDBG Program, contact CDBG Program Manager Dennis Porter at (208) 287-0782 or dennis.porter@commerce.idaho.gov.

6.2 State Revolving Fund

Under certain circumstances, the SRF may provide low-interest loan funds for a solid waste project through the Water Pollution Control State Revolving Fund. For a solid waste project to be eligible for SRF, project funding would be necessary to protect a source of drinking water or surface water from contamination from a structurally deficient disposal cell or leachate collection system.

For more information about Idaho's SRF Program, contact SRF Program Manager Tim Wendland at (208) 373-0439 or tim.wendland@deq.idaho.gov.

6.3 USDA Rural Development Water and Waste Disposal Loan & Grant Program

Rural Development (RD) provides grant and loan funding to municipalities and counties for solid waste, water and wastewater projects that improve the quality of life and promote economic development in Rural America. RD determines eligibility based on the population of the community where the project would be constructed. Bonner County (population 40,877) is eligible to apply for RD funding if the facility it wants to construct is in a community with a population of 10,000 or less.

RD bases its determination of grant eligibility and the interest rate a project would receive on the community's median household income (MHI) and user rates. If the community has an MHI of \$39,648 or lower, and the project is necessary to alleviate a serious public health and/or sanitation concern, up to 75% of the project costs are grant eligible. The term of the loan would include the Poverty Rate, which is currently 2.5%. With an MHI of \$41,943 (2010 census) Bonner County qualifies for RD's Intermediate Rate of 3.375% and potentially having up to 45% of project costs grant funded. Historically, RD does not award grant funding to solid waste projects. To win an RD grant, the project would need to address a situation that represents an imminent threat to public health and/or the environment. RD's Market Rate for communities with an MHI greater than \$49,561 is 4.25%.

Although, Bonner County may be eligible for an RD funding, it is unlikely to secure such a grant for solid waste projects based on history. For more information about USDA Rural Development, contact the Northern Idaho Area Director Mary Christine Fisher at (208) 209-4364 or christine.fisher@usda.gov.

6.4 Economic Development Administration Public Works Program

Economic Development Administration's (EDA's) Public Works Program provides economically distressed communities and regions with comprehensive and flexible resources to address a wide variety of economic needs. A solid waste project is potentially eligible for EDA funding if it would support the expansion of an existing business or the location of a new business to Bonner County that would result in the creation or retention of good-paying jobs.

This also doesn't seem like a possibility for solid waste projects in Bonner County. For more information about the EDA Public Works Program, contact Richard Berndt at EDA's Seattle Regional Office at (206) 220-7682 or rberndt@eda.gov.

7.0 Capital Outlay Schedule

The capital outlay schedule is provided in **Table 10**. Design and permitting are assumed to occur at least one year before construction.

The cost estimates are in 2019 dollars (2019\$) and have been escalated to the year of expenditure assuming a 2.8% annual rate of inflation. Capital expenditures are expected to occur in the fiscal year (FY).

Appendix A provides more detailed breakdowns of the cost estimates for those that are noted in the table.

Table 10 – Bonner County Solid Waste – Capital Outlay Cost Schedule

| Project | A&E Design Year | A&E Design Fees (2019\$) | Construction/ CM Services Year | Construction/ CM Services Cost Estimate (2019\$) | Total Project Cost (2019\$) | Notes |
|--|-----------------|--------------------------|--------------------------------|--|-----------------------------|--|
| Colburn HHW Building | 2020 | \$65,520 <\$67,360> | 2021 | \$554,480 <\$585,970> | \$620,000 | Includes a 1,200-sf pre-engineered metal structure with a 200-sf covered receiving area and an adjacent 750 sf dry storage area. |
| New Colburn Transfer Building | 2022 | \$323,280 <\$351,210> | 2023 | \$2,974,720 <\$3,322,150> | \$3,298,000 | Includes a 7,200-sf steel building, with a 15,000-sf paved apron, two tunnel access with pit scales, and a knuckleboom crane. |
| Colburn Site Improvements | 2022 | \$63,480 <\$68,970> | 2023 | \$566,520 <\$632,690> | \$630,000 | Concurrent with the new transfer building construction, as most of the site work is related to the new building. Includes general earth work, grading improvements, road improvements and chain link fencing and gates. |
| Existing Colburn Transfer Building Remodel | 2024 | \$63,120 <\$72,470> | 2025 | \$580,880 <\$685,560> | \$644,000 | The reconditioning of the existing transfer building includes the replacement of steel siding and translucent window panels, the replacement of heavy-wear areas on the tipping floor, 8' metal clad concrete walls, and new pit scales. |
| Idaho Hill Site Improvements | 2026 | \$88,320 <\$107,160> | 2027 | \$812,680 <\$1,013,600> | \$901,000 | Includes paving, a District Manager's Shop building, water and sewer utilities, electrical connections, and a new cast-in-place concrete z-wall. |
| Dickensheet Site Improvements | 2027 | \$90,240 <\$112,550> | 2028 | \$829,760 <\$1,063,880> | \$920,000 | Includes paving, a domestic well, pump, water lines, chain link fence, and a new cast-in-place concrete z-wall. |
| Colburn Commercial Scale | 2028 | \$32,520 <\$41,700> | 2029 | \$314,480 <\$414,500> | \$347,000 | Includes an 80'x10' above-ground commercial scale (unattended) for the Colburn Site, as well as remote displays, kiosk, servers, and software. |
| Dufort Site Improvements | 2029 | \$30,120 <\$39,700> | 2030 | \$277,880 <\$376,520> | \$308,000 | Includes paving, site drainage improvements, and a new cast-in-place concrete z-wall. |
| Total (2019\$) | | \$756,600 | | \$6,911,400 | \$7,668,000 | |

Notes:

- a. Estimates included contingencies with a typical level of accuracy of -30% to +50%.
- b. Year of expenditure dollars are in "< >" and assume a 2.8% annual inflation rate. No interest on investments or accruals are included.
- c. Total costs are an estimate of two or more years of expenditures.

8.0 Summary

Bonner County's solid waste system consists of 14 collection sites, half of which are full-service sites and the other half, kitchen-only sites. The Colburn Site also serves as the main transfer station where all of the waste generated in Bonner County is processed and sent to Waste Management's landfill in Arlington, Oregon. For access to these collection sites, each household in the County pays \$115 per year, as an assessment fee on their property taxes. In addition, commercial waste disposal or wastes dropped off in excess of the maximum amounts by residents is charged at \$14 per cubic yard, at the sites.

Solid waste production in the County is growing at a rate of approximately 2.08%. To accommodate future demands, several sites were proposed for upgrade. Based on discussions between Bonner County and Great West Engineering, it was decided to retain Colburn as the main transfer station for the County and make it the primary of focus for improvements. Colburn is located near the center of solid waste mass in the County and can be upgraded without the need for more land acquisition, among other reasons. The Idaho Hill, Dickensheet, and Dufort collection sites were also included as needing capital improvements. The prioritization of improvements, through discussion and scoring, as well as detailed cost estimating, resulted in a capital outlay schedule (refer to **Table 10**).

FIGURES

M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-01.dwg

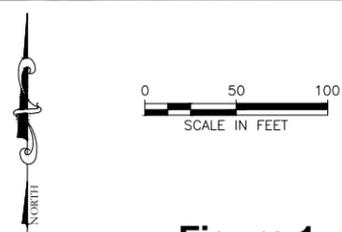


Figure 1
Colburn Existing Site Plan
BONNER COUNTY SOLID WASTE
10-YEAR CAPITAL IMPROVEMENTS PLAN

M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-02.dwg

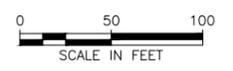


Figure 2
Proposed Site Plan

BONNER COUNTY SOLID WASTE
10-YEAR CAPITAL IMPROVEMENTS PLAN



M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-03A.dwg

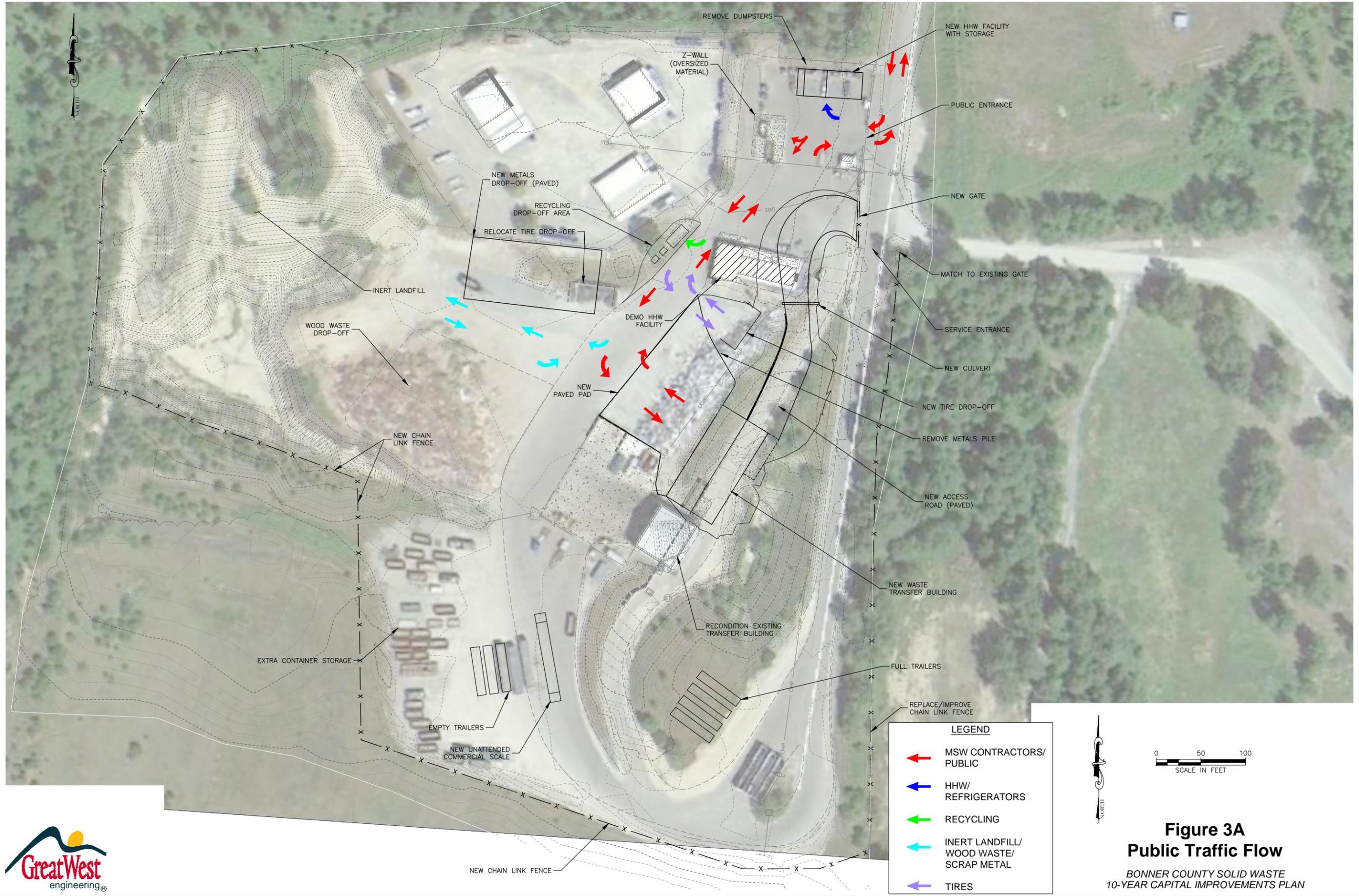
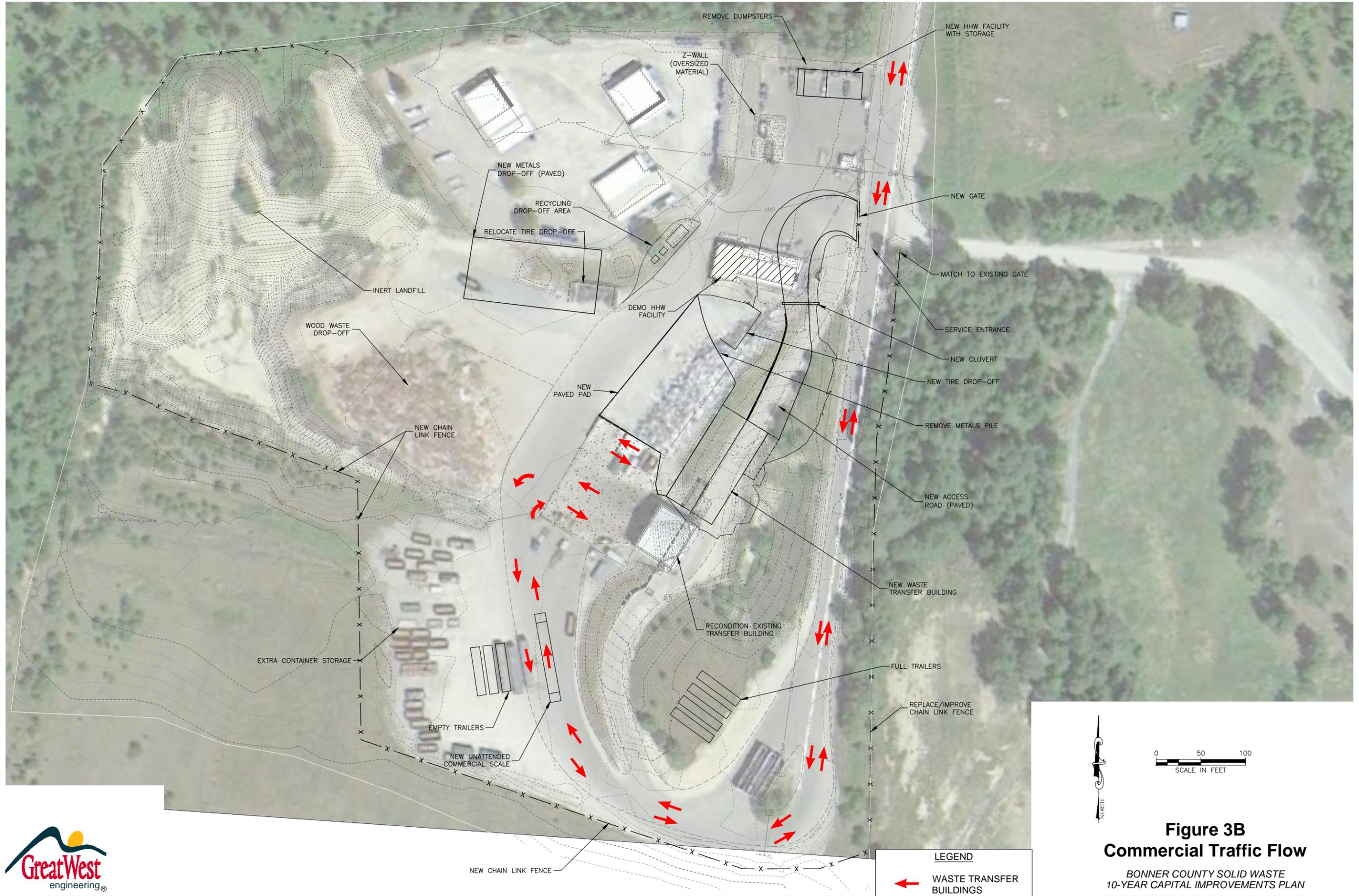


Figure 3A
Public Traffic Flow
BONNER COUNTY SOLID WASTE
10-YEAR CAPITAL IMPROVEMENTS PLAN

M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-03B.dwg

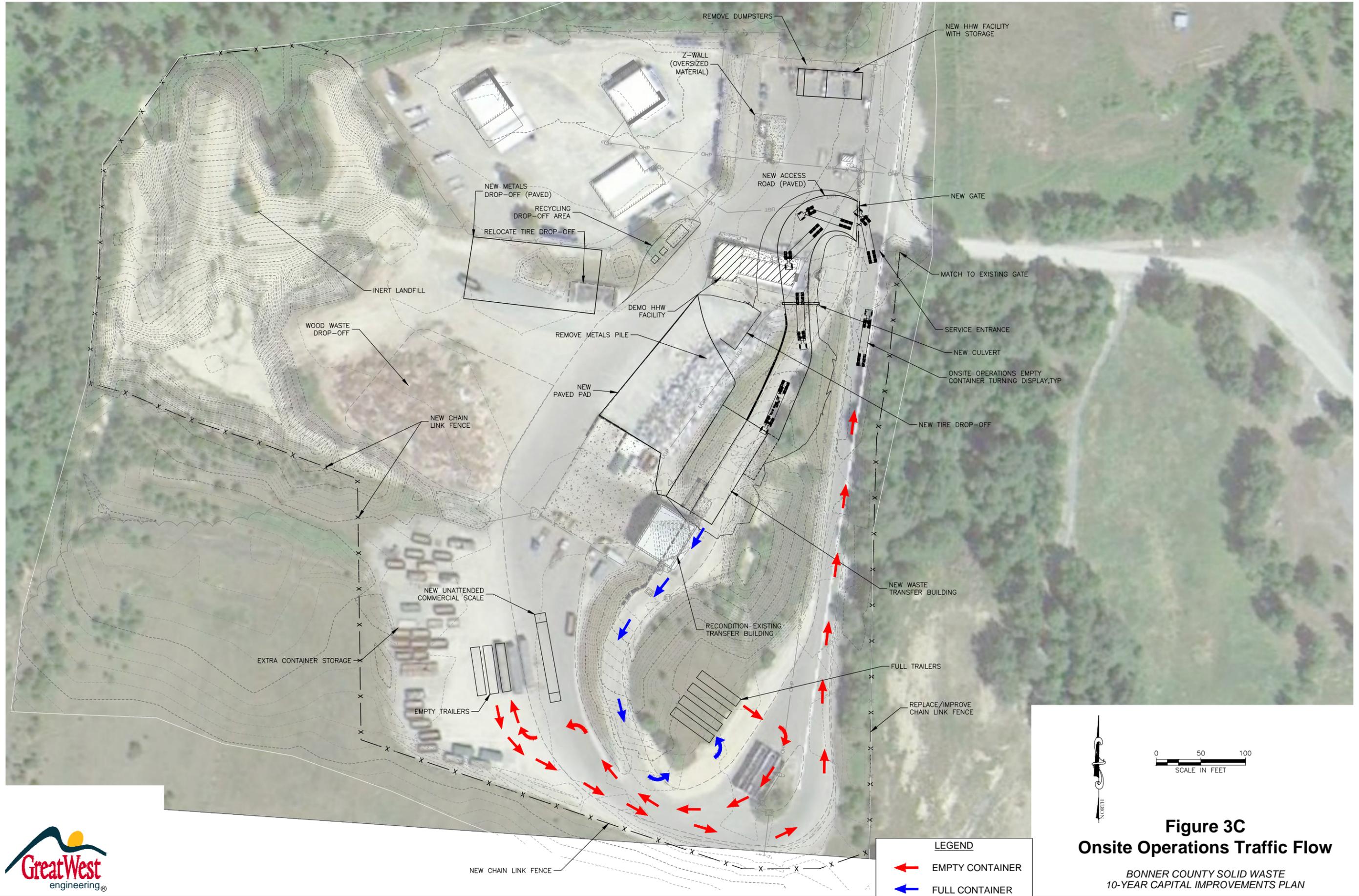


0 50 100
SCALE IN FEET

Figure 3B
Commercial Traffic Flow
BONNER COUNTY SOLID WASTE
10-YEAR CAPITAL IMPROVEMENTS PLAN

LEGEND
← WASTE TRANSFER BUILDINGS

M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-03C.dwg



LEGEND

| | |
|--|-----------------|
| | EMPTY CONTAINER |
| | FULL CONTAINER |



0 50 100
SCALE IN FEET

Figure 3C
Onsite Operations Traffic Flow

BONNER COUNTY SOLID WASTE
10-YEAR CAPITAL IMPROVEMENTS PLAN

M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-04.dwg



Figure 4
Idaho Hill Proposed Site Improvements
 BONNER COUNTY SOLID WASTE
 10-YEAR CAPITAL IMPROVEMENTS PLAN

M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-05.dwg

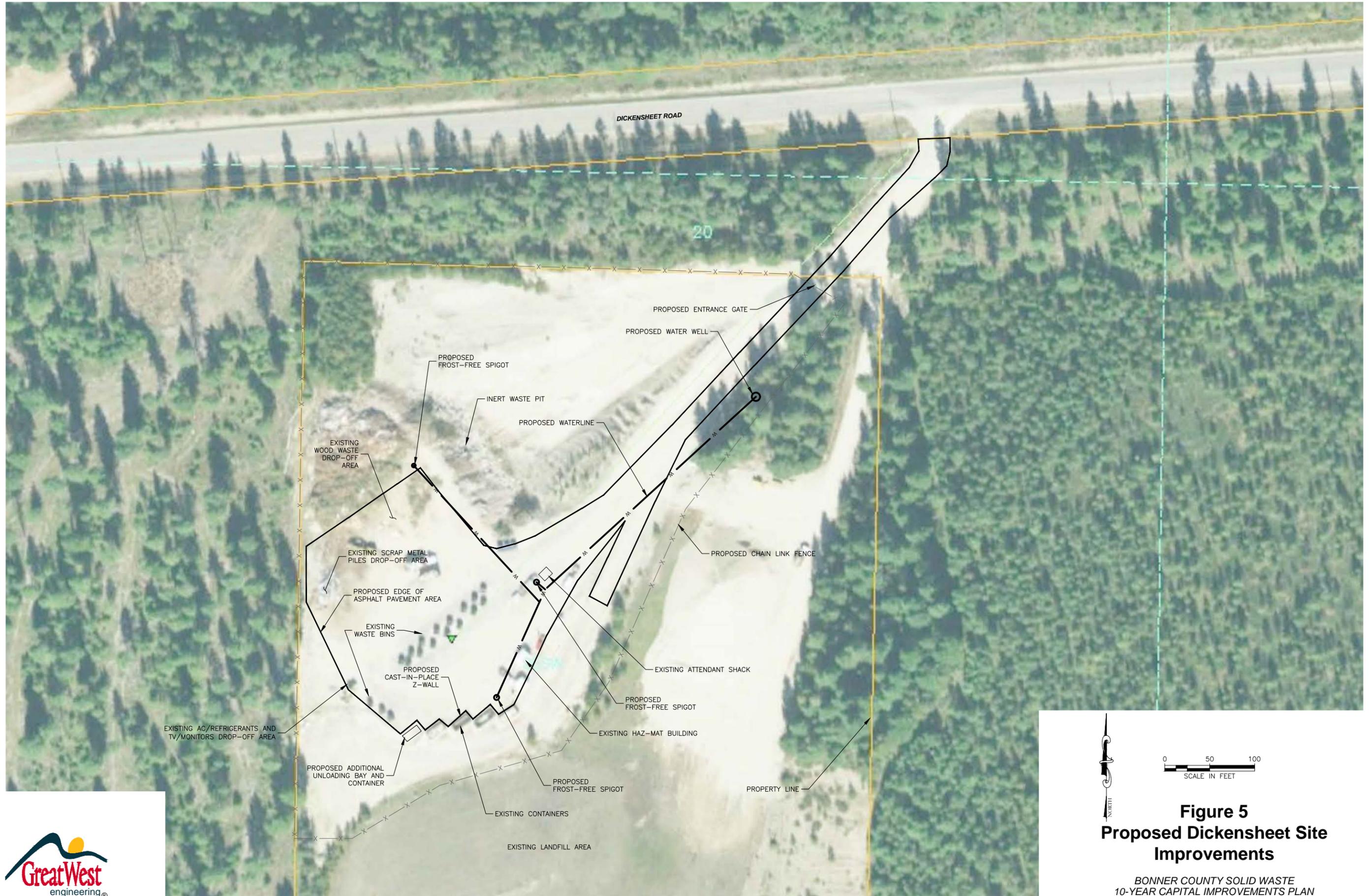


Figure 5
Proposed Dickensheet Site
Improvements

BONNER COUNTY SOLID WASTE
 10-YEAR CAPITAL IMPROVEMENTS PLAN



M:\4-17148-Bonner County Transfer Station\CADD 4-17148\Exhibits\4-17148-FIG-06.dwg

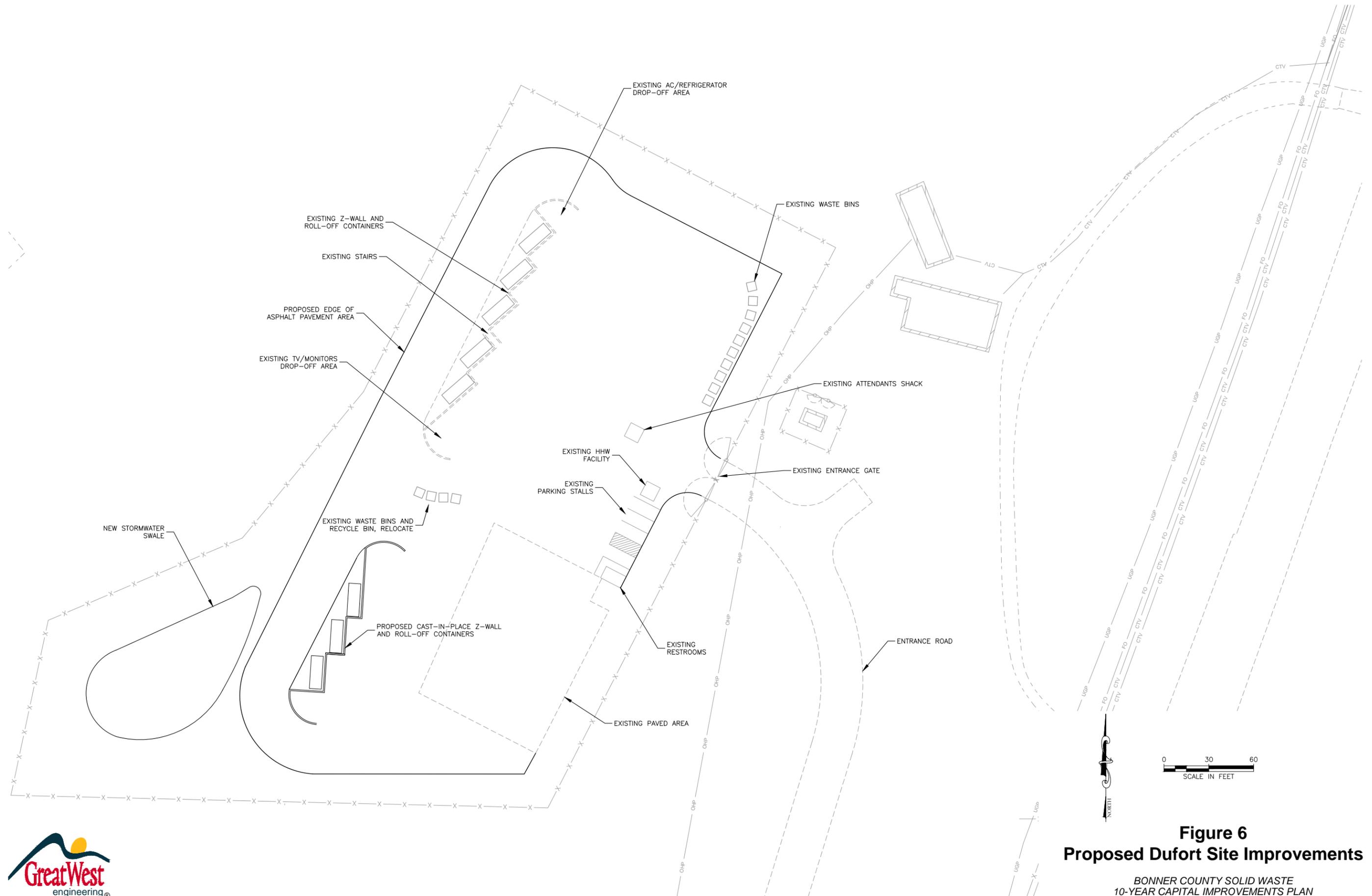


Figure 6
Proposed Dufort Site Improvements

BONNER COUNTY SOLID WASTE
10-YEAR CAPITAL IMPROVEMENTS PLAN



APPENDIX A

Engineer's Opinion of Costs

10-Year CIP / Bonner County
Colburn Site Improvements - New HHW Facility/Storage
Engineer's Opinion of Cost



Prepared For: Bonner County Solid Waste
Prepared By: Duncan Breedlove, EIT
Reviewed by: Stephanie Beckert, PE
Date: April 2019
Project No. 4-17148
Revision No. 0
Approved By: Travis Pyle, PE

| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|---------------------------------|---|--------------------|------|------------|---------------------|
| Site Civil | | | | | |
| 1 | Building Utilities Connection (Allowance) | 1 | LS | \$ 10,000 | \$ 10,000 |
| 2 | Building Pad Final Preparation (Allowance) | 1 | LS | \$ 5,000 | \$ 5,000 |
| 3 | Structural Backfill (Under Building Slabs) | 100 | CY | \$ 28.00 | \$ 2,800 |
| 4 | Paved Apron (Asphalt/Base Rock/Top Course) | 2,500 | SF | \$ 5.00 | \$ 12,500 |
| Structural/Architectural | | | | | |
| 5 | Steel Building/Slab/Walls | 1,200 | LS | \$ 175.00 | \$ 210,000 |
| 6 | Mechanical - Plumbing and Ventilation | 1 | LS | \$ 30,000 | \$ 30,000 |
| 7 | Electrical Systems | 1 | LS | \$ 35,000 | \$ 35,000 |
| 8 | Canopy Cover w/ Slab | 200 | SF | \$ 50.00 | \$ 10,000 |
| 9 | Enclosed Storage w/ Slab | 750 | SF | \$ 65.00 | \$ 48,750 |
| General Conditions | | | | | |
| 10 | Bonus, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 52,733 | \$ 52,733 |
| 11 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 17,578 | \$ 17,578 |

| | | |
|--|-------|------------------|
| CONSTRUCTION SUBTOTAL | | \$434,360 |
| CONTINGENCY ⁽²⁾ | 20% | \$86,872 |
| CONSTRUCTION TOTAL (Rounded) | | \$521,000 |
| A/E DESIGN | 12% | \$62,520 |
| A/E CM SUPPORT SERVICES (limited CM Support) | 4% | \$20,840 |
| TAXES (Materials Only) | 6.00% | \$15,630 |
| TOTAL (Base Cost) | | \$620,000 |
| Low Range (-30%) | | \$434,000 |
| High Range (+50%) | | \$930,000 |

Notes:

- (1) This is cost estimate based on concept-level design. This estimate assumes a 1-15% level of design and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%.
- (2) Contingency is for scope changes that are presently unforeseen.

10-Year CIP / Bonner County
Colburn Site Improvements - New Waste Transfer Building
Engineer's Opinion of Cost



Prepared For: Bonner County Solid Waste

Prepared By: Duncan Breedlove, EIT

Reviewed by: Stephanie Beckert, PE

Date: April 2019

Project No. 4-17148

Revision No. 0

Approved By: Travis Pyle, PE

| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|---------------------------------|--|--------------------|------|------------|---------------------|
| Site Civil | | | | | |
| 1 | Building Utilities Connection (Allowance) | 1 | LS | \$ 5,000 | \$ 5,000 |
| 2 | Building Pad Final Preparation (Allowance) | 1 | LS | \$ 12,000 | \$ 12,000 |
| 3 | New Contact Water Tank (5,000 gallons) | 1 | LS | \$ 35,000 | \$ 35,000 |
| 4 | Structural Fill (Building Foundation) | 100 | CY | \$ 28.00 | \$ 2,800 |
| 5 | Structural Fill (Retaining Wall) | 130 | CY | \$ 28.00 | \$ 3,640 |
| 6 | Paved Apron (Asphalt/Base Rock/Top Course) | 15,000 | SF | \$ 5.00 | \$ 75,000 |
| Structural/Architectural | | | | | |
| 7 | Steel Building/Tipping Floor/Push Walls/Cladding | 7,200 | SF | \$ 200.00 | \$ 1,440,000 |
| 8 | Retaining Wall - Assume 0.5 CY/LF | 70 | CY | \$ 800.00 | \$ 56,000 |
| 7 | Knuckleboom Crane/Electrical/Install | 1 | LS | \$ 250,000 | \$ 250,000 |
| 8 | Axle Pit Scales (Two Scales) w/ Readouts | 1 | LS | \$ 45,000 | \$ 45,000 |
| General Conditions | | | | | |
| 9 | Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 288,666 | \$ 288,666 |
| 10 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 96,222 | \$ 96,222 |

| | | |
|--|-------|--------------------|
| CONSTRUCTION SUBTOTAL | | \$2,309,328 |
| CONTINGENCY ⁽²⁾ | 20% | \$461,866 |
| CONSTRUCTION TOTAL (Rounded) | | \$2,771,000 |
| A/E DESIGN | 12% | \$332,520 |
| A/E CM SUPPORT SERVICES (limited CM Support) | 4% | \$110,840 |
| TAXES (Materials Only) | 6.00% | \$83,130 |
| TOTAL (Base Cost) | | \$3,298,000 |
| Low Range (-30%) | | \$2,309,000 |
| High Range (+50%) | | \$4,947,000 |

Notes:

(1) This is cost estimate based on concept-level design. This estimate assumes a 1-15% level of design and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%.

(2) Contingency is for scope changes that are presently unforeseen.

10-Year CIP / Bonner County
Colburn Site Improvements - Site Work
Engineer's Opinion of Cost



Prepared For: Bonner County Solid Waste
Prepared By: Duncan Breedlove, EIT
Reviewed by: Stephanie Beckert, PE
Date: April 2019
Project No. 4-17148
Revision No. 0
Approved By: Travis Pyle, PE

| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|-----------------------------------|---|--------------------|------|------------|---------------------|
| Site Civil | | | | | |
| 1 | Site Clearing and Preparation | 1 | LS | \$ 5,000 | \$ 5,000 |
| 2 | Site General Excavation | 3,100 | CY | \$ 2.25 | \$ 6,975 |
| 3 | General Site Fill (Select Native Fill) | 1,400 | CY | \$ 3.50 | \$ 4,900 |
| 4 | Geotech Work/Structural Allowance | 1 | LS | \$ 35,000 | \$ 35,000 |
| 5 | Asphalt/Base Rock/Top Course | 28,600 | SF | \$ 5.00 | \$ 143,000 |
| 6 | 8-Inch Structural Fill (Road) | 300 | CY | \$ 28.00 | \$ 8,400 |
| 7 | Stormwater Management Systems (Swales, Ponds, Ditches, etc.) - Allowance | 1 | LS | \$ 35,000 | \$ 35,000 |
| 8 | Perimeter Chain Link Fence | 2,500 | LF | \$ 35.00 | \$ 87,500 |
| 9 | Striping and Signage | 1 | LS | \$ 5,000 | \$ 5,000 |
| 10 | Soil Stabilization/Seeding and Mulching | 1 | AC | \$ 2,500 | \$ 2,500 |
| Site Yard Electrical/Comm. | | | | | |
| 11 | Site/Yard Electrical/Comm./Lighting (Allowance) | 1 | LS | \$ 35,000 | \$ 35,000 |
| General Conditions | | | | | |
| 12 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 54,116 | \$ 54,116 |
| 13 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 18,039 | \$ 18,039 |

| | | |
|--|-------|------------------|
| CONSTRUCTION SUBTOTAL | | \$440,430 |
| CONTINGENCY ⁽²⁾ | 20% | \$88,086 |
| CONSTRUCTION TOTAL (Rounded) | | \$529,000 |
| A/E DESIGN | 12% | \$63,480 |
| A/E CM SUPPORT SERVICES (limited CM Support) | 4% | \$21,160 |
| TAXES (Materials Only) | 6.00% | \$15,870 |
| TOTAL (Base Cost) | | \$630,000 |
| Low Range (-30%) | | \$441,000 |
| High Range (+50%) | | \$945,000 |

Notes:

(1) This is cost estimate based on concept-level design. This estimate assumes a 1-15% level of design and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%.

(2) Contingency is for scope changes that are presently unforeseen.

10-Year CIP / Bonner County
Colburn Site Improvements - Recondition Existing Transfer Building
Engineer's Opinion of Cost



Prepared For: Bonner County Solid Waste
Prepared By: Duncan Breedlove, EIT
Reviewed by: Stephanie Beckert, PE
Date: April 2019
Project No. 4-17148
Revision No. 0
Approved By: Travis Pyle, PE

| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|---------------------------------|--|--------------------|------|------------|---------------------|
| Site Civil | | | | | |
| 1 | Allowance - Site Prep/Area Work/Demo | 1 | LS | \$ 25,000 | \$ 25,000 |
| Structural/Architectural | | | | | |
| 2 | Replace Steel Siding Panels | 7,000 | SF | \$ 6.00 | \$ 42,000 |
| 3 | Replace Translucent Window Panels | 200 | SF | \$ 125.00 | \$ 25,000 |
| 4 | Demo/Repair Heavy Wear Area of Tipping Floor | 1,500 | SF | \$ 75.00 | \$ 112,500 |
| 5 | Replace Push-Walls with 8' Metal Cladded Walls | 80 | LF | \$ 700.00 | \$ 56,000 |
| 6 | Upgrade Lighting (interior and exterior) | 1 | LS | \$ 25,000 | \$ 25,000 |
| 7 | Replace Chute Metal Armoring | 90 | LF | \$ 500.00 | \$ 45,000 |
| 8 | Replace Pit Scales | 1 | LS | \$ 45,000 | \$ 45,000 |
| General Conditions | | | | | |
| 9 | Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 56,325 | \$ 56,325 |
| 10 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 18,775 | \$ 18,775 |

| | | |
|--|-------|------------------|
| CONSTRUCTION SUBTOTAL | | \$450,600 |
| CONTINGENCY ⁽²⁾ | 20% | \$90,120 |
| CONSTRUCTION TOTAL (Rounded) | | \$541,000 |
| A/E DESIGN | 12% | \$64,920 |
| A/E CM SUPPORT SERVICES (limited CM Support) | 4% | \$21,640 |
| TAXES (Materials Only) | 6.00% | \$16,230 |
| TOTAL (Base Cost) | | \$644,000 |
| Low Range (-30%) | | \$451,000 |
| High Range (+50%) | | \$966,000 |

Notes:

(1) This is cost estimate based on concept-level design. This estimate assumes a 1-15% level of design and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%.

(2) Contingency is for scope changes that are presently unforeseen.

10-Year CIP / Bonner County
Colburn Site Improvements - Commercial Scale
Engineer's Opinion of Cost



Prepared For: Bonner County Solid Waste
Prepared By: Duncan Breedlove, EIT
Reviewed by: Stephanie Beckert, PE
Date: April 2019
Project No. 4-17148
Revision No. 0
Approved By: Travis Pyle, PE

| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|---------------------------------|--|--------------------|------|------------|---------------------|
| Site Civil | | | | | |
| 1 | Site Prep | 1 | LS | \$ 15,000 | \$ 15,000 |
| 2 | Grading/Paving/Improvements | 1 | LS | \$ 30,000 | \$ 30,000 |
| Scales and Appurtenances | | | | | |
| 3 | 80'x10' Above Ground Scale/Approach Pads | 1 | EA | \$ 90,000 | \$ 90,000 |
| 4 | Remote Weight Displays (Scoreboards) | 2 | EA | \$ 2,500 | \$ 5,000 |
| 5 | Kiosks | 2 | EA | \$ 8,500 | \$ 17,000 |
| 6 | Servers/Computer Hardware (Allowance) | 1 | LS | \$ 15,000 | \$ 15,000 |
| 7 | Electrical/Comm. (Allowance) | 1 | LS | \$ 25,000 | \$ 25,000 |
| 8 | Installation/Comissioning Support | 1 | LS | \$ 5,000 | \$ 5,000 |
| General Conditions | | | | | |
| 9 | Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 30,300 | \$ 30,300 |
| 10 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 10,100 | \$ 10,100 |

| | | |
|--|-------|------------------|
| CONSTRUCTION SUBTOTAL | | \$242,400 |
| CONTINGENCY ⁽²⁾ | 20% | \$48,480 |
| CONSTRUCTION TOTAL (Rounded) | | \$291,000 |
| A/E DESIGN | 12% | \$34,920 |
| A/E CM SUPPORT SERVICES (limited CM Support) | 4% | \$11,640 |
| TAXES (Materials Only) | 6.00% | \$8,730 |
| TOTAL (Base Cost) | | \$347,000 |
| Low Range (-30%) | | \$243,000 |
| High Range (+50%) | | \$521,000 |

Notes:

(1) This is cost estimate based on concept-level design. This estimate assumes a 1-15% level of design and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%.
(2) Contingency is for scope changes that are presently unforeseen.

10-Year CIP / Bonner County

Idaho Hill Site Improvements

Engineer's Opinion of Cost



Prepared For: Bonner County Solid Waste

Prepared By: Duncan Breedlove, EIT

Reviewed by: Stephanie Beckert, PE

Date: April 2019

Project No. 4-17148

Revision No. 0

Approved By: Travis Pyle, PE

| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|---|---|--------------------|------|------------|---------------------|
| Site Civil | | | | | |
| 1 | Site Clearing and Preparation | 1 | LS | \$ 2,500 | \$ 2,500 |
| 2 | Paving (Asphalt/Base Rock/Top Course) | 49,900 | SF | \$ 5.00 | \$ 249,500 |
| 3 | Septic Tank | 1 | LS | \$ 2,500 | \$ 2,500 |
| 4 | Drainfield | 1,000 | SF | \$ 3.50 | \$ 3,500 |
| 5 | Domestic Well | 200 | FT | \$ 60.00 | \$ 12,000 |
| 6 | Pump | 1 | LS | \$ 2,500 | \$ 2,500 |
| 7 | Pump Electrical Connection | 1 | LS | \$ 1,500 | \$ 1,500 |
| 8 | Site Utility Lines (Water/Sewer) | 740 | LF | \$ 25.00 | \$ 18,500 |
| 9 | Frost-Free Spigots | 3 | LS | \$ 800 | \$ 2,400 |
| 10 | Chain Link Fence and Gates | 1,610 | LF | \$ 35 | \$ 56,350 |
| Structural/Architectural - Building and Wall | | | | | |
| 10 | <u>District Managers Shop Building</u> | | | | |
| 10a | Building Structure/Footing/Foundation | 1150 | SF | \$ 75.00 | \$ 86,250 |
| 10b | Lean-To | 1150 | SF | \$ 30.00 | \$ 34,500 |
| 10c | Mechanical - Plumbing and Ventilation | 1 | LS | \$ 8,000 | \$ 8,000 |
| 10d | Electrical Systems | 1 | LS | \$ 10,000 | \$ 10,000 |
| 11 | Z-Walls - Assume 0.25 cy/LF | 45 | CY | \$ 800 | \$ 35,600 |
| General Conditions | | | | | |
| 12 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 78,840 | \$ 78,840 |
| 13 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 26,280 | \$ 26,280 |

| | | |
|--|-------|--------------------|
| CONSTRUCTION SUBTOTAL | | \$630,720 |
| CONTINGENCY ⁽²⁾ | 20% | \$126,144 |
| CONSTRUCTION TOTAL (Rounded) | | \$757,000 |
| A/E DESIGN | 12% | \$90,840 |
| A/E CM SUPPORT SERVICES (limited CM Support) | 4% | \$30,280 |
| TAXES (Materials Only) | 6.00% | \$22,710 |
| TOTAL (Base Cost) | | \$901,000 |
| Low Range (-30%) | | \$631,000 |
| High Range (+50%) | | \$1,352,000 |

Notes:

(1) This is cost estimate based on concept-level design. This estimate assumes a 1-15% level of design and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%.

10-Year CIP / Bonner County

Dickensheet Site Improvements

Engineer's Opinion of Cost



Prepared For: Bonner County Solid Waste

Prepared By: Duncan Breedlove, EIT

Reviewed by: Stephanie Beckert, PE

Date: April 2019

Project No. 4-17148

Revision No. 0

Approved By: Travis Pyle, PE

| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|--|---|--------------------|------|------------|---------------------|
| Site Civil | | | | | |
| 1 | Site Clearing and Preparation | 1 | LS | \$ 2,500 | \$ 2,500 |
| 2 | Paving (Asphalt/Base Rock/Top Course) | 76,700 | SF | \$ 5.00 | \$ 383,500 |
| 3 | Domestic Well | 200 | FT | \$ 60.00 | \$ 12,000 |
| 4 | Pump | 1 | LS | \$ 2,500 | \$ 2,500 |
| 5 | Pump Electrical Connection | 1 | LS | \$ 1,500 | \$ 1,500 |
| 6 | Site Utility Lines (Water) | 600 | LF | \$ 25.00 | \$ 15,000 |
| 7 | Frost-Free Spigots | 3 | LS | \$ 2,500 | \$ 7,500 |
| 8 | Chain Link Fence and Gates | 2,200 | LF | \$ 35.00 | \$ 77,000 |
| Structural/Architectural - Wall Replacement/Extension | | | | | |
| 9 | Z-Walls - Assume 0.25 cy/LF | 45 | CY | \$ 800 | \$ 35,600 |
| General Conditions | | | | | |
| 10 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 80,565 | \$ 80,565 |
| 11 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 26,855 | \$ 26,855 |
| CONSTRUCTION SUBTOTAL | | | | | \$644,520 |
| CONTINGENCY ⁽²⁾ 20% | | | | | \$128,904 |
| CONSTRUCTION TOTAL (Rounded) | | | | | \$773,000 |
| A/E DESIGN ⁽³⁾ 12% | | | | | \$92,760 |
| A/E CM SUPPORT SERVICES (limited CM Support) 4% | | | | | \$30,920 |
| TAXES (Materials Only) 6.00% | | | | | \$23,190 |
| TOTAL (Base Cost) | | | | | \$920,000 |
| Low Range (-30%) | | | | | \$644,000 |
| High Range (+50%) | | | | | \$1,380,000 |

Notes:

(1) This is cost estimate based on concept-level design. This estimate assumes a 1-15% level of design and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%.

(2) Contingency is for scope changes that are presently unforeseen.

10-Year CIP / Bonner County

Dufort Site Improvements

Engineer's Opinion of Cost



Prepared For: Bonner County Solid Waste

Prepared By: Duncan Breedlove, EIT

Reviewed by: Stephanie Beckert, PE

Date: April 2019

Project No. 4-17148

Revision No. 0

Approved By: Travis Pyle, PE

| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|--|--|--------------------|------|------------------|---------------------|
| Site Civil | | | | | |
| 1 | Site Clearing and Preparation | 1 | LS | \$ 2,500 | \$ 2,500 |
| 2 | Paving (Asphalt/Base Rock/Top Course) | 25,000 | SF | \$ 5.00 | \$ 125,000 |
| 3 | Site Drainage Improvements | 1 | LS | \$ 12,000 | \$ 12,000 |
| Structural/Architectural | | | | | |
| 4 | Z-Walls - Assume 0.25cy/LF | 50 | CY | \$ 800 | \$ 40,000 |
| General Conditions | | | | | |
| 5 | Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 26,925 | \$ 26,925 |
| 6 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 8,975 | \$ 8,975 |
| CONSTRUCTION SUBTOTAL | | | | \$215,400 | |
| CONTINGENCY ⁽²⁾ | | 20% | | \$43,080 | |
| CONSTRUCTION TOTAL (Rounded) | | | | \$258,000 | |
| A/E DESIGN | | 12% | | \$30,960 | |
| A/E CM SUPPORT SERVICES (limited CM Support) | | 4% | | \$10,320 | |
| TAXES (Materials Only) | | 6.00% | | \$7,740 | |
| TOTAL (Base Cost) | | | | \$308,000 | |
| Low Range (-30%) | | | | \$216,000 | |
| High Range (+50%) | | | | \$462,000 | |

Notes:

(1) This is cost estimate based on concept-level design. This estimate assumes a 1-15% level of design and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%.

(2) Contingency is for scope changes that are presently unforeseen.

APPENDIX F

Waste Management Contract



Bonner County

Board of Commissioners

Glen Bailey

Daniel McDonald

Jeff Connolly

Bonner County Master Contract

Solid Waste and Recycling Services

This Agreement is made and entered into this 18th Day of September, 2018, by and between Bonner County, whose address is 1500 Hwy 2, Sandpoint ID 83864, hereinafter called the "owner or COUNTY," and Waste Management of Idaho, Inc., whose address is 720 4th Avenue, Suite 400, Kirkland, WA 98029, hereinafter called the "CONTRACTOR."

I. GENERAL PROVISIONS

A. THE CONTRACT

This Contract Document and Appendices A & B are the governing contract instruments. The terms of this document control over any inconsistent provisions in any other documents approved as part of this project. The TERM of this contract is five (5) fiscal years beginning October 1, 2018 and ending September 30, 2023. The Term is strictly fiscal year by fiscal year i.e., only one fiscal year commitment at a time. However, the parties mutually expect the relationship to last 5-years and the County does not presently intend on soliciting other quotes until 5-years have elapsed. The contract may be extended, amended or modified only by a written modification agreed upon by COUNTY and CONTRACTOR.

B. THE WORK

1. Term "Work" means the construction and services required by the Contract Documents, and includes all other labor, materials, equipment and services provided by the CONTRACTOR to fulfill the CONTRACTOR's obligation.
2. The intent of the Contract Documents is to include all items necessary for the proper execution and completion of the Work by the CONTRACTOR.

II. OWNER, also known as COUNTY

A. INFORMATION AND SERVICES REQUIRED OF THE OWNER

Except for permits and fees which are the responsibility of the CONTRACTOR under the Contract Documents, the Owner shall obtain and pay for other necessary approvals, easements, assessments and charges.

B. OWNER'S RIGHT TO CARRY OUT THE WORK

1. If the CONTRACTOR defaults or neglects to carry out the Work in accordance with the Contract Documents and fails within a thirty-day period after receipt of written notice from the Owner to correct such default or neglect with diligence and promptness, the Owner may, without prejudice to other remedies, correct such deficiencies. In such case, a Change Order shall be issued, deducting the cost of correction from payments due the CONTRACTOR.
2. The CONTRACTOR shall not (by contract, operation of law or otherwise) assign this Contract or any right or interest in the Contract, or delegate performance of any of its duties or obligations under this Contract, without the prior written consent of the Owner. Any such assignment or delegation without the Owner's prior written consent shall be void at the Owner's option. Subject to the foregoing restriction on assignment and delegation by the CONTRACTOR, this Contract shall be fully binding upon and enforceable by CONTRACTOR, Owner and their respective successors, assignees and legal representatives.

III. CONTRACTOR

A. EXECUTION OF THE CONTRACT

Execution of the Contract by the CONTRACTOR is a representation that the CONTRACTOR has visited the sites, become familiar with local conditions under which the work is to be performed and correlated personal observations with requirements of the Contract Documents. The CONTRACTOR also agrees to provide and adhere to a work schedule that is agreed upon by the Owner. The work schedule can only be altered with the written approval of the Owner.

B. REVIEW OF THE CONTRACT DOCUMENTS AND FIELD CONDITIONS BY THE CONTRACTOR

The CONTRACTOR shall carefully study and compare the Contract Documents with information furnished by the Owner. Before commencing with activities, the CONTRACTOR shall: (1) verify field condition; (2) carefully compare this and other information known to the CONTRACTOR with the Contract Documents; and (3) promptly report errors, inconsistencies or omissions discovered to the Owner.

C. SUPERVISION

The CONTRACTOR shall, consistent with the promise that work be performed in a skillful and workmanlike manner, supervise and direct work, using the CONTRACTOR's best skill and attention. The CONTRACTOR shall be solely responsible for and have control over construction means, methods, techniques, and procedures, and for coordinating all portions of the Work in accordance with the Contract Documents.

D. LABOR AND MATERIALS

1. Unless otherwise provided in the Contract Documents, the CONTRACTOR shall provide and pay for labor, incidental materials, equipment, tools, utilities, transportation, disposal of waste and all services necessary for proper execution and completion of the Work.
2. The CONTRACTOR will not store any materials on site in a way that may cause damage to property of the Owner.

E. WARRANTY

The CONTRACTOR warrants to the Owner that: (1) materials and equipment furnished under the contract will be in good working order unless otherwise required or permitted by the Contract Documents; (2) the Work will be free from defects not inherent in the quality required or permitted; (3) CONTRACTOR will contain, tie or enclose all solid waste so that leaking, spilling or blowing are prevented and in the event of any leaking, spilling or blowing, the CONTRACTOR shall immediately clean up litter, and leaking or spillage; and (4) the Work will conform to the requirements of the Contract Documents.

F. TAXES

The CONTRACTOR shall pay sales taxes that are legally required when the Contract is executed.

G. PERMITS, FEES, AND NOTICES

1. The CONTRACTOR shall obtain and pay for all permits and governmental fees, licenses and inspections necessary for proper execution and completion of Work, unless otherwise indicated in the Contract Documents.
2. The CONTRACTOR shall comply with and give notices required by agencies having jurisdiction over the Work. If the CONTRACTOR performs Work knowing it to be contrary to laws, statutes, ordinances, building codes, and rules and regulations without notice of the Owner, the CONTRACTOR shall assume full responsibility for such Work and shall bear the attributable costs. The CONTRACTOR shall promptly notify the Owner in writing of any known inconsistencies in the Contract Documents with such governmental laws, rules and regulations.

H. USE OF SITE

The CONTRACTOR shall confine operations at the sites to areas permitted by the Contract Documents and the Owner. The CONTRACTOR will inform and coordinate with the Bonner County Solid Waste Management Department.

I. CLEANING UP

The CONTRACTOR shall keep the Owners premises and surrounding area free from accumulation of debris and trash related to the Work.

J. INDEMNIFICATION

To the fullest extent permitted by law, the CONTRACTOR shall indemnify and hold harmless the Owner, Agents and employees thereof from and against claims, damages, losses, and expenses, including but not limited to attorney's fees, arising out of or resulting from performance of the Work, provided that such a claim, damage, loss or expense is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the Work itself) including loss of use resulting thereof, but only to the extent caused in whole or in part by negligent acts or omissions of the CONTRACTOR, a SUBCONTRACTOR, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether such claim, damage, loss, or expense is caused in part by a party indemnified hereunder.

K. ACTIVITIES ON OWNER'S PREMISES

1. If the CONTRACTOR or any of its SUBCONTRACTOR or suppliers, of any tier, performs any activities on the premises owned, leased, possessed, or controlled by the Owner, the CONTRACTOR shall; (a) take all precautions which are necessary to prevent injury (including death) to persons and damage to any property or environment in connection with such activities; and (b) release, defend, indemnify and hold harmless the Owner from all claims, losses, harm, liabilities, damages, costs and expenses (including, but not limited to, reasonable attorney's fees) that may arise in connection with such activities. Without limiting the generality of the foregoing, the CONTRACTOR waives its immunity under any applicable workers' compensation laws for purposes of this Section L and assumes potential liability for actions brought by the CONTRACTOR's employees, SUBCONTRACTORS, or suppliers of any tier.
2. The CONTRACTOR shall maintain commercial general liability policy which shall provide bodily injury and property damage liability on the CONTRACTOR's operations; on work sublet to others; and on the indemnity agreement set out above. The limits of liability insurance shall not be less than the following:
 - a. \$1,000,000 per occurrence for bodily injury liability including sickness, disease or death and \$1,000,000 bodily injury liability for all occurrences (other than automobiles); and
 - b. \$1,000,000 for property damage liability (other than automobiles) because of damage to or destruction of property of others including loss of use thereof caused by one occurrence and \$1,000,000 property damage liability for all occurrences.

- c. As an alternate to subparagraphs (a) and (b) above, the CONTRACTOR may insure for \$1,000,000 combined single limit protection for both bodily injury and property damage liability per occurrence and \$1,000,000 general aggregate.
 - d. In addition, the CONTRACTOR shall maintain Automobile Liability limits of \$1,000,000 per accident for bodily injury liability including sickness, disease or death and property damage liability because of damage to or destruction of property of others including loss of use thereof arising out of the operation of owned, non-owned and hired vehicles.
 - e. In addition, the CONTRACTOR shall maintain a true umbrella policy which provides excess limits over the primary General Liability, Automobile Liability and Employers' Liability coverage, in an amount not less than \$1,000,000.
3. In addition, the CONTRACTOR shall purchase and maintain insurance for claims under workers' compensation (industrial insurance), disability benefit and other similar employee benefit acts in the State statutory amount and Employer's Liability with coverage of at least \$250,000/\$500,000. Certificates of insurance evidencing coverage shall be included in the submittal package and reviewed for approval by the Owner prior to the start of work. CERTIFICATES OF INSURANCE must be continually provided to demonstrate continuation of coverage. THIS REQUIREMENT IS MATERIAL AND BREACH OF SAID REQUIREMENT WILL ENABLE OWNER TO REPUDIATE THE AGREEMENT. Bonner County must be listed as additional insured.
 4. The insurance described above shall be in place prior to commencing activities. The Owner's specification or approval of the coverage's or insurance in this agreement or of their amounts are not limits of liability and shall not relieve or decrease the liability of the CONTRACTOR.
 5. Before exposure to loss can occur, the CONTRACTOR shall furnish the Owner with Certificates of Insurance as evidence of all insurance required above. All certificates must be signed copies and shall contain a clause agreeing that such insurance cannot be canceled without first giving thirty (30) days written notice to the Owner, except ten (10) days notice shall be given for cancellation due to non-payment of premium.
 6. During the execution of this contract the Owner may present the CONTRACTOR with master key sets to gain timely entrance to the premises. Any keys issued to the CONTRACTOR remain the property of the Owner. The CONTRACTOR takes financial responsibility for loss, damage or theft of issued key sets, and agrees to pay all costs related to re-coring any or all premises due to loss of key sets issued to CONTRACTOR or employees of the CONTRACTOR.

IV. ADMINISTRATION OF THE CONTRACT

- A. The owner will provide administration of the Contract as described in the Contract Documents.

- B. The Owner will not have control over or charge of and will not be responsible for construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the Work, since these are solely the CONTRACTOR's responsibility.
- C. Based on the Owner's observations and evaluations of the CONTRACTOR's applications for payment, the Owner will review and certify the amounts due the CONTRACTOR.

V. CHANGES IN THE WORK

- A. After execution of the Contract, changes in the Work may be accomplished by Change Order or by order for a minor change in the Work. The Owner, without invalidating the Contract, may order changes in the Work within the general scope of the Contract consisting of additions, deletions or other revisions, the Contract sum and Contract Time being adjusted accordingly. All change orders shall be submitted to the Owner's representative for approval prior to any request for payment of said change order.
- B. Any increases or decreases to work or compensation for work will be negotiated in good faith. Any change orders for increases or decreases exceeding \$5,000.00 (five thousand dollars) will require Board of County Commissioners approval.

VI. TIME LIMITS AND PENALTIES

- A. Time limits stated in the Contract Documents are of the essence of the Contract.
- B. If the CONTRACTOR is delayed at any time in progress of the Work by changes ordered in the Work, or by labor disputes, fire, unusual delay in deliveries, unavoidable casualties of other causes beyond the CONTRACTOR's control, the Contract time shall be extended by Change Order for such reasonable time as the Owner may determine.
- C. If the CONTRACTOR fails to complete the project by the completion date, plus extensions, as established in the Technical Specifications of the Contract, the Owner shall be entitled to recover liquidated damages as an alternative remedy to the ability to recover damages as described in Section II.C.1. The Owners liquidated damages will be set at one thousand five hundred dollars (\$1,500.00) per day for each date following the established completion date (plus extensions) in the contract.

VII. PAYMENTS AND COMPLETION

A. CONTRACT SUM

The Contract Sum stated in the Agreement, including authorized adjustments, is the total amount payable by the Owner to the CONTRACTOR for performance of the Work under the Contract Documents are contained in Appendix B.

APPLICATIONS FOR PAYMENT

1. **Payment Schedule:**

Payment Request - All payment request shall be submitted for approval and acceptance by the 20th day of each month. Upon approval by the Owner's representative, the invoiced amount will be paid by the end of the same month if the invoice is submitted on or before the 10th. The CONTRACTOR may only bill for that work which is completed by the 10th. Invoices that include payment for work anticipated to be complete by the end of the month will not be approved. All work completed between the 11th and the end of the month shall be included on the next month's invoicing.

2. The Contractor further warrants that upon submittal of an application for payment, all Work for which certificates for payment have been previously issued and payments received from the Owner shall, to the best of the Contractor's knowledge, information and belief, be free and clear of liens, claims, security interests or other encumbrances adverse to the Owner's interests.

B. PROGRESS PAYMENTS

1. The Owner shall make payments in the manner provided in the Contract Documents.
2. The CONTRACTOR shall promptly pay each SUBCONTRACTOR and material supplier, upon receipt of payment from the Owner, out of the amount paid to the CONTRACTOR on account of such entities portion of the Work.
3. The Owner does not have responsibility for the payment of money to a SUBCONTRACTOR or material supplier.
4. A progress payment shall not constitute acceptance of Work not in accordance with the requirements of the Contract Documents.

C. EXTRAORDINARY CIRCUMSTANCES

CONTRACTOR'S Rates set by this Agreement are calculated to pay certain expenses and costs that are of a contingent and uncertain nature. Therefore, in addition to the annual rate increase, CONTRACTOR'S Rates in Appendix A shall, upon written request of CONTRACTOR, be further adjusted on an interim basis for increased expenses or reduced revenue associated with performance of the services hereunder due to any one or more of the following causes:

- (a) material changes in CONTRACTOR'S costs resulting from a Force Majeure event;
- (b) changes in the scope or method of services provided by CONTRACTOR;
- (c) any change in Applicable Law that becomes effective after the Effective Date of this Agreement;
- (d) any increase in fees for disposal of garbage or the processing of recyclable materials;
- (e) any increase in surcharges, fees, assessments or taxes levied by federal, state or local regulatory authorities or other governmental entities in relation to the Services under this Agreement;

- (f) a material increase in the volume of garbage and/or recyclable materials: or
- (g) any other extraordinary circumstances or causes or reasons that are not within the reasonable control of CONTRACTOR.

If CONTRACTOR requests an adjustment due to the extraordinary circumstances set forth above, CONTRACTOR shall prepare a rate adjustment request setting forth its calculation of the increased costs or reduced revenue and accompanying rate adjustment necessary to offset such increased costs or reduced revenue. The COUNTY may request any and all documentation and data reasonably necessary to evaluate such request by CONTRACTOR, and may retain, at its own expense, an independent third party to audit and review such documentation and such request. If such third party is retained, the COUNTY shall take reasonable steps, consistent with state law, to protect the confidential or proprietary nature of any data or information supplied by WM. The COUNTY shall act within thirty (30) days of receipt of the request from CONTRACTOR, but shall approve the request if reasonably sufficient supporting information is provided.

Notwithstanding the foregoing, if the request is based upon any new or increased third party fees, taxes, assessments or charges, the COUNTY shall approve the interim rate adjustment within such time period as necessary to ensure that such fees, taxes, assessments or charges are passed on to customers by the date the same are effective.

In the event that a change in Applicable Law or a material change in market conditions occurs, including but not limited to lack of commercially reasonable market availability for a type of processed Recyclable Material, changes in market specifications affecting the salability of a type of processed Recyclable Material, or changes affecting the recyclability or marketability of a type of processed Recyclable Material (each a "Material Change"), and such Material Change has the effect of materially altering the terms of this Agreement, or preventing or precluding compliance with one or more provisions of this Agreement, or preventing, precluding or substantially affecting the benefit(s) bargained for under this Agreement, including profits of CONTRACTOR, this Agreement shall be modified or suspended as may be necessary to comply with, ameliorate, or prevent the detrimental effects on the Agreement of, such Material Change. A party detrimentally affected by a Material Change shall so notify the other party and request amendment to this Agreement accordingly, and the Parties shall engage in good faith negotiations regarding such amendments of this Agreement that reflect the extent to which the provisions hereof have been, or should be, so modified or suspended. If a Material Change precludes or reduces any of Company's Rates or other revenues, then the parties shall modify this Agreement in accordance with this provision in order that CONTRACTOR can achieve, on an ongoing basis, profits that existed immediately prior to the Material Change.

If as a result of a Force Majeure event, a Party is unable wholly or partially to meet its obligations under this Agreement, it shall give the other Party prompt written notice of the Force Majeure event, describing it in reasonable detail. A Party's obligations under this Agreement shall be suspended, but only with respect to the particular component of obligations affected by the Force Majeure and only for the period during which the Force Majeure exists.

VIII. PROTECTION OF PERSONS AND PROPERTY

A. SAFETY PRECAUTIONS AND PROGRAMS

The CONTRACTOR shall be responsible for initiating, maintaining and supervising all safety precautions and programs, including all those required by law in connection with performance of the Contract. The CONTRACTOR shall promptly remedy damage and loss to property caused in whole or in part of the CONTRACTOR, or by anyone for whose acts the CONTRACTOR may be liable, except as stated otherwise.

IX. CORRECTION OF WORK

- A. The CONTRACTOR shall promptly correct Work rejected by the Owner as failing to conform to the requirements of the Contract Documents. The CONTRACTOR shall bear the cost of correcting such rejected Work.
- B. In addition to the CONTRACTOR's other obligations including warranties under Contract, the CONTRACTOR shall, for a period of one year after substantial completion, correct work not conforming to the requirements of the Contract Documents.
- C. If the CONTRACTOR fails to correct nonconforming Work within a reasonable time, the Owner may correct it and the CONTRACTOR shall reimburse the Owner for the cost of correction.

X. MISCELLANEOUS PROVISIONS

A. ASSIGNMENT OF CONTRACT

Neither party to the Contract shall assign the Contract as a whole without written consent of the other.

B. GOVERNING LAW

The CONTRACTOR shall be governed by the law of the place where the work is conducted.

C. NONWAIVER

The failure of the Owner to insist upon or enforce strict performance by the CONTRACTOR of any provisions of this Contract, or to exercise any rights or remedies under this Contract, shall not be construed as a waiver or relinquishment to any extent of its right to assert or rely upon any such provisions, rights or remedies in that or any other instance; rather, the same shall be and remain in full force and effect.

D. ENTIRE AGREEMENT

This Contract sets forth the entire agreement and supersedes any and all prior agreements, between CONTRACTOR and Owner regarding the Work. No amendment or modification of any provisions of this Contract shall be valid unless set forth in a written instrument signed by both parties. The Owner shall not be bound by, and specifically objects to, any term, condition or other provision which is different from or in addition to the provisions of this Contract (whether or not it would materially alter this Contract) and which has been proffered by CONTRACTOR in any quotation, invoice, shipping document, acceptance, confirmation, correspondence or otherwise, unless the Owner specifically agrees to such provision in a written instrument signed by the Owner. The rights, remedies and warranties afforded to the Owner pursuant to any provision of this Contract are in addition to and do not in any way limit any other rights, remedies or warranties afforded the Owner by any other provisions of this Contract, by any of the Contracts SUBCONTRACTORS, suppliers of any tier, or by law.

E. EMPLOYEES

1. The CONTRACTOR shall enforce strict discipline and good order among the CONTRACTOR's employees and other persons carrying out the Contract. The CONTRACTOR shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. At no change to the Contract price or Contract time, the Owner may provide written notice requiring the CONTRACTOR to remove from the site any employee or other person carrying out the Contract whom the Owner considers objectionable. If the work is being performed at a site in active school use or where there is a likelihood of contact with children, a person shall be unfit if he or she has plead guilty to or has been convicted of any felony crime involving physical injury or death of a child, the physical neglect of a child sexual offenses against a minor, sexual exploitation of a child or violation of similar laws of another jurisdiction. A violation of this provision is grounds for the immediate termination of this contract.
2. The CONTRACTOR shall comply with all applicable hours of work as outlined by the Owner.
3. The CONTRACTOR shall provide the Owner copies of and have available at the Project site a workplace survey or material safety data sheets for all "hazardous" chemicals under the control or use of the CONTRACTOR at the Project site. The CONTRACTOR shall not be entitled to any additional contract time or compensation arising from its failure or alleged failure to comply with any applicable Federal or State enumerated regulation.
4. Prior to contract commencement, the CONTRACTOR shall procure from the Owner all relevant documents describing known dangers and hazardous materials located at the work areas.

F. STATUTES

1. The CONTRACTOR shall abide by the provisions of all applicable Idaho statutes.
2. Law Against Discrimination. The CONTRACTOR shall comply with pertinent statutory provisions relating to Idaho Labor Laws.
3. Safety Standards. The CONTRACTOR shall comply with OSHA safety standards.
4. Unemployment Compensation. The CONTRACTOR shall pay contributions for wages for personal services performed under this Contract or arrange for a bond acceptable to the commissioner.
5. Drug-Free Workplace. The CONTRACTOR shall fully comply with all applicable federal, state, and local laws and regulations regarding drug-free workplace, including the Drug-Free Workplace Executive Order 2007-08. Any person not fit for duty for any reason, including the use of alcohol, controlled substances, or drugs, shall immediately be removed from the Work. No employee shall be in position of or use any of the above-named substance while on school property.

XI. TERMINATION OF CONTRACT

A. TERMINATION BY THE CONTRACTOR

If the Owner fails to make payment when due or substantially breaches any other obligation of this Contract, following seven days' written notice to the Owner, the CONTRACTOR may terminate the Contract and recover from the Owner payment for Work executed and for proven loss with respect to materials, equipment, tools, construction equipment and machinery, including reasonable overhead, profit and damage.

B. TERMINATION BY THE OWNER

1. The Owner may terminate the Contract if the CONTRACTOR:
 - a. Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;
 - b. Fails to make payment to SUBCONTRACTORS for materials or labor in accordance with the respective agreements between the CONTRACTOR and the SUBCONTRACTORS;
 - c. Persistently or materially disregards laws, ordinances, or rules, regulations or orders of a public authority having jurisdiction;
 - d. Fails to prosecute the work or any portion thereof with sufficient diligence to ensure the substantial completion of the work within the Contract time;
 - e. Is adjudged, bankrupt, makes a general assignment for the benefit of its creditors, or if a receiver is appointed an account of its insolvency;

- f. Fails to comply by permitting a worker on the Project having contact with children who has been convicted of or pled guilty to a felony crime involving children set forth in the section ten "Miscellaneous Provisions", E "Employees" above.
 - g. Is otherwise guilty of substantial breach of a provision of the Contract Documents.
 - h. Fails to continually and timely provide liability insurance certificates as stated above
2. When any of the above reasons exist, the Owner, may without prejudice to any other Rights or remedies of the Owner and after giving the CONTRACTOR and the CONTRACTOR's surety, if any, 30 days' written notice, terminate employment of the CONTRACTOR and may:
 - a. Finish the Work by whatever reasonable method the Owner may deem expedient.
 3. When the Owner terminates the Contract for one of the reasons stated, the CONTRACTOR shall not be entitled to receive further payment until the Work is finished.
 4. If the unpaid balance of the Contract sum exceeds costs of finishing the work, such excess shall be paid to the CONTRACTOR. If such costs exceed the unpaid balance, the CONTRACTOR shall pay the difference to the Owner. This obligation for payment shall survive termination of the contract.

C. DISPUTES

1. Any and all disputes that cannot be settled reasonably between the Owner and the CONTRACTOR shall be required to utilize the Idaho State Court system to resolve such disputes. It is agreed by both parties that arbitration or the use of an arbitrator will not be used to resolve disputes on this project.

CONTRACTOR

BONNER COUNTY COMMISSIONERS

Joe R. Riddell
NAME

Vice President & Asst Secretary
TITLE

Waste Management of Idaho, Inc
COMPANY

8/29/18
DATE

Glen Bailey
GLEN BAILEY, Chairman

Daniel McDonald
DANIEL MCDONALD, Commissioner

Jeff Connolly
JEFF CONNOLLY, Commissioner

September 18, 2018
DATE

APPENDIX A

TERMS AND CONDITIONS

DEFINITIONS

Acceptable Waste means that portion of solid waste that is normally disposed of by and originating from the occupants to the COUNTY residential dwelling units, businesses, industrial, and commercial establishments which consists of household wastes from private residences, commercial waste which originates in wholesale, retail, or service establishments such as restaurants, stores, markets, theaters, hotels, and warehouses, and institutional waste material originating in schools, hospitals, research institutions, and public buildings. In no event shall Acceptable Waste include: (1) any Hazardous Waste; or (2) any other Unacceptable Waste as defined herein. Any material which may be recycled may be excluded from the waste stream by the COUNTY and shall not, under such circumstance, be considered Acceptable Waste.

Agreement means this Solid Waste and Recycling Collection, Transfer Station Operations, and Transportation and Disposal Agreement by and between CONTRACTOR and the COUNTY as it may be amended in writing upon mutual consent from time to time.

Applicable Law means any law, regulation, requirement, or order of any Federal, State or local agency, court or other domestic or foreign governmental body, or interpretation thereof by any court or administrative agency of competent jurisdiction, and requirements of all permits, licenses, and governmental approvals applicable to performance under this Agreement.

Billing Period means each calendar month during the term of this AGREEMENT.

Change in Law means any amendment to, or promulgation of, any federal, state, county, city, or local statute, regulation, or ordinance (or interpretation thereof by a court having jurisdiction) after the execution date of this AGREEMENT that imposes, changes, modifies, and/or alters requirements of CONTRACTOR'S performance under this AGREEMENT.

Contractor means Waste Management of Idaho, Inc., its successors and assigns.

County means the County of Bonner.

Delivery Week means the six-day period composed of the Business Days beginning on Monday of each calendar week and ending on the following Saturday.

DEQ means the Idaho Department of Health and Welfare, Division of Environmental Quality.

Director means the Director of the Solid Waste Department of Bonner County or such person as may be designated by the County Commissioners to administer this AGREEMENT.

Disposal Site means the site or sites located at Columbia Ridge Landfill near Arlington Oregon, or the alternate Greater Wenatchee Landfill in Douglas County Washington, or the proposed Landfill in Adams County Washington.

Force Majeure means any act, event, or condition having a direct material adverse effect on CONTRACTOR'S ability to perform Services under this Agreement (including construction of the Transfer Station), if such act, event, or condition is beyond the reasonable control of the party relying thereon as justification for not performing an obligation or complying with any condition required of such party under this AGREEMENT. Such acts, events, or conditions shall include, but shall not be limited to, the following: (1) An act of God, lightning, earthquake, fire, severe weather conditions, epidemic, landslide, drought, hurricane, tornado, storm, explosion, partial or entire failure of utilities, flood, nuclear radiation, act of a public enemy, war, blockade, insurrection, riot or civil disturbance, labor strike or interruption, extortion, sabotage, or similar occurrence or any exercise of the power of eminent domain, condemnation, or other action of any Governmental Body on behalf of any public, quasi-public, or private entity, and (2) The order, judgment, action, or determination of any federal, state, or local court, administrative agency, or Governmental Body (excepting decisions federal, state, and local tax laws), which adversely affects the: (a) operation of the Transfer Station; (b) the right or ability of the Transfer Station to accept or transport Acceptable Waste by road; or (c) the right or ability of the Disposal Site to dispose of the Acceptable Waste, or the suspension, termination, interruption, denial, or failure of renewal or issuance of any permit, license, consent, authorization, or approval necessary to the operation of the Transfer Station or Disposal Site, or acceptance, processing, transportation, or disposal of Acceptable Waste, unless, however, it is shown that such order or judgment is the result of the grossly negligent, willful, or intentional action or inaction of the party relying thereon or is the result of grossly negligent or willful violation of Applicable Laws, and provided further that the contesting in good faith of any such order or judgment shall not constitute or be construed as a grossly negligent, willful, or intentional action or inaction of such party.

Governmental Body means (1) the United States of America; (2) one or several of the 50 states; (3) any county; (4) any municipal, city, or town authority; (5) any agency, authority, regulatory body, or subdivision of (1), (2), (3), or (4), as may have jurisdiction over or power and authority to regulate the Transfer Station, CONTRACTOR, the COUNTY, or the Disposal Site.

Hazardous Waste means (1) any material or substance which, by reason of its composition or characteristics, is (a) toxic or hazardous waste as defined in either the Solid Waste Disposal Act, 42 USC Section 6901 et seq., as replaced, amended, expanded, or supplemented, or any laws of similar purpose or effect, and such policies or regulations thereunder, or under relevant state law as replaced, amended, expanded, or supplemented, or any laws of similar purpose or effect, and any rules, regulations, or policies thereunder, or (b) special nuclear or by-products material within the meaning of the Atomic Energy Act of 1954; (2) other material which any governmental agency or unit having appropriate jurisdiction shall determine from time to time is harmful, toxic, or dangerous, or otherwise ineligible for transfer through, transportation by, or disposal from the Transfer Station; and (3) any material which would result in process residue being Hazardous Waste under (1) and (2) above.

Landfill means CONTRACTOR's Columbia Ridge Landfill in Gilliam County Oregon, the Greater Wenatchee Landfill in Douglas County Washington or the Proposed Landfill in Adams County Washington.

Permits mean any and all permits, licenses, approvals, certificates of public convenience or necessity, franchises, or authorizations which must be issued by any Governmental Body having jurisdiction

thereof to legally enable CONTRACTOR to accept and transport Acceptable Waste from the Transfer Station to the Disposal Site.

SWTS or Transfer Station means the solid waste transfer, processing, and transportation facilities located at the Colburn Landfill inclusive of adjacent property utilized for the operation thereof, or such other transfer station designated by the County Commissioners, exclusive of any portion of the premises excluded or retained by the COUNTY for other purposes.

Special Waste means any waste that requires special handling under federal, state, or local laws or regulations.

Unacceptable Waste means that portion of solid waste; exclusive of Hazardous Waste, such as, but not limited to: (1) explosives, radioactive materials, cesspool waste, sewerage, sludge; (2) motor vehicles, including major motor vehicle parts, agricultural and farm machinery and equipment, marine vessels and major parts thereof, any other large type of machinery or equipment; (3) automobile tires; (4) that which in the reasonable judgment of CONTRACTOR may present a substantial endangerment to health or to safety, or has a reasonable possibility of adversely affecting the operation of the Transfer Station; or (5) waste not authorized for disposal at the Disposal Site by those governmental entities having jurisdiction over any waste, the disposal of which would constitute a violation of any governmental requirement to the environment health or safety. Unacceptable Waste also includes any waste that is now or hereafter defined by federal law or by the disposal jurisdiction as radioactive, dangerous, hazardous or extremely hazardous waste.

1. SOLID WASTE AND RECYCLING COLLECTION SERVICES

The COUNTY provides its citizens the opportunity to utilize 14 strategically located solid waste and recycling drop off sites; ~~ten (10)~~eleven (11) attended sites and ~~four (4)~~three (3) unattended sites. The attended sites include Dickensheet site, 11-mile site, Prater Valley site, Colburn site, Upland Drive site, Careywood site, Idaho Hill site, Dufort site, Garfield Bay site, Hope/Clarkfork site and Blanchard site. The unattended sites include Wrenco Loop site, ~~Laelede site~~Careywood site, Lakeview site and Lakeview-Schweitzer site.

1.1 Service. CONTRACTOR will provide both front load collection service (6 & 8-yard containers and 4-yard handicap containers) and roll off collection service (20-yard to 50-yard containers), which includes wood, metal and cardboard roll off containers. Frequency of collection service will be determined and agreed to by COUNTY and CONTRACTOR. COUNTY will pay the CONTRACTOR the service fees set out in Appendix AB.

1.2 Payment. CONTRACTOR shall invoice the County-imposed commercial waste disposal fees to all commercial establishments being serviced by CONTRACTOR within Bonner County monthly. CONTRACTOR shall, once each calendar month remit to the COUNTY all amounts collected as commercial waste disposal fees. CONTRACTOR shall account for all waste disposal fees billed in an auditable manner. CONTRACTOR shall make available its fiscal records pertaining to the billing activities performed pursuant to this Agreement upon request by the COUNTY. COUNTY shall pay the CONTRACTOR a billing and collection fee equal to 3% of all disposal fees collected on behalf of the

COUNTY, inclusive of interest and late charges. CONTRACTOR shall be paid for the Solid Waste and Recycling Collection Service according to the fees identified in Appendix AB.

1.3 Collection Rights. It is understood between the COUNTY and CONTRACTOR, that although the CONTRACTOR is contracted to collect solid waste from the entire geographic area of the COUNTY, the COUNTY may permit businesses to haul their own waste and will, with the CONTRACTOR'S consent, explore other options to handle rural solid waste that may not include CONTRACTOR, but the COUNTY will not grant a franchise or other contract to another competitive solid waste or recycling contractor without CONTRACTOR' s consent.

1.4 Pilot Recycling Program. The COUNTY shall pay CONTRACTOR to perform one time per week front end load Recyclable Materials collection service for eight, 8-yard containers at the County staffed collection location of The Dufort Site, 25 Dufort Road, Sagle, ID 83860.

For purposes of this Section, Recyclable Materials shall include items contained in Appendix C.

CONTRACTOR shall not be obligated to collect non-recyclables and shall inform COUNTY of any refusal to collect for this reason. Upon removal of the non-recyclable materials, COUNTY may request CONTRACTOR perform a return trip, for which a return trip charge may be assessed. If COUNTY requests CONTRACTOR haul as garbage, a contamination charge shall be assessed and the contaminated load shall be considered garbage.

In the event a change in Applicable Law or a material change in market conditions occurs, this Agreement shall be modified or suspended as may be necessary to allow CONTRACTOR to achieve, on an ongoing basis, profits that existed immediately prior to the Material Change.

Either Party may terminate the Pilot Recycling Program upon thirty (30) days written notice.

CONTRACTOR shall be paid for the Pilot Recycling Program according to the fees identified in Appendix B.

2. TRANSFER STATION OPERATIONS

2.1 Operation of Transfer Station. CONTRACTOR shall operate the Transfer Station in an efficient and workmanlike manner, ensuring that solid waste is efficiently transferred from short haul vehicles and containers to long haul trailers or containers as established by but not limited to the Transfer Station Operations contract, Transportation and Disposal Contract, Rural Collection Contract, Conditional Use Permit, Operations Manual for Bonner County Transfer Sites, Bonner County Transfer Station Operations Manual and the Unacceptable Waste Exclusion Plan upon acceptance .

CONTRACTOR shall provide all personnel, equipment, machinery, fuel, portable restroom, vehicles, tools, safety supplies, telephone, et cetera, necessary for operation of the Transfer Station, moving the long-haul trailers and maintenance of the premises.

CONTRACTOR shall not collect Hazardous Wastes or Unacceptable Wastes. CONTRACTOR may refuse to accept Acceptable Waste if such refusal is consistent with this agreement and any amendments thereto. CONTRACTOR shall be responsible for any damage caused by CONTRACTOR to long haul trailers. COUNTY shall have access over all roads always. Should COUNTY change any contract or

operation manual as referenced herein in a manner which increases the cost of operations, CONTRACTOR shall have the right to reimbursement of such additional out of pocket costs.

2.2 Operation Hours. CONTRACTOR shall operate facility to accommodate trucks servicing short haul and long-haul operation in accordance with COUNTY'S contract obligations. CONTRACTOR shall provide an attendant when operating the facility to accommodate the public, Monday through Friday from 8:00 a.m. to 4:30 p.m. and on-call Saturdays and Sundays. CONTRACTOR shall observe the following holidays: Thanksgiving Day, Christmas Day and New Year's Day.

2.3 Supervisor and Personnel. The transfer station will have a supervisor in charge of the Transfer Station Operation. This supervisor, or their alternate, is available during facility operating hours. A 24-hour, 365-day communication contact and response person shall be made available. All employees will receive annual training in hazardous waste identification and emergency response. CONTRACTOR must comply with all applicable federal, state, and local laws and regulations pertaining to equal employment opportunity.

2.4 Delegation. The services and obligations of CONTRACTOR may not be delegated or transferred to any person without the prior express written consent of the COUNTY to such delegation or transfer.

2.5 Obligation of Expenses. CONTRACTOR is responsible for costs incurred for repairs to Premises resulting from any and all damage as a result of CONTRACTOR'S negligence in regard to scales, modular office and transfer station. CONTRACTOR'S liability shall not extend beyond its proportionate share of fault.

COUNTY is responsible for regular maintenance and repairs at the transfer stations. COUNTY is also responsible for expenses incurred under Force Majeure and costs incurred for repairs or modifications to Premises as a result of natural deterioration and/or the need for capital improvements as determined by COUNTY. COUNTY is not responsible for expenses determined to be CONTRACTOR'S responsibilities described herein.

2.6 Tipping Floor Responsibilities. CONTRACTOR shall be responsible for keeping the tipping floor and adjacent area reasonably clean and clear of debris during operating hours. CONTRACTOR will clear the tipping floor of garbage at the end of each daily shift. CONTRACTOR shall be responsible for removing snow and ice from the tipping floor, access to the tipping floor and immediate areas adjacent to the tipping floor during winter months.

COUNTY shall be responsible for removing snow and ice from the ingress and egress of the top loading tunnel behind the tipping floor. COUNTY shall also be responsible for removing snow and ice from the approaches and around the wood, metal and tires areas of the transfer station. COUNTY shall also be responsible for facility maintenance and repairs of the tipping floor, leachate management/collection system, scales and loader bits.

2.7 Exclusivity. All acceptable waste shall be delivered to the Transfer Station except as otherwise provided herein. CONTRACTOR shall use its best efforts not to receive any solid waste at the Transfer Station other than Acceptable Waste generated or deemed to be generated within COUNTY (and adjacent counties that COUNTY may contract with) by the residents and commercial and institutional establishments, which has been directed to the Transfer Station pursuant to the waste flow orders of COUNTY. CONTRACTOR shall be entitled to rely on waste origin documents supplied by solid waste

collectors upon making deliveries to the Transfer Station in satisfying its best efforts and obligation to exclude Hazardous Waste and Unacceptable Waste. CONTRACTOR shall maintain the implemented Unacceptable Waste Exclusion Plan with COUNTY. Said plan shall include documented training for all CONTRACTOR 'S employees working at facility.

2.8 Unacceptable Waste. CONTRACTOR shall effectively detect unacceptable waste that has entered the staging area and shall manage unacceptable waste as described in the Unacceptable Waste Exclusion Plan. CONTRACTOR shall be responsible for all costs or fines incurred due to unacceptable waste loaded into long haul trailers, under reasonable control of the CONTRACTOR. Costs and fines include but are not limited to tipping fees and transport costs. A full report shall be submitted to COUNTY if a refusal or fine is established by landfill.

2.9 Calculation of Fees. CONTRACTOR shall calculate and report to COUNTY on County-approved forms monthly the amount of Acceptable Waste delivered to the Transfer Station by the haulers and generators of Acceptable Waste generated or deemed generated in COUNTY (and any other county that COUNTY may agree to accept Acceptable Waste from). CONTRACTOR shall be entitled to receive from COUNTY the Service Fee for each ton of Acceptable Waste received and transferred through the Transfer Station based on tons delivered to COUNTY'S disposal site per COUNTY'S disposal site's certified scales.

2.10 Weighing of Deliveries. COUNTY shall maintain the weighing devices at the Transfer Station for providing its services hereunder. COUNTY, at its sole cost and expense, shall test and recalibrate the scales. The COUNTY will have the right to maintain personnel at the Transfer Station to oversee weighing and office operations of CONTRACTOR so long as such personnel shall not interfere, obstruct, or otherwise impede the efficient operation of the Transfer Station.

2.11 Weight Records. CONTRACTOR shall maintain a record containing the weight (or yardage), date, time and vehicle identification of each vehicle transporting waste upon its entrance and exit of the Transfer Station. Tare Weights shall be deemed acceptable as entrance weights if a suitable scale is not available. Weight records for any other county delivering solid waste to the Transfer Station shall be reported in a separate report indicating the tonnage from each county. All weight records shall be made on County -approved forms to COUNTY on a monthly basis.

2.12 Reporting. CONTRACTOR shall maintain running records as to quantities of Acceptable Waste transported from the Transfer Station as well as waste delivered to the Transfer Station. CONTRACTOR shall maintain records and provide such information as reasonably required by the COUNTY.

2.13 Regulations. CONTRACTOR shall operate the Transfer Station in accordance with all laws and regulations including the COUNTY'S conditional use permit and applicable regulations enacted by the host state or county of the Landfill.

2.14 Transport Obligations. CONTRACTOR shall be obligated to operate in compliance with all contractual obligations contained in the agreement between COUNTY and the long-haul contractor for transport and disposal of Acceptable Waste.

2.15 Payment. CONTRACTOR shall be paid for Transfer Station Operations Service according to the fees identified in Appendix B.

3. TRANSPORTATION AND DISPOSAL SERVICES

3.1.1 CONTRACTOR Responsibilities. CONTRACTOR shall promptly receive, accept, transfer, and dispose of all Acceptable Waste delivered in accordance with this AGREEMENT and other AGREEMENT documents and in accordance with all Applicable Laws, regulations, Permits, and ordinances which are not inconsistent with this AGREEMENT.

CONTRACTOR may refuse to accept any Hazardous Wastes or Unacceptable Wastes if such refusal is consistent with this AGREEMENT.

3.1.2 Delegation. The material services and obligations of CONTRACTOR may not be delegated or transferred to any person without the prior express written consent of the COUNTY to such delegation or transfer. CONTRACTOR may not enter into agreements for provision of material services with respect to fulfillment of CONTRACTOR's duties and obligations hereunder without the necessity of such consent.

3.1.3 Actions. During the term of this AGREEMENT, CONTRACTOR shall take any and all actions available to it, at its sole cost and expense to: (1) maintain its ability to transport and dispose of Acceptable Waste; (2) refrain from taking any actions that would, in any manner, reduce the capability of its Disposal Site to be operated; (3) to transport and dispose of Acceptable Waste, so as to fulfill its obligations and provide the services described herein; and (4) to maintain ownership, operation and/or leasing of Disposal Sites and Vehicles necessary to perform its obligations under this AGREEMENT.

3.1.4 Redirection of Acceptable Waste. The CONTRACTOR may, at any time upon at least thirty days written notice to COUNTY, redirect the COUNTY's Acceptable Waste to a different facility.

3.1.5 Compliance with Applicable Laws. CONTRACTOR shall at all times comply with and adhere to Applicable Laws for the transportation and disposal of waste and shall provide to COUNTY: (1) within five days after the receipt thereof, true, corrected, and complete copies of any written notice of noncompliance or true and accurate transcripts of any oral notice of noncompliance or true and accurate transcripts of any oral notice of noncompliance issued or given by any Governmental Body; and (2) prompt written notice describing the occurrence of any event or the existence of any circumstances which does or may result in noncompliance or nonadherence, or of any action or proceeding of any nature alleging the same.

3.1.6 Maintenance of Permits. Except as otherwise set forth herein, CONTRACTOR shall take all actions necessary to obtain, and shall take no actions which would adversely affect the retention of any Permits required to comply with this AGREEMENT in good standing.

3.1.7 Scales. In the event that the scales at the Transfer Station(s) become inoperable so as to preclude weighing of long haul trailers as provided herein, CONTRACTOR shall use scales at the Disposal Site or other scales to compute tonnage.

3.1.8 Accidents; Complaints. The CONTRACTOR shall be responsible for all injuries, accidents and other mishaps associated with its operations that are not caused by the negligence of the COUNTY. The CONTRACTOR shall report all reportable accidents resulting from the performance of this AGREEMENT to the COUNTY as soon as practicable by telephone or messenger. For purposes of this Section, "reportable accident" shall include the death of any person, any personal injury resulting in inpatient hospitalization or out-patient treatment by a physician, or damage to any real or personal

property exceeding \$5,000. The CONTRACTOR shall report, in writing, to the COUNTY, within seven (7) days of that accident, complete details of the accident, including witness statements.

The CONTRACTOR shall respond in a reasonable manner to complaints, charges and allegations related to CONTRACTOR's performance under the AGREEMENT within thirty (30) days of receipt of that complaint, charge, or allegation, including but not limited to, those complaints made or actions brought by citizens, citizen groups and public agencies. The CONTRACTOR shall deliver to the COUNTY a report of all significant complaints submitted that shall include but not be limited to the name and address of the complainant, the substance of the complaint, including the activity or service at issue, the action, if any, the Contractor has taken to investigate or remedy the problem or an explanation of why no action has been taken.

3.1.9 Reporting. CONTRACTOR shall maintain running records as to quantities of Acceptable Waste delivered to the Disposal Site by CONTRACTOR. CONTRACTOR shall submit monthly statements setting forth such information as reasonably required by the COUNTY, including but not limited to tonnage and tons per load.

3.1.10 Scheduling; Management; Quality of Performance. The CONTRACTOR shall coordinate, schedule in an orderly manner and manage all work done by CONTRACTOR's officers, employees, subcontractors shall perform every act or service under this AGREEMENT in a skillful and competent manner in accordance with the highest standards of the solid waste transportation and disposal industries. The CONTRACTOR shall be responsible to the COUNTY for any errors, deficiencies, or failures to perform under this AGREEMENT. All workers and subcontractors shall be skilled in their trades. All operators shall be licensed or otherwise qualified as required by law. The CONTRACTOR shall furnish evidence of the skill and licenses of its officers, employees, subcontractors and agents on the request of the COUNTY. The CONTRACTOR shall, at all times, enforce strict discipline and good order among its employees and all subcontractors.

3.1.11 Royalties; License Fees; Patents. The CONTRACTOR shall pay all royalties and license fees, shall defend all suits or claims for patent infringements that may occur in the performance of this AGREEMENT and shall hold the COUNTY harmless from any loss on account thereof.

3.1.12 Payment. CONTRACTOR shall be paid for the Transportation and Disposal Service according to the fees identified in Appendix B.

3.2 COUNTY Responsibilities. The COUNTY shall deliver all Acceptable Waste generated within the County that is subject to the County's jurisdiction, on each Business Day and after the Commencement Date, cause, pursuant to this agreement, trailers or containers to be loaded with Acceptable Waste, unless otherwise agreed by the parties. There will be no penalty or charge against the COUNTY should circumstances beyond the COUNTY's control prevent delivery of waste for a period not to exceed fourteen days, after which COUNTY may be billed for the daily portion of the tonnage which would have been shipped during the period of non- delivery.

COUNTY shall calculate the amount of Acceptable Waste delivered to the CONTRACTOR based upon the difference in weight of the delivery vehicles as weighed before and after the loading of Acceptable Waste, and CONTRACTOR shall be entitled to receive from the COUNTY the contracted fee for each ton of Acceptable Waste transported. However, due to standard practices, CONTRACTOR may bill COUNTY based on scale weight at the Disposal Site. COUNTY reserves the right to adjust billings if an inconsistency in weight exists.

3.2.1 Weighing of Waste. COUNTY shall maintain a weighing device at the Transfer Station for the purpose of providing its services hereunder. COUNTY, at its cost and expense, shall test and recalibrate the scales as often as may be required by Applicable Laws. The CONTRACTOR will have the right to maintain personnel at the Transfer Station to oversee weighing and office operations so long as such personnel shall not interfere, obstruct, or otherwise impede the efficient operation of the Transfer Station.

3.2.3 Acceptable Waste Only.

(a) The COUNTY shall use best efforts to cause the delivery of only Acceptable Waste to the CONTRACTOR.

(b) In an effort to ensure that only Acceptable Waste is delivered to the Transfer Station, the COUNTY shall notify generators and solid waste haulers (private and public), at reasonable intervals, that Unacceptable Waste is not to be delivered to the Transfer Station(s). Such notification shall not, however, relieve the COUNTY of its responsibility to use best efforts to prevent the delivery of Unacceptable Waste to the Transfer Station.

(c) COUNTY employees or contracted personnel at the Transfer Station shall scrutinize waste as it is transferred at the Transfer Station and shall remove (or cause to be removed) hazardous or unacceptable waste when detected.

3.2.4 Waste Stream. COUNTY will take no action to remove Acceptable Waste (except that removed through recycling, composting or a similar option) from the waste stream directed to CONTRACTOR for duration of this AGREEMENT, except that under no circumstances shall the COUNTY be obligated to direct or cause to be directed to the CONTRACTOR any Acceptable Waste after the end of the term of this AGREEMENT. COUNTY reserves the right to redirect the waste stream to another location or make other transportation arrangements at any time when CONTRACTOR is in continuing violation of this AGREEMENT or is failing to perform; CONTRACTOR shall have no right to payment for such waste.

3.2.5 Prosecution of Actions. COUNTY shall diligently (1) defend itself and CONTRACTOR against all actions and causes of action arising out of any action or lack of action by the COUNTY, pending or threatened against said COUNTY or CONTRACTOR which, irrespective of the merits thereof, would adversely affect the ability of the Transfer Station or the CONTRACTOR from performing obligations; and (2) prosecute any and all claims which the COUNTY or CONTRACTOR may have which, if waived or permitted to lapse, would adversely affect the ability of the Transfer Station or CONTRACTOR to accept, process, transport or dispose of Acceptable Waste.

3.2.6 Access to SWTS. COUNTY shall permit CONTRACTOR and its subcontractors to have 24-hour access to the SWTS or other areas where loaded trailers are stored for purposes of transporting waste from the SWTS.

3.2.7 Power and Authority. The COUNTY represents to CONTRACTOR that:

(a) The COUNTY is duly organized and existing in good standing under the laws of the State of Idaho and is duly qualified and authorized to carry on the governmental functions and operations contemplated by this AGREEMENT; and

(b) The COUNTY has the power, authority, and legal right, to enter into and perform its obligations set forth in this AGREEMENT, including but not limited to its obligations upon breach as set forth in Article VIII, paragraph B; and

(c) The execution, delivery and performance of this AGREEMENT: (1) has been duly authorized by the County Commissioners; (2) does not require any consent or referendum of voters; (3) does not violate any State statute with respect to public bidding; and (4) will not violate any judgment, order, law, or regulation applicable to the COUNTY or any provisions of the COUNTY's Charter or Bylaws; and

(d) This AGREEMENT has been duly entered into and delivered and, as of the date of approval by the Bonner County Commissioners will constitute a legal, valid and binding obligation of the COUNTY, enforceable in accordance with its terms, except as enforcement may be limited by bankruptcy, insolvency, reorganization, moratorium, or other laws relating to or limiting creditor's rights generally; and

(e) There is no action, suit, or proceeding, at law or in equity, before or by any court or governmental authority, pending or, to the best of COUNTY's knowledge, threatened against the COUNTY, wherein an unfavorable decision, ruling or finding would materially adversely affect the performance by the COUNTY of its obligations hereunder or the other transactions contemplated hereby, or which, in any way, would adversely affect the validity or enforceability of this AGREEMENT, or any other agreement or instrument entered into by the COUNTY in connection with the transactions contemplated hereby; and

(f) The COUNTY shall provide a written opinion of counsel to CONTRACTOR at the time of the COUNTY's execution of this AGREEMENT which confirms that the representations set forth in this Article VII, paragraph A are true and correct as of the date of said execution.

3.2.8 Director. COUNTY will designate a director to administer this program, who shall be the primary contact person CONTRACTOR should deal with in carrying out the provisions of this AGREEMENT.

3.2.9 Payment. CONTRACTOR shall be paid for the Transportation and Disposal Service according to the fees identified in Appendix B.

APPENDIX B
RATES AND FEES

Front End Load Service

The COUNTY shall pay CONTRACTOR a flat fee of **\$35,231.00** per month for CONTRACTOR to perform front end load service (8-yard containers) at all staffed and non-staffed designated collection locations in the County. This rate shall be subject to a 2.8% annual increase. In addition, it shall be adjusted in the event that additional collection locations and/or the frequency of collections are added by the COUNTY. If additional collection locations and/or the frequency of collections are added by the COUNTY in future years, the Parties agree to work in good faith to renegotiate the rate set forth herein.

Roll-Off Service

The COUNTY shall pay CONTRACTOR a flat fee of **\$21,729.00** per month for CONTRACTOR to perform roll-off collection service at all staffed and non-staffed designated collection locations in the County using the 2017 actual roll off hauls for the Base Year (2,267 hauls). This rate shall be subject to a 2.8% annual increase. In the event hauls exceed the Base Year level we will add the additional hauls to the next year's billing calculation at the average rate per haul and recalculate the flat monthly fee for the subsequent year.

Pilot Single Stream Recycling Service

The COUNTY shall pay CONTRACTOR a fee of **\$520.00** per collection at the Dufort site located at 25 Dufort Road, Sagle, ID 83860. This fee includes transport to and processing at the SMaRT Center in Spokane, WA. This rate shall be subject to a 2.8% annual increase.

Transfer Station Operations

The COUNTY shall pay CONTRACTOR a fee of **\$8.72** per ton to operate the COUNTY Transfer Station commonly known as the Colburn Transfer Station. This rate shall be subject to a 2.8% annual increase.

Transport and Disposal Service

The COUNTY shall pay CONTRACTOR a fee of **\$73.44** per ton to transport and dispose of all COUNTY waste at CONTRACTOR'S Columbia Ridge Landfill. This rate shall be subject to a 2.8% annual increase.

APPENDIX C
PILOT RECYCLABLES LIST & INSTRUCTIONS

| MATERIAL TYPES | ACCEPTABLE RECYCLABLES DESCRIPTION | PREPARATION INSTRUCTIONS | EXCLUSIONS |
|----------------|--|--|---|
| Paper | <ul style="list-style-type: none"> • Office paper, copy paper, construction paper, file folders, note paper, computer paper, brochures • Newspaper, ads and paper inserts • Magazines and inserts • Catalogs • Cardboard • Direct mail and paper inserts • Envelopes • Paper bags • Cereal, cookie and cracker boxes • Paper towel tubes • Toilet paper tubes • Tissue boxes • Non-foil wrapping paper • Kraft paper bags or boxes | <p>Remove plastic bags (exterior or interior), plastic packaging, metal, electronics, magnets, twine, straws, lids and any food or liquids. Must be dry. Plastic windows in paper envelopes okay.</p> | <ul style="list-style-type: none"> • Shredded paper • Paper envelopes with bubble wrap liners • Insulation liners or envelopes made from plastic (Tyvek); • Laminated paper • Stickers/labels • Photos • Carbon paper • Receipts • Paper affixed to magnets • Hot or cold cups • Pet food bags • Mixed material bags • Wet or soiled paper • Paper with large amounts of paint or glue • Frozen food boxes • Juice boxes • Milk, juice and ice cream cartons • Aseptic containers – e.g. soup, broth, soy milk, almond milk |
| Cardboard | <ul style="list-style-type: none"> • Cardboard boxes • Cardboard packaging • Cardboard beverage | <p>Flatten all cardboard. Remove all interior packaging, block foam, packing peanuts and exterior plastic wrap. Do not bundle with tape or twine. External tape okay. Oversized cardboard can be placed next to cart/container. Must be dry.</p> | <ul style="list-style-type: none"> • Waxed cardboard |
| Metal | <ul style="list-style-type: none"> • Tin, aluminum and steel food or beverage containers | <p>Remove all exterior packaging; remove lids; empty of all food or liquids. Labels do not need to be removed.</p> | <ul style="list-style-type: none"> • Aluminum foil and trays • Sharp or greasy metal • Scrap metal • Batteries • Microwaves • Electrical cords • Cell phones |

| | | | |
|-----------------|---|--|--|
| | | | <ul style="list-style-type: none"> • Car snow chains. • Aerosol cans |
| Plastic Bottles | <ul style="list-style-type: none"> • PET/PETE bottles #1 • HDPE bottles/jugs #2 | Remove and dispose of lids; remove straws; empty of all food, liquids or other debris. Labels do not need to be removed. | <ul style="list-style-type: none"> • Plastic bags • Plastics items #3-#7 • Food and beverage containers • Dairy tubs, e.g. butter, yogurt, cottage cheese • Cups • Rigid flower pots • 5-gallon buckets • Plastic film • Diapers • Plastic bottles that contained HHW listed materials • Deli, bakery and produce clamshell containers • Loose lids – any size; plant trays • PVC • Large rigid plastic (outdoor furniture, laundry baskets, swimming pools, toys, etc.) • Hoses • Landscaping/sprinkler tubing. |
| | | | <p>OTHER EXCLUSIONS</p> <ul style="list-style-type: none"> • Shredded paper • Fabric (textiles) • Carpet • Wire • Rope • Chains • Christmas Lights • Wood • Glass of any kind |

DELIVERY SPECIFICATIONS:

Material delivered by or on behalf of Customer may not contain Non-Recyclables or Excluded Materials. “Excluded Materials” means radioactive, volatile, corrosive, flammable, explosive, biomedical, infectious, bio-hazardous or toxic substance or material, or regulated medical or hazardous waste as defined by, characterized or listed under applicable federal, state, or local laws or regulations, materials containing information (in hard copy or electronic format, or otherwise) which information is protected or regulated under any local, state or federal privacy or data security laws, including, but not limited to the Health Insurance Portability and Accountability Act of 1996, as amended, or other regulations or ordinances.

Company may reject in whole or in part, or may process, in its sole discretion, Recyclables not meeting the specifications, including wet materials, and Customer shall pay Company for all costs, losses and expenses incurred with respect to such non-conforming Recyclables including costs for handling, processing, transporting and/or disposing of such non-conforming Recyclable Materials which charges may include an amount for Company's operating or profit margin. Without limiting the foregoing, and Customer shall pay a contamination charge for additional handling, processing, transporting and/or disposing of Non-Recyclables, Excluded Materials, and/or all or part of non-conforming loads and additional charges may be assessed for bulky items such as appliances, concrete, furniture, mattresses, tires, electronics, pallets, yard waste, propane tanks, etc.

Company reserves the right upon notice to discontinue acceptance of any category of materials set forth above as a result of market conditions related to such materials and makes no representations as to the recyclability of the materials.

APPENDIX G

County Financial Information

(to be provided when available from annual audit)

APPENDIX H

Engineer's Opinion of Project Costs

Preliminary Engineering Report
Colburn Site Improvements - Site Work
Engineer's Opinion of Cost

Prepared For: Bonner County Solid Waste
Prepared By: Travis Pyle, PE/Great West
Reviewed by: Spencer Ferguson, PE/Bonner County
Date: March 8, 2021
Project No. 4-20113
Revision No. Final
Approved By: Travis Pyle, PE



| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|-----------------------------------|---|--------------------|------|------------|---------------------|
| Site Civil | | | | | |
| 1 | Site Clearing and Preparation | 1 | LS | \$ 5,000 | \$ 5,000 |
| | Site Demo | 1 | LS | \$ 10,000 | \$ 10,000 |
| 2 | Site General Excavation | 4,000 | CY | \$ 2.75 | \$ 11,000 |
| 3 | General Site Fill (Select Native Fill) | 1,400 | CY | \$ 3.50 | \$ 4,900 |
| 4 | Geotech Work/Structural Allowance | 1 | LS | \$ 40,000 | \$ 40,000 |
| 5 | Asphalt/Base Rock/Top Course | 28,600 | SF | \$ 6.00 | \$ 171,600 |
| 6 | 8-inch Structural Fill (Road) | 300 | CY | \$ 35.00 | \$ 10,500 |
| 7 | Stormwater Management Systems (Swales, Ponds, Ditches, etc.) - Allowance | 1 | LS | \$ 40,000 | \$ 40,000 |
| 8 | Perimeter Chain Link Fence | 2,500 | LF | \$ 36.00 | \$ 90,000 |
| 9 | Striping and Signage | 1 | LS | \$ 8,000 | \$ 8,000 |
| 10 | Soil Stabilization/Seeding and Mulching | 1 | AC | \$ 2,600 | \$ 2,600 |
| Site Yard Electrical/Comm. | | | | | |
| 11 | Site/Yard Electrical/Comm./Lighting (Allowance) | 1 | LS | \$ 35,000 | \$ 35,000 |
| General Conditions | | | | | |
| 12 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 64,290 | \$ 64,290 |
| 13 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 21,430 | \$ 21,430 |

| | | |
|--|-------|--------------------|
| CONSTRUCTION SUBTOTAL | | \$514,320 |
| CONTINGENCY ⁽²⁾ | 20% | \$102,864 |
| CONSTRUCTION TOTAL (Rounded) | | \$617,000 |
| A/E DESIGN | 10% | \$61,700 |
| A/E CM SUPPORT SERVICES (limited CM Support) | 4% | \$24,680 |
| TAXES (Materials Only) | 6.00% | \$18,510 |
| TOTAL (Base Cost) | | \$722,000 |
| Low Range (-30%) | | \$505,000 |
| High Range (+50%) | | \$1,083,000 |

Notes:

(1) This cost estimate is based on design as reflected in the PER (1-15% level of design) and is considered a Class 4 estimate in accordance with ACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%. The actual cost of the project will depend on competitive market conditions, actual labor and material costs, actual site conditions (e.g., suitability of subsurface soils), productivity, project scope, schedule, final design, and other factors. As a result, the actual costs of the projects will vary. Because of these factors, funding needs must be carefully reviewed prior to making specific financial decisions or establishing final budgets.

(2) Contingency is for scope changes that are presently unforeseen.

Preliminary Engineering Report
Colburn Site Improvements - Commercial Scale
Engineer's Opinion of Cost

Prepared For: Bonner County Solid Waste
Prepared By: Travis Pyle, PE/Great West
Reviewed by: Spencer Ferguson, PE/Bonner County
Date: March 8, 2021
Project No. 4-20113
Revision No. Final
Approved By: Travis Pyle, PE



| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|--|---|--------------------|------|------------------|---------------------|
| Site Civil | | | | | |
| 1 | Site Clearing and Preparation | 1 | LS | \$ 15,000 | \$ 15,000 |
| 2 | Grading/Paving/Improvements Allowance | 1 | LS | \$ 35,000 | \$ 35,000 |
| Scales and Appurtenances | | | | | |
| 3 | 80'x10' Above Ground Scale/Approach Pads | 1 | EA | \$ 90,000 | \$ 90,000 |
| 4 | Remote Weight Displays (Scoreboards) | 2 | EA | \$ 2,800 | \$ 5,600 |
| 5 | Kiosks | 2 | EA | \$ 9,000 | \$ 18,000 |
| 6 | Servers/Computer Hardware (Allowance) | 1 | LS | \$ 16,000 | \$ 16,000 |
| 7 | Electrical/Comm. (Allowance) | 1 | LS | \$ 26,000 | \$ 26,000 |
| 8 | Installation/Comissioning Support | 1 | LS | \$ 5,500 | \$ 5,500 |
| General Conditions | | | | | |
| 9 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 31,665 | \$ 31,665 |
| 10 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 10,555 | \$ 10,555 |
| CONSTRUCTION SUBTOTAL | | | | \$253,320 | |
| CONTINGENCY ⁽²⁾ | | | | 20% | \$50,664 |
| CONSTRUCTION TOTAL (Rounded) | | | | \$304,000 | |
| A/E DESIGN | | | | 10% | \$30,400 |
| A/E CM SUPPORT SERVICES (limited CM Support) | | | | 4% | \$12,160 |
| TAXES (Materials Only) | | | | 6.00% | \$9,120 |
| TOTAL (Base Cost) | | | | \$356,000 | |
| Low Range (-30%) | | | | \$249,000 | |
| High Range (+50%) | | | | \$534,000 | |

Notes:

(1) This cost estimate is based on design as reflected in the PER (1-15% level of design) and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%. The actual cost of the project will depend on competitive market conditions, actual labor and material costs, actual site conditions (e.g., suitability of subsurface soils), productivity, project scope, schedule, final design, and other factors. As a result, the actual costs of the projects will vary. Because of these factors, funding needs must be carefully reviewed prior to making specific financial decisions or establishing final budgets.

(2) Contingency is for scope changes that are presently unforeseen.

Preliminary Engineering Report
Colburn Site Improvements - New Waste Transfer Building
Engineer's Opinion of Cost

Prepared For: Bonner County Solid Waste
Prepared By: Travis Pyle, PE/Great West
Reviewed by: Spencer Ferguson, PE/Bonner County
Date: March 8, 2021
Project No. 4-20113
Revision No. Final
Approved By: Travis Pyle, PE



| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|---------------------------------|---|--------------------|------|------------|---------------------|
| Site Civil | | | | | |
| 1 | Building Utilities Connection (Allowance) | 1 | LS | \$ 25,000 | \$ 25,000 |
| 2 | Building Pad Final Preparation (Allowance) | 1 | LS | \$ 12,000 | \$ 12,000 |
| 3 | New Contact Water Tank (5,000 gallons) | 1 | LS | \$ 35,000 | \$ 35,000 |
| 4 | Structural Fill (Building Foundation) | 100 | CY | \$ 29.00 | \$ 2,900 |
| 5 | Structural Fill (Short Retaining Wall) | 130 | CY | \$ 35.00 | \$ 4,550 |
| 6 | Paved Apron (Asphalt/Base Rock/Top Course) | 15,000 | SF | \$ 6.00 | \$ 90,000 |
| Structural/Architectural | | | | | |
| 7 | Steel Building/Tipping Floor/Push Walls/Cladding | 7,200 | SF | \$ 205.00 | \$ 1,476,000 |
| 8 | Retaining Wall - Assume 0.5 CY/LF | 70 | CY | \$ 825.00 | \$ 57,750 |
| 7 | Knuckleboom Crane/Electrical/Install | 1 | LS | \$ 260,000 | \$ 260,000 |
| 8 | Axle Pit Scales (Two Scales) w/ Readouts | 1 | LS | \$ 47,000 | \$ 47,000 |
| Electrical / Comm. | | | | | |
| 9 | Site Electrical Power/Comm. | 1 | LS | \$ 35,000 | \$ 35,000 |
| General Conditions | | | | | |
| 9 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 306,780 | \$ 306,780 |
| 10 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 102,260 | \$ 102,260 |

| | | |
|--|-------|--------------------|
| CONSTRUCTION SUBTOTAL | | \$2,454,240 |
| CONTINGENCY ⁽²⁾ | 20% | \$490,848 |
| CONSTRUCTION TOTAL (Rounded) | | \$2,945,000 |
| A/E DESIGN | 10% | \$294,500 |
| A/E CM SUPPORT SERVICES (limited CM Support) | 4% | \$117,800 |
| TAXES (Materials Only) | 6.00% | \$88,350 |
| TOTAL (Base Cost) | | \$3,446,000 |
| Low Range (-30%) | | \$2,412,000 |
| High Range (+50%) | | \$5,169,000 |

Notes:

(1) This cost estimate is based on design as reflected in the PER (1-15% level of design) and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%. The actual cost of the project will depend on competitive market conditions, actual labor and material costs, actual site conditions (e.g., suitability of subsurface soils), productivity, project scope, schedule, final design, and other factors. As a result, the actual costs of the projects will vary. Because of these factors, funding needs must be carefully reviewed prior to making specific financial decisions or establishing final budgets.

(2) Contingency is for scope changes that are presently unforeseen.

Preliminary Engineering Report
Colburn Site Improvements - Recondition Existing Transfer Building
Engineer's Opinion of Cost

Prepared For: Bonner County Solid Waste
Prepared By: Travis Pyle, PE/Great West
Reviewed by: Spencer Ferguson, PE/Bonner County
Date: March 8, 2021
Project No. 4-20113
Revision No. Final
Approved By: Travis Pyle, PE



| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|---|---|--------------------|------|------------------|---------------------|
| Site Civil | | | | | |
| 1 | Allowance - Site Prep/Area Work/Demo | 1 | LS | \$ 25,000 | \$ 25,000 |
| Structural/Architectural | | | | | |
| 2 | Replace Steel Siding Panels | 7,000 | SF | \$ 6.00 | \$ 42,000 |
| 3 | Replace Translucent Window Panels | 200 | SF | \$ 130.00 | \$ 26,000 |
| 4 | Demo/Repair Heavy Wear Area of Tipping Floor | 1,500 | SF | \$ 78.00 | \$ 117,000 |
| 5 | Replace Push-Walls with 8' Metal Cladded Walls | 80 | LF | \$ 735.00 | \$ 58,800 |
| 6 | Upgrade Lighting (interior and exterior) | 1 | LS | \$ 26,000 | \$ 26,000 |
| 7 | Replace Chute Metal Armoring | 90 | LF | \$ 525.00 | \$ 47,250 |
| 8 | Replace Pit Scales | 1 | LS | \$ 47,000 | \$ 47,000 |
| General Conditions | | | | | |
| 9 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 58,358 | \$ 58,358 |
| 10 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 19,453 | \$ 19,453 |
| CONSTRUCTION SUBTOTAL | | | | \$466,860 | |
| CONTINGENCY ⁽²⁾ 20% | | | | \$93,372 | |
| CONSTRUCTION TOTAL (Rounded) | | | | \$560,000 | |
| A/E DESIGN 10% | | | | \$56,000 | |
| A/E CM SUPPORT SERVICES (limited CM Support) 4% | | | | \$22,400 | |
| TAXES (Materials Only) 6.00% | | | | \$16,800 | |
| TOTAL (Base Cost) | | | | \$656,000 | |
| Low Range (-30%) | | | | \$459,000 | |
| High Range (+50%) | | | | \$984,000 | |

Notes:

(1) This cost estimate is based on design as reflected in the PER (1-15% level of design) and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%. The actual cost of the project will depend on competitive market conditions, actual labor and material costs, actual site conditions (e.g., suitability of subsurface soils), productivity, project scope, schedule, final design, and other factors. As a result, the actual costs of the projects will vary. Because of these factors, funding needs must be carefully reviewed prior to making specific financial decisions or establishing final budgets.

(2) Contingency is for scope changes that are presently unforeseen.

Preliminary Engineering Report
Colburn Site Improvements - New HHW Facility/Storage
Engineer's Opinion of Cost

Prepared For: Bonner County Solid Waste
Prepared By: Travis Pyle, PE/Great West
Reviewed by: Spencer Ferguson, PE/Bonner County
Date: March 8, 2021
Project No. 4-20113
Revision No. Final
Approved By: Travis Pyle, PE



| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|---------------------------------|---|--------------------|------|--------------|---------------------|
| Site Civil | | | | | |
| 1 | Building Utilities Connection (Allowance) | 1 | LS | \$ 11,000 | \$ 11,000 |
| 2 | Building Pad Final Preparation (Allowance) | 1 | LS | \$ 5,500 | \$ 5,500 |
| 3 | Structural Backfill (Under Building Slabs) | 100 | CY | \$ 28.00 | \$ 2,800 |
| 4 | Paved Apron (Asphalt/Base Rock/Top Course) | 2,500 | SF | \$ 6.00 | \$ 15,000 |
| 5 | Cut/Patch Existing Asphalt (allowance) | 1 | LS | \$ 10,000.00 | \$ 10,000 |
| Structural/Architectural | | | | | |
| 6 | Steel Building/Slab/Walls | 1,200 | SF | \$ 185.00 | \$ 222,000 |
| 7 | Mechanical - Plumbing and Ventilation | 1 | LS | \$ 32,000 | \$ 32,000 |
| 8 | Electrical Systems | 1 | LS | \$ 38,000 | \$ 38,000 |
| 9 | Canopy Cover w/ Slab | 200 | SF | \$ 53.00 | \$ 10,600 |
| 10 | Enclosed Storage w/ Slab | 750 | SF | \$ 70.00 | \$ 52,500 |
| General Conditions | | | | | |
| 11 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 59,910 | \$ 59,910 |
| 12 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 19,970 | \$ 19,970 |

| | | |
|--|-------|--------------------|
| CONSTRUCTION SUBTOTAL | | \$479,280 |
| CONTINGENCY ⁽²⁾ | 20% | \$95,856 |
| CONSTRUCTION TOTAL (Rounded) | | \$575,000 |
| A/E DESIGN | 10% | \$57,500 |
| A/E CM SUPPORT SERVICES (limited CM Support) | 4% | \$23,000 |
| TAXES (Materials Only) | 6.00% | \$17,250 |
| TOTAL (Base Cost) | | \$673,000 |
| Low Range (-30%) | | \$471,000 |
| High Range (+50%) | | \$1,010,000 |

Notes:

(1) This cost estimate is based on design as reflected in the PER (1-15% level of design) and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%. The actual cost of the project will depend on competitive market conditions, actual labor and material costs, actual site conditions (e.g., suitability of subsurface soils), productivity, project scope, schedule, final design, and other factors. As a result, the actual costs of the projects will vary. Because of these factors, funding needs must be carefully reviewed prior to making specific financial decisions or establishing final budgets.

(2) Contingency is for scope changes that are presently unforeseen.

Preliminary Engineering Report

Dickensheet Site Improvements

Engineer's Opinion of Cost

Prepared For: Bonner County Solid Waste
Prepared By: Travis Pyle, PE/Great West
Reviewed by: Spencer Ferguson, PE/Bonner County
Date: March 8, 2021
Project No. 4-20113
Revision No. Final
Approved By: Travis Pyle, PE



| Item No. | Description | Estimated | | | Extended |
|--|---|-----------|------|------------|--------------------|
| | | Quantity | Unit | Unit Price | Unit Price |
| Site Civil | | | | | |
| 1 | Site Clearing and Preparation | 1 | LS | \$ 3,000 | \$ 3,000 |
| 2 | Paving (Asphalt/Base Rock/Top Course) | 76,700 | SF | \$ 6.00 | \$ 460,200 |
| 3 | Domestic Well | 200 | FT | \$ 63.00 | \$ 12,600 |
| 4 | Pump | 1 | LS | \$ 2,600 | \$ 2,600 |
| 5 | Pump Electrical Connection | 1 | LS | \$ 1,800 | \$ 1,800 |
| 6 | Site Utility Lines (Water) | 600 | LF | \$ 26.00 | \$ 15,600 |
| 7 | Frost-Free Spigots | 3 | LS | \$ 900 | \$ 2,700 |
| 8 | Chain Link Fence and Gates | 2,200 | LF | \$ 37.00 | \$ 81,400 |
| Structural/Architectural - Wall Replacement/Extension | | | | | |
| 9 | Z-Walls - Assume 0.25 cy/LF | 45 | CY | \$ 825 | \$ 36,713 |
| General Conditions | | | | | |
| 10 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 92,492 | \$ 92,492 |
| 11 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 30,831 | \$ 30,831 |
| CONSTRUCTION SUBTOTAL | | | | | \$739,935 |
| CONTINGENCY ⁽²⁾ 20% | | | | | \$147,987 |
| CONSTRUCTION TOTAL (Rounded) | | | | | \$888,000 |
| A/E DESIGN ⁽³⁾ 10% | | | | | \$88,800 |
| A/E CM SUPPORT SERVICES (limited CM Support) 4% | | | | | \$35,520 |
| TAXES (Materials Only) 6.00% | | | | | \$26,640 |
| TOTAL (Base Cost) | | | | | \$1,039,000 |
| Low Range (-30%) | | | | | \$727,000 |
| High Range (+50%) | | | | | \$1,559,000 |

Notes:

(1) This cost estimate is based on design as reflected in the PER (1-15% level of design) and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%. The actual cost of the project will depend on competitive market conditions, actual labor and material costs, actual site conditions (e.g., suitability of subsurface soils), productivity, project scope, schedule, final design, and other factors. As a result, the actual costs of the projects will vary. Because of these factors, funding needs must be carefully reviewed prior to making specific financial decisions or establishing final budgets.

(2) Contingency is for scope changes that are presently unforeseen.

Preliminary Engineering Report

Dufort Site Improvements

Engineer's Opinion of Cost

Prepared For: Bonner County Solid Waste
Prepared By: Travis Pyle, PE/Great West
Reviewed by: Spencer Ferguson, PE/Bonner County
Date: March 8, 2021
Project No. 4-20113
Revision No. Final
Approved By: Travis Pyle, PE



| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|---|---|--------------------|------|------------------|---------------------|
| Site Civil | | | | | |
| 1 | Site Clearing and Preparation | 1 | LS | \$ 3,000 | \$ 3,000 |
| 2 | Paving (Asphalt/Base Rock/Top Course) | 25,000 | SF | \$ 6.00 | \$ 150,000 |
| 3 | Site Drainage Improvements | 1 | LS | \$ 13,000 | \$ 13,000 |
| Structural/Architectural | | | | | |
| 4 | Z-Walls - Assume 0.25cy/LF | 50 | CY | \$ 825 | \$ 41,250 |
| General Conditions | | | | | |
| 5 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 31,088 | \$ 31,088 |
| 6 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 10,363 | \$ 10,363 |
| CONSTRUCTION SUBTOTAL | | | | \$248,700 | |
| CONTINGENCY ⁽²⁾ 20% | | | | \$49,740 | |
| CONSTRUCTION TOTAL (Rounded) | | | | \$298,000 | |
| A/E DESIGN 10% | | | | \$29,800 | |
| A/E CM SUPPORT SERVICES (limited CM Support) 4% | | | | \$11,920 | |
| TAXES (Materials Only) 6.00% | | | | \$8,940 | |
| TOTAL (Base Cost) | | | | \$349,000 | |
| Low Range (-30%) | | | | \$244,000 | |
| High Range (+50%) | | | | \$524,000 | |

Notes:

(1) This cost estimate is based on design as reflected in the PER (1-15% level of design) and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%. The actual cost of the project will depend on competitive market conditions, actual labor and material costs, actual site conditions (e.g., suitability of subsurface soils), productivity, project scope, schedule, final design, and other factors. As a result, the actual costs of the projects will vary. Because of these factors, funding needs must be carefully reviewed prior to making specific financial decisions or establishing final budgets.

(2) Contingency is for scope changes that are presently unforeseen.

Preliminary Engineering Report

Idaho Hill Site Improvements

Engineer's Opinion of Cost

Prepared For: Bonner County Solid Waste
Prepared By: Travis Pyle, PE/Great West
Reviewed by: Spencer Ferguson, PE/Bonner County
Date: March 8, 2021
Project No. 4-20113
Revision No. Final
Approved By: Travis Pyle, PE



| Item No. | Description | Estimated Quantity | Unit | Unit Price | Extended Unit Price |
|---|---|--------------------|------|------------|---------------------|
| Site Civil | | | | | |
| 1 | Site Clearing and Preparation | 1 | LS | \$ 3,000 | \$ 3,000 |
| 2 | Paving (Asphalt/Base Rock/Top Course) | 49,900 | SF | \$ 6.00 | \$ 299,400 |
| 3 | Septic Tank | 1 | LS | \$ 3,000 | \$ 3,000 |
| 4 | Drainfield | 1,000 | SF | \$ 3.75 | \$ 3,750 |
| 5 | Domestic Well | 200 | FT | \$ 65.00 | \$ 13,000 |
| 6 | Pump | 1 | LS | \$ 2,600 | \$ 2,600 |
| 7 | Pump Electrical Connection | 1 | LS | \$ 1,800 | \$ 1,800 |
| 8 | Site Utility Lines (Water/Sewer) | 740 | LF | \$ 26.00 | \$ 19,240 |
| 9 | Frost-Free Spigots | 3 | LS | \$ 900 | \$ 2,700 |
| 10 | Chain Link Fence and Gates | 1,610 | LF | \$ 37.00 | \$ 59,570 |
| Structural/Architectural - Building and Wall | | | | | |
| 10 | <u>District Managers Shop Building</u> | | | | |
| 10a | Building Structure/Footing/Foundation | 1150 | SF | \$ 75.00 | \$ 86,250 |
| 10b | Lean-To | 1150 | SF | \$ 40.00 | \$ 46,000 |
| 10c | Mechanical - Plumbing and Ventilation | 1 | LS | \$ 8,000 | \$ 8,000 |
| 10d | Electrical Systems | 1 | LS | \$ 12,000 | \$ 12,000 |
| 11 | Z-Walls - Assume 0.25 cy/LF | 45 | CY | \$ 825 | \$ 36,713 |
| General Conditions | | | | | |
| 12 | Bonds, Insurance Premiums, Mobilization, Demobilization, Contract Closeout and OH&P (15%) | 1 | LS | \$ 89,553 | \$ 89,553 |
| 13 | Construction Facilities, Temporary Controls, Survey, and Safety (5%) | 1 | LS | \$ 29,851 | \$ 29,851 |
| CONSTRUCTION SUBTOTAL | | | | | \$716,427 |
| CONTINGENCY ⁽²⁾ 20% | | | | | \$143,285 |
| CONSTRUCTION TOTAL (Rounded) | | | | | \$860,000 |
| A/E DESIGN 10% | | | | | \$86,000 |
| A/E CM SUPPORT SERVICES (limited CM Support) 4% | | | | | \$34,400 |
| TAXES (Materials Only) 6.00% | | | | | \$25,800 |
| TOTAL (Base Cost) | | | | | \$1,007,000 |
| Low Range (-30%) | | | | | \$705,000 |
| High Range (+50%) | | | | | \$1,511,000 |

Notes:

(1) This cost estimate is based on design as reflected in the PER (1-15% level of design) and is considered a Class 4 estimate in accordance with AACE International's classification system (Study of Feasibility) with a typical range of accuracy between -30% to +50%. The actual cost of the project will depend on competitive market conditions, actual labor and material costs, actual site conditions (e.g., suitability of subsurface soils), productivity, project scope, schedule, final design, and other factors. As a result, the actual costs of the projects will vary. Because of these factors, funding needs must be carefully reviewed prior to making specific financial decisions or establishing final budgets.

(2) Contingency is for scope changes that are presently unforeseen.

APPENDIX I

Engineer's Calculations

Bonner County
Colburn Transfer Station
Data Summary - Existing and Future 20-Year Projections



By: Travis Pyle, PE
 Date: 03/15/2021

Checked By: Michelle Langdon
 Date: 03/16/2021

| Item/Description | Quantity | Unit | Source/Assumptions |
|---|----------|----------|---|
| Design Criteria: | | | |
| Design Period | 20 | Years | Design Period (2040 Design Year) |
| Days per Week of Operation | 7 | DPW | Open Monday - Saturday |
| Hours of Operation | 10 | HPD | Open 7:00 a.m. to 5:00 p.m. |
| Holidays Per Year | 10 | DPY | Assumed Observed Holidays |
| Facility Operational Days per Year Total | 355 | DPY | Minus Holidays |
| Weekdays | 251 | DPY | Calculation (Total DPY - Weekend DPY) |
| Weekend Days | 104 | DPY | Assumes all weekends are non-holidays |
| Total Public Vehicles Per Year (MSW) | 65,640 | VPY | County 2020 data; Assume 80% are garbage drop-off facility users |
| Ave. Public Vehicles Per Day | 185 | VPD | Calculation [VPY / Operating Days (DPY)] |
| Total Commercial Vehicle Per Year | 7,420 | VPY | WMI 2020 Data (trip/2 = visit by WMI) |
| Ave. Commercial Vehicles Per Day | 21 | VPD | Calculation [VPY / Ops Days (DPY)] |
| Annual Population Growth Rate | 1.45% | AGR | Assumed Sustained Growth Rate |
| Per Capita Waste Generation Rate | 5.2 | PPD | Calculated (5-year Average, 2016-2020) |
| Weekday Waste to Weekend Waste Ratio | 75% | Unitless | Estimate. Amount of Weekday Waste tons to Weekend Waste Tons |
| Commercial:Public Tonnage Ratio (Weekday) | 85% | Unitless | Estimate. Ratio of Commercial to Public tons (weekdays) |
| Commercial:Public Tonnage Ratio (Weekend) | 70% | Unitless | Estimate. Ratio of Commercial to Public tons (weekends) |
| Peaking Factor (tonnage) | 2.0 | PFR | Great West Estimate |
| Current System (2020): | | | |
| Population | 46,402 | PPL | Census Data and Estimate (2020) |
| Annual Waste (MSW) Accepted | 45,307 | TPY | County 2020 Data (for Transfer) |
| Average Daily Tons | 128 | TPD | Calculation (TPY / Operating Days (DPY)) |
| Ave. Public Vehicle Payload | 0.13 | TPV | County Estimate (Public) |
| Ave. Commercial Vehicle Payload | 4.96 | TPV | County Estimate (Commercial) |
| Ave. Inbound Transaction Time | 1 | MIN | County Estimate (Public) |
| Ave. Outbound Transaction Time | 0.5 | MIN | County Estimate (Public) - Typical Drive away with no payment |
| Weekday: | | | |
| Total Weekday Tons Per Year - Total P&C | 33,980 | TPY | Estimate. See Weekday to Weekend tonnage ratio |
| Commercial: | | | |
| Total Tons Per Year | 28,883 | TPY | Calculation [Total Weekend TPY x Commercial:Public Tonnage Ration (Weekday)] |
| Total Vehicles Per Year | 5,823 | VPY | Calculation TPY / Commercial Ave. Payload TPV |
| Ave Tons Per Day | 115 | TPD | Calculation TPY / Weekday DPY |
| Ave. Vehicles Per Day | 23 | VPD | TPD / TPV |
| Peak Tons Per Day | 230 | TPD | TPD x PFR |
| Peak Vehicles Per Day | 46 | VPD | Peak TPD / Commercial Ave. Payload TPV |
| Peak Tons Per Hour | 23.0 | TPH | Peak TPD / HPD |
| Peak Vehicles Per Hour | 5 | VPH | Peak TPH / Commercial Ave. Payload TPV |
| Public: | | | |
| Total Tons Per Year | 5,097 | TPY | Total Weekend TPY - Commercial Weekend TPY |
| Total Vehicles Per Year | 39,208 | VPY | TPY / Public Ave. Payload TPV |
| Ave Tons Per Day | 20 | TPD | Calculation TPY / Weekday DPY |
| Ave. Vehicles Per Day | 156 | VPD | TPD / TPV |
| Peak Tons Per Day | 41 | TPD | TPD x PFR |
| Peak Vehicles Per Day | 312 | VPD | Peak TPD / Public Ave. Payload TPV |
| Peak Tons Per Hour | 4.1 | TPH | Peak TPD / HPD |
| Peak Vehicles Per Hour | 32 | VPH | Peak TPH / Public Ave. Payload TPV |
| Weekend Day: | | | |
| Total Weekend Tons Per Year - Total P&C | 11,327 | TPY | Estimate. See Weekday to Weekend tonnage ratio (1 minus this ratio times total TPY) |
| Commercial: | | | |
| Total Tons Per Year | 7,929 | TPY | Calculation [Total Weekend TPY x Commercial:Public Tonnage Ration (Weekday)] |
| Total Vehicles Per Year | 1,599 | VPY | Calculation TPY / Commercial Ave. Payload TPV |
| Ave Tons Per Day | 76 | TPD | Calculation TPY / Weekday DPY |
| Ave. Vehicles Per Day | 15 | VPD | TPD / TPV |
| Peak Tons Per Day | 152 | TPD | TPD x PFR |
| Peak Vehicles Per Day | 31 | VPD | Peak TPD / Commercial Ave. Payload TPV |
| Peak Tons Per Hour | 15.2 | TPH | Peak TPD / HPD |
| Peak Vehicles Per Hour | 4 | VPH | Peak TPH / Commercial Ave. Payload TPV |
| Public: | | | |
| Total Tons Per Year | 3,398 | TPY | Total Weekend TPY - Commercial Weekend TPY |
| Total Vehicles Per Year | 26,139 | VPY | TPY / Public Ave. Payload TPV |
| Ave Tons Per Day | 33 | TPD | Calculation TPY / Weekday DPY |
| Ave. Vehicles Per Day | 251 | VPD | TPD / TPV |
| Peak Tons Per Day | 65 | TPD | TPD x PFR |
| Peak Vehicles Per Day | 503 | VPD | Peak TPD / Public Ave. Payload TPV |
| Peak Tons Per Hour | 6.5 | TPH | Peak TPD / HPD |
| Peak Vehicles Per Hour | 51 | VPH | Peak TPH / Public Ave. Payload TPV |
| Total Annual (All Days) | | | |

| | | | |
|---|-------------------------|-----|---|
| Total Tons Per Year - Total P&C | 45,307 | TPY | |
| Commercial: | | | |
| Total Tons Per Year | 36,812 | TPY | Calculation (Commercial Weekday + Commercial Weekend) - TPY |
| Total Vehicles Per Year | 7,422 | VPY | Calculation (Commercial Weekday + Commercial Weekend) - VPY |
| Ave Tons Per Day | 104 | TPD | Calculation (Commercial Weekday + Commercial Weekend) - TPD |
| Public: | | | |
| Total Tons Per Year | 8,495 | TPY | Calculation (Public Weekday + Public Weekend) - TPY |
| Total Vehicles Per Year | 65,347 | VPY | Calculation (Public Weekday + Public Weekend) - VPY |
| Ave Tons Per Day | 24 | TPD | Calculation (Public Weekday + Public Weekend) - TPD |
| 20-Year Design Period (2040): | | | |
| Population | 61,884 | PPL | Census Data and Estimate (2020) x AGR (20-years) |
| Annual Waste (MSW) Accepted | 58,728 | TPY | PPL x PCD |
| Average Daily Tons | 165 | TPD | Calculation (TPY / Operating Days (DPY)) |
| Ave. Public Vehicle Payload | 0.13 | TPV | County Estimate (Public) |
| Ave. Commercial Vehicle Payload | 4.96 | TPV | County Estimate (Commercial) |
| Ave. Inbound Transaction Time | 1 | MIN | County Estimate (Public) - No Change |
| Ave. Outbound Transaction Time | 0.5 | MIN | County Estimate (Public) - No Change |
| Weekday: | | | |
| Total Weekday Tons Per Year - Total P&C | 44,046 | TPY | Estimate. See Weekday to Weekend tonnage ratio |
| Commercial: | | | |
| Total Tons Per Year | 37,439 | TPY | Calculation [Total Weekend TPY x Commercial:Public Tonnage Ratio (Weekday)] |
| Total Vehicles Per Year | 7,548 | VPY | Calculation TPY / Commercial Ave. Payload TPV |
| Ave Tons Per Day | 149 | TPD | Calculation TPY / Weekday DPY |
| Ave. Vehicles Per Day | 30 | VPD | TPD / TPV |
| Peak Tons Per Day | 298 | TPD | TPD x PFr |
| Peak Vehicles Per Day | 60 | VPD | Peak TPD / Commercial Ave. Payload TPV |
| Peak Tons Per Hour | 29.8 | TPH | Peak TPD / HPD |
| Peak Vehicles Per Hour | 7 | VPH | Peak TPH / Commercial Ave. Payload TPV |
| Public: | | | |
| Total Tons Per Year | 6,607 | TPY | Total Weekend TPY - Commercial Weekend TPY |
| Total Vehicles Per Year | 50,822 | VPY | TPY / Public Ave. Payload TPV |
| Ave Tons Per Day | 26 | TPD | Calculation TPY / Weekday DPY |
| Ave. Vehicles Per Day | 202 | VPD | TPD / TPV |
| Peak Tons Per Day | 53 | TPD | TPD x PFr |
| Peak Vehicles Per Day | 405 | VPD | Peak TPD / Public Ave. Payload TPV |
| Peak Tons Per Hour | 5.3 | TPH | Peak TPD / HPD |
| Peak Vehicles Per Hour | 41 | VPH | Peak TPH / Public Ave. Payload TPV |
| Weekend Day: | | | |
| Total Weekend Tons Per Year - Total P&C | 14,682 | TPY | Estimate. See Weekday to Weekend tonnage ratio (1 minus this ratio times total TPY) |
| Commercial: | | | |
| Total Tons Per Year | 10,277 | TPY | Calculation [Total Weekend TPY x Commercial:Public Tonnage Ratio (Weekday)] |
| Total Vehicles Per Year | 2,072 | VPY | Calculation TPY / Commercial Ave. Payload TPV |
| Ave Tons Per Day | 99 | TPD | Calculation TPY / Weekday DPY |
| Ave. Vehicles Per Day | 20 | VPD | TPD / TPV |
| Peak Tons Per Day | 198 | TPD | TPD x PFr |
| Peak Vehicles Per Day | 40 | VPD | Peak TPD / Commercial Ave. Payload TPV |
| Peak Tons Per Hour | 19.8 | TPH | Peak TPD / HPD |
| Peak Vehicles Per Hour | 4 | VPH | Peak TPH / Commercial Ave. Payload TPV |
| Public: | | | |
| Total Tons Per Year | 4,405 | TPY | Total Weekend TPY - Commercial Weekend TPY |
| Total Vehicles Per Year | 33,881 | VPY | TPY / Public Ave. Payload TPV |
| Ave Tons Per Day | 42 | TPD | Calculation TPY / Weekday DPY |
| Ave. Vehicles Per Day | 326 | VPD | TPD / TPV |
| Peak Tons Per Day | 85 | TPD | TPD x PFr |
| Peak Vehicles Per Day | 652 | VPD | Peak TPD / Public Ave. Payload TPV |
| Peak Tons Per Hour | 8.5 | TPH | Peak TPD / HPD |
| Peak Vehicles Per Hour | 66 | VPH | Peak TPH / Public Ave. Payload TPV |
| Total Annual (All Days) | | | |
| Total Tons Per Year - Total P&C | 58,728 | TPY | |
| Commercial: | | | |
| Total Tons Per Year | 47,716 | TPY | Calculation (Commercial Weekday + Commercial Weekend) - TPY |
| Total Vehicles Per Year | 9,620 | VPY | Calculation (Commercial Weekday + Commercial Weekend) - VPY |
| Ave Tons Per Day | 134 | TPD | Calculation (Commercial Weekday + Commercial Weekend) - TPD |
| Public: | | | |
| Total Tons Per Year | 11,011 | TPY | Calculation (Public Weekday + Public Weekend) - TPY |
| Total Vehicles Per Year | 84,704 | VPY | Calculation (Public Weekday + Public Weekend) - VPY |
| Ave Tons Per Day | 31 | TPD | Calculation (Public Weekday + Public Weekend) - TPD |
| Acronyms: | | | |
| AGR = Annual Growth Rate | TPH = tons per hour | | |
| DPW = days per week | TPV = tons per vehicle | | |
| DPY = days per year | TPY = tons per year | | |
| PCD = per capital disposal | VPH = vehicles per hour | | |
| PPL = population | VPD = vehicles per day | | |
| PFR = Peaking Factor | | | |
| TPD = tons per day | | | |

Bonner County
Colburn Transfer Station
20-Year Sizing Analysis



By: Travis Pyle, PE
 Date: 03/15/2021

Checked By: Michelle Langdon
 Date: 03/16/2021

| 20-YEAR SIZING ANALYSIS - NEW WTB BONNER COUNTY, IDAHO | | | |
|--|--------------|-----------|--|
| DESCRIPTION | AMOUNT | UNITS | ASSUMPTIONS |
| Waste Quantities: | | | |
| Peak Weekday Waste Quantities | 351 | TPD | |
| Peak Hour Weekday Waste Quantities | 35 | TPH | |
| Peak Weekend Waste Quantities | 282 | TPD | |
| Peak Hour Weekend Waste Quantities | 28 | TPH | |
| Vehicle Arrival Rates: | | | |
| Peak Hour Weekday Public | 41 | VPH | |
| Peak Hour Weekend Public | 66 | VPH | |
| Peak Hour Weekday Commercial | 7 | VPH | |
| Peak Hour Weekend Commercial | 4 | VPH | |
| Transfer Trailers: | | | |
| Average Trailer Payload | 29 | TPV | |
| Peak Trailers per Day | 12 | TRPD | Weekday loading (peak waste tonnage) |
| Peak Trailers per Hour | 1.2 | TRPH | |
| Min. Loading Time Per Trailer* | 30 | minutes | Assume 30 min (should be 20-30 min) |
| Number of Loading Stalls Required | 1.0 | #stall(s) | Assumes all goes to one building. Two Buildings |
| CALCULATIONS | | | |
| DESCRIPTION | CALCULATION | UNITS | ASSUMPTIONS |
| Waste Storage Floor Space: | | | |
| Peak Waste Storage | 175 | TON | 1/2 day of peak weekday |
| Floor Storage Capacity | 702 | CY | Assume 500#/CY |
| Floor Storage Area | 1,895 | SF | 10' high |
| Unloading Stalls (Weekend): | | | |
| Public Stall Count | 12 | 10 | minute unloading time |
| Commercial Stall Count | 1 | 7 | minute unloading time |
| TOTAL | 13 | | Assume 12 Public + 1 Commercial |
| Unloading Delivery Stalls (Weekday): | | | |
| Public Stall Count | 8 | 10 | minute unloading time |
| Commercial Stall Count | 1 | 7 | minute unloading time |
| TOTAL | 9 | | |
| Existing Building: | | | |
| Overall: | | | |
| Width | 56 | FT | |
| Depth | 48 | FT | |
| Floor Area | 2,688 | SF | |
| Clear (Tipping Floor) | | | |
| Width | 51 | FT | Public stalls = 12'; Comm. = 15' |
| Depth | 31 | FT | |
| Floor Area | 1,581 | SF | |
| Stall Count | | | |
| All Public, OR | 4.0 | # | Public Stalls = 12' |
| All Commercial | 3.0 | # | Commercial Stalls = 15' |
| New Minimum Building Dimensions | | | |
| Width | 116 | FT | Public stalls = 12'; Comm. = 15' |
| Public Stall(s) Width | 96 | | See minimum - Weekend (minus existing bldg) |
| Commercial Stall(s) Width | 15 | | One minimum set-aside stall |
| Edge Space / Column Space | 5 | | Edge space/columns/building return |
| Depth | 42 | | |
| Tipping Floor | 30 | FT | Minimum Depth for pushing waste and unloading |
| Space Over Tunnel/ Chute Opening | 12 | FT | |
| Operational Floor Area | 3,480 | SF | 30' min times building width |
| Additional Area (Bathroom, Elect Room, etc.) | 348 | SF | 10% Add |
| Space Over Tunnel | 1,392 | | "dead space" on tipping floor |
| Floor Storage (Peak) | 1,895 | SF | In case of downtime (also space at old building) |
| Total Building Area | 7,115 | SF | Main Floor (not including tunnel) |

*Sets the number of pits for top-loading of waste.

- TPD = Tons per Day
- TPM = Tons per Month
- VPD = Vehicles per Day
- VPH = Vehicles per Hour
- TPV = Tons per Vehicle
- TRPD = Trailers per day
- TRPH = Trailers per hour
- SF = Square Feet
- FT = Feet
- YD = Yard
- CY = Cubic Yard
- SY = Square Yard
- Ton = Tons

Bonner County
Colburn Transfer Station
Queuing Calculations - Future (20-Year Projection)



By: Travis Pyle, PE
Date: 03/15/2021

Checked By: Michelle Langdon
Date: 03/16/2021

Inputs:

Transaction Times:

Inbound (sec) = 60 <County Data>
Time to Pull-on and Off (sec) = 0 <no scale>
Total (sec) = 60
Outbound (sec) = 120 <County Data>
Time to Pull-on and Off (sec) = 0 <no scale>
Total (sec) = 120

Queue Lengths:

Inbound (ft) = 800 <Estimated distance on Pinecone Drive>
Outbound (ft) = 400 <Estimated distance from WTBS to Gate>

Inbound Traffic - Public (Weekend Day)

Total Transaction Time (sec/veh) = 60 <short stop to get instructions from gate attendant>
Maximum # Through (#/hr) = 60
Peak Arrival Rate (vph) = 70
Queue In-Bound Length Needed (ft) = 250 <Weekend - 25' average vehicle length>

Outbound Traffic - Public

Total Transaction Time (sec/veh) = 30 <outbound typically no stops except for contractors>
Maximum # Through (#/hr) = 120
Peak Arrival Rate (vph) = 70
Queue Out-Bound Length Needed (ft) = 0 <Weekend - 25' average vehicle length>

Assumptions:

(1) Assumes uniform arrival rates under steady state conditions.

APPENDIX J

Financial Forecast (20-Year)

| Solid Waste Financial Forecast Summary | | | | PROJECTED DATA | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|--|---------------------------|--------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Bonner County Solid Waste 20-Year Forecast with USDA RD Loan | | | | Fiscal Year - Actual Data | | | PROJECTED DATA | | | | | | | | | | | | | | | | | | |
| | | | | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | 2036 | 2037 | 2038 | 2039 |
| Beginning Cash | | | | \$3,303,986 | \$2,546,143 | \$1,930,054 | \$3,022,661 | \$3,962,801 | \$4,668,567 | \$5,665,680 | \$6,644,090 | \$6,535,593 | \$6,291,350 | \$5,904,918 | \$5,365,633 | \$4,666,227 | \$4,217,207 | \$3,595,034 | \$2,786,131 | \$2,497,472 | \$2,697,279 | \$3,672,549 | \$4,452,244 | \$5,024,764 | \$5,378,964 |
| TOTAL REVENUES | | | | \$ 5,194,526 | \$ 5,848,957 | \$ 8,368,239 | \$ 8,706,880 | \$ 8,859,895 | \$ 9,015,155 | \$ 9,174,140 | \$ 9,335,360 | \$ 9,501,635 | \$ 9,670,020 | \$ 9,839,715 | \$ 10,013,730 | \$ 10,624,875 | \$ 10,811,425 | \$ 11,001,170 | \$ 11,193,730 | \$ 12,081,495 | \$ 12,290,950 | \$ 12,504,785 | \$ 12,722,520 | \$ 12,944,830 | \$ 13,170,820 |
| Expenses - Labor and Benefits | | | | \$ 1,368,206 | \$ 1,382,880 | \$ 1,508,055 | \$ 1,615,370 | \$ 1,943,890 | \$ 1,987,510 | \$ 2,037,140 | \$ 2,085,880 | \$ 2,136,510 | \$ 2,187,160 | \$ 2,238,910 | \$ 2,293,570 | \$ 2,347,330 | \$ 2,404,100 | \$ 2,462,880 | \$ 2,520,760 | \$ 2,581,350 | \$ 2,644,250 | \$ 2,706,050 | \$ 2,773,060 | \$ 2,839,880 | \$ 2,908,800 |
| Expenses - Operating Expenses | | | | \$ 4,508,843 | \$ 5,025,775 | \$ 5,767,177 | \$ 5,521,540 | \$ 5,307,840 | \$ 5,316,250 | \$ 5,525,750 | \$ 5,745,360 | \$ 5,974,970 | \$ 6,213,470 | \$ 6,461,180 | \$ 6,717,880 | \$ 7,000,390 | \$ 7,279,100 | \$ 7,571,810 | \$ 7,876,510 | \$ 8,214,220 | \$ 8,540,930 | \$ 8,884,540 | \$ 9,241,440 | \$ 9,611,250 | \$ 9,998,960 |
| Expenses - Capital Improvements (Includes Loan Payment) | | | | \$ 75,320 | \$ 56,391 | \$ 400 | \$ 629,830 | \$ 902,399 | \$ 714,282 | \$ 632,840 | \$ 1,612,617 | \$ 1,634,398 | \$ 1,655,821 | \$ 1,678,910 | \$ 1,701,687 | \$ 1,726,175 | \$ 1,750,398 | \$ 1,775,383 | \$ 1,085,118 | \$ 1,086,118 | \$ 130,500 | \$ 134,500 | \$ 135,500 | \$ 139,500 | \$ 143,500 |
| TOTAL EXPENDITURES | | | | \$5,952,368 | \$6,465,046 | \$7,275,632 | \$7,766,740 | \$8,154,129 | \$8,018,042 | \$8,195,730 | \$9,443,857 | \$9,745,878 | \$10,056,451 | \$10,379,000 | \$10,713,137 | \$11,073,895 | \$11,433,598 | \$11,810,073 | \$11,482,388 | \$11,881,688 | \$11,315,680 | \$11,725,090 | \$12,150,000 | \$12,590,630 | \$13,051,260 |
| Revenues - Expenditures | | | | (\$757,843) | (\$616,089) | \$1,092,607 | \$940,140 | \$705,766 | \$997,113 | \$978,410 | (\$108,497) | (\$244,243) | (\$386,431) | (\$539,285) | (\$699,407) | (\$449,020) | (\$622,173) | (\$808,903) | (\$288,658) | \$199,807 | \$975,270 | \$779,695 | \$572,520 | \$354,200 | \$119,560 |
| Ending Balance | | | | \$2,546,143 | \$1,930,054 | \$3,022,661 | \$3,962,801 | \$4,668,567 | \$5,665,680 | \$6,644,090 | \$6,535,593 | \$6,291,350 | \$5,904,918 | \$5,365,633 | \$4,666,227 | \$4,217,207 | \$3,595,034 | \$2,786,131 | \$2,497,472 | \$2,697,279 | \$3,672,549 | \$4,452,244 | \$5,024,764 | \$5,378,964 | \$5,498,524 |

| Breakdown of Expenses and Revenues: | | | | PROJECTED | | | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|-----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| ACTUAL | | | | PROJECTED | | | | | | | | | | | | | | | | | | | | | |
| Solid Waste (Tons) | | | | 41,973 | 43,030 | 44,397 | 45,041 | 45,694 | 46,357 | 47,029 | 47,711 | 48,403 | 49,105 | 49,817 | 50,539 | 51,272 | 52,015 | 52,769 | 53,535 | 54,311 | 55,098 | 55,897 | 56,708 | 57,530 | 58,364 |
| Solid Waste (CY) - Commercial Only (Only Commercial Accounts) | | | | 155,562 | 185,151 | 187,835 | 190,559 | 193,322 | 196,125 | 198,969 | 201,854 | 204,781 | 207,750 | 210,763 | 213,819 | 216,919 | 220,064 | 223,255 | 226,493 | 229,777 | 233,108 | 236,488 | 239,918 | 243,396 | 246,926 |
| Commercial Waste Fees (\$/CY) | | | | \$14.00 | \$14.00 | \$18.00 | \$18.00 | \$18.00 | \$18.00 | \$18.00 | \$18.00 | \$18.00 | \$18.00 | \$18.00 | \$18.00 | \$20.00 | \$20.00 | \$20.00 | \$20.00 | \$23.00 | \$23.00 | \$23.00 | \$23.00 | \$23.00 | \$23.00 |
| Households in Bonner County (est. Acnts for Reduced Rate Households) | | | | 23,429 | 26,204 | 26,433 | 26,962 | 27,501 | 28,051 | 28,612 | 29,184 | 29,767 | 30,362 | 30,969 | 31,588 | 32,219 | 32,863 | 33,520 | 34,190 | 34,873 | 35,570 | 36,281 | 37,006 | 37,746 | 38,500 |
| Residential Fee (\$/house) | | | | \$115.00 | \$115.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 | \$185.00 |

