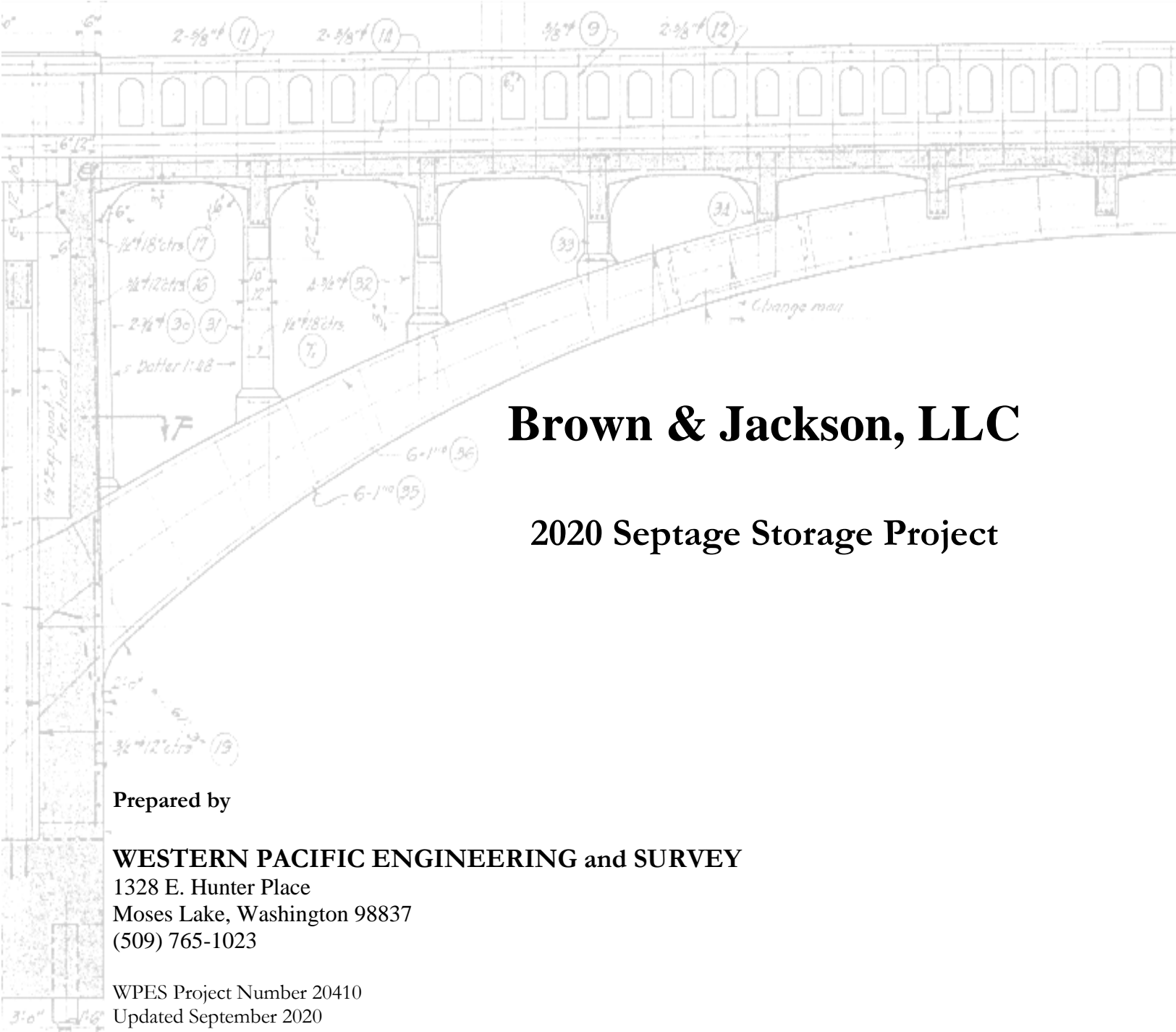


OPERATION & CLOSURE PLAN



Brown & Jackson, LLC

2020 Septage Storage Project

Prepared by

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WPES Project Number 20410
Updated September 2020



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Introduction

This Operation and Closure Plan was developed for 4G Farms and Brown & Jackson, Inc. as part of their application for coverage under the General Permit for Biosolids Management through the Washington State Department of Ecology. This plan has been prepared pursuant to the requirements set forth in the Washington Administrative Code (WAC) Chapter 173-350-330.

It is the responsibility of the owner and/or facility operator to remain in compliance with the performance standards of WAC Chapter 173-350-330. Additionally, the owner and/or operator are responsible for keeping and following the operation and closure plan set forth in this document. If necessary this plan may be modified or updated with the approval, or at the direction, of the jurisdictional health department.

The intent of this document is to describe the facilities operation and convey to site operation personnel the concept of operation intended by facility's design engineer. This plan of operation and closure must be available for inspection at the request of the jurisdictional health department.

Project Summary

In an effort to streamline their business Brown & Jackson is constructing two new collection ponds to store the septage so that it may be land applied. This Beneficial Use Facility is located on Kittitas County Tax Parcel No. 295134, near the intersection of Christensen Road and Parke Creek Road in the western half of Section 34, Township 18 North, Range 20 East, W.M. The site in which the septage is being stored and land applied is owned by 4G Farms, an agricultural entity of Brown & Jackson, LLC.

The site will contain a series of storage ponds to hold the septage that is pumped from a variety of commercial and residential sources around the greater Ellensburg and Kittitas area. The septage will be stored in the ponds until the late summer/early fall, when it will be pumped out and disked into the designated farmed areas located on the same parcel. The septage will be disked into the ground to aid the growth of the winter wheat and other potential crops.

Types of Waste

Per WAC 173-308-080, Septage is defined as "liquid or solid material removed from septic tanks, cess pools, portable toilets, type III marine sanitation devices, vault toilets, RV holding tanks, or similar systems that only receive domestic sewage. Septage may also include commercial or industrial septage mixed with domestic septage if approved in accordance with the provisions in WAC 173-308-020 (3)(g)".

Specifically the waste being transported to the storage ponds on this site is pumped from a variety of residential and commercial sources in the Kittitas and Ellensburg area. The Septage is hauled



to the site, screened prior to entry to the storage ponds, and then once a year pumped out of the ponds and land applied. The septage is land applied following the Site Specific Land Application Plan, approved by the Washington State Department of Ecology.

Handling of Waste

The septage received on-site will be stored in lined storage ponds that are constructed per the engineer's design. The septage is screened before being pumped into the storage ponds, and all personnel of Brown & Jackson are trained to operate the pump trucks, screens and all associated and necessary equipment.

The screening of the septage prior to land application will be through a Screenco Mega Screen 600 receiving station, a bar screen system that meets the requirements of WAC 173-308-205. This ensures that any unacceptable waste is not entering the storage ponds. The rejected waste retained on the screens will be disposed of via the on-site dumpsters and then hauled off site to a landfill.

To ensure that the storage ponds do not overflow and that the required minimum freeboard of 18" is maintained, a depth gauge giving visual indication of the maximum liquid level shall be visible from the point in which septage will enter the storage ponds.

General Facility Operations

Septic pump trucks will arrive via Park Creek Road and enter the property on the northern portion of the site. They will proceed down the gravel access road to the storage ponds. Once arriving at the chosen storage pond, the truck will dump its load through the screen receiving station, which will in turn drain into the pond.

The wastewater can be applied to the ground, via permit, as long as the ground is not frozen. The plan is to pump the septage from the ponds and land apply each fall. The Septage will be pumped from the ponds with trucks and then land applied at agronomic rates to the designated farming locations. The applied septage will then be disked into the ground using standard farming equipment within 6 hours of application.

In order to maintain the safety of the public, the gate at the main entry to the site will remain locked when there is no one on site. Brown & Jackson will ensure that the necessary emergency responders have access to the site.

Additionally, it is the owner's responsibility to maintain the fences, signs, and access roads in site. Fences should be inspected periodically and repairs when necessary. Signs designating the activities of the site shall be kept in in good condition and remain legible. Access roads and gravel surfacing shall be maintained so that emergency vehicles may reach the site.



Should dust control be needed in area of the facility, Brown & Jackson will provide a water truck to spray areas as necessary. Additionally, should rodents, insects, or other vectors become an issue, Brown & Jackson will contact Kittitas County Health for guidance of best practices to reduce and remove the nuisances.

Given the remote location of the storage ponds, it is not anticipated that the odors will be a nuisance. Additionally, since the septage is being disked into the ground within 6 hours of application, the overall odors associated with the land application areas should be minimal. Should the facility owner or operator notice or be made aware of nuisance odors, a biosolids odor control specialist will be contracted to audit the odors and provide recommendations for remediation. Brown & Jackson will keep systematic records of any odor complaints that they may receive, along with how the complaint was addressed and resolved.

Facility Maintenance

The owner and/or operator, will inspect the storage ponds on a regular basis to maintain the facility, prevent malfunctions, deterioration, operator errors and discharges that may cause or lead to the release of wastes to the environment that could pose a threat to human health.

Per WAC 173-350-330 (6) (a) (v), these Inspections must be conducted as needed, but at least weekly, to ensure that facility is meeting the operational standards. Facility inspection reports must be maintained in the operating records kept at the office of Brown & Jackson.

Additionally, once a year when the septage is land applied, the ponds will be emptied and cleaned. Once the septage has been pumped out and land applied, any sludge remaining at the bottom will be sprayed with water trucks to clean the bottom of the ponds. This watered down septage sludge will be pumped out and sent through the bar screen before being land applied. Any unwanted debris will be disposed of in the on-site dumpster.

While the ponds are empty and clean, the owner and/or operator will inspect the liner thoroughly for any potential damage or signs of leaking. Also, while the ponds are empty, the owner will have the change to perform any other in depth quality check that may be needed. Record of these annual inspection must be maintained in the operating records kept at the office of Brown & Jackson.

During this thorough inspection of the pond liners, the Washington State Department of Ecology must be given sufficient and have the opportunity to be present during the liner inspections. Per WAC 173-350-330 (6) (a) (ix) inspections of the owner or operator must inspect surface impoundment liners for leaks no less frequently than every five years.

Leak detection shall be performed utilizing the ponds built in leak detection system shown on the engineered drawings. Each pond has a capped pvc pipe at the top of the berm wall. The operator will remove the threaded lid and insert the probe of a water level meter to reach the sump of the pond. Specifically, a Solnist 101 P7 Water Level Meter has been purchased for this purpose. If no



liquid has been detected then the pond liner is operating correctly and the cap can simply be threaded back on.

If there is liquid detected in the pipe, than that is a sign that a leak may have occurred. However, there are other potential reasons that could result in liquid in the sump, for example, there could be an accumulation of moisture from the air entrained liner layers. Due to this fact, the liquid detected in the pipe shall be first sampled and tested for water quality. Water quality testing should be performed by a qualified lab. Brown & Jackson will collect the water sample and take it to Eurofins Cascade Analytical Lab in Yakima, Washington.

Should the water quality tests show that no septage is present than no action is needed. Should septage be present in the water sample taken, then the entirety septage from that pond shall be removed. The removed septage may be pumped into the other pond, or hauled off site to Kittitas County Disposal. Once the septage has been removed, a visual inspection of the liner must take place. If needed a liner specialist may be contracted to develop a solution.

Record Retention

As previously mentioned in this plan all dump slips, inspection reports, evidence of maintenance, and other documents associated with the operation of the storage pons and land application site will be maintained by Brown & Jackson. The Hard copies of these records will be retained at Brown & Jackson office, located at 107 N Main Street in Ellensburg, Washington. All records must be kept for a minimum of five years and shall be available upon request by the Kittitas Health Department.

Additionally, the owner must prepare and submit an annual facility report to the Kittitas County Health Department and the Department of Ecology by April 1st of each year. This annual facility report must detail the facilities activities during the previous calendar and at a minimum include the following information:

- The name and address of the facility
- The calendar year covered by the report
- Results of leak detection system monitoring
- Results of liner inspections
- Any additional information that may be required as a condition of the permit

Safety Planning

In case of a fire on site, Kittitas County Fire Department will be the responding emergency service. Should any Brown & Jackson personnel be in need of emergency services, current protocol is to get to a safe location, call emergency services, and then inform the owner.



Should a leak in the ponds be detected, personnel shall immediately inform the owner. It is the responsibility of the owner to begin the process of emptying the ponds once notification has been made, so that the pond liner may be fixed.

In the case of a spill or leak, the owner shall work with and inform both Doe and DOH with 24 hours. The owner shall report and document the cleanup and any associated improvements or repairs. If needed a liner specialist any be contracted to fix any leak.

Closure Plan

Should the owner decide to close up and quit using the septage storage ponds, the following item must occur:

1. The owner is responsible for notifying the Kittitas county health department and the department of ecology sixty days in advance of the closure.
2. All septage shall be pumped out of the closing pond with pump trucks.
3. The owner is responsible for removing all the septage from the storage ponds to a facility that conforms with regulations for handling the septage. The Kittitas County Solids Waste Disposal site accepts septage for disposal into their liquid waste evaporation lagoons.
4. The owner is responsible for removing the pond liners, as to not create a safety hazard.

