

Mitigation Summary

Media	Impact	Description of Mitigation
Earth	Erosion	Due to the existing relatively flat slopes across most of the site, the potential for erosion during construction is minimal and can be controlled on site with the use of Best Management Practices (BMPs) for erosion control
		Disturbed areas will be stabilized by revegetating as soon as possible after completion of construction activities in that area
		The use of BMPs to prevent and contain erosion will be included in the contract requirements for the selected Contractor. Prior to the start of construction, a Soil Erosion and Sediment Control Plan and Stormwater Pollution Prevention Plan (SWPPP) will be prepared based on final design and will identify the steps that will be taken to control erosion and sedimentation during each phase of construction. The Contractor will be required to provide BMPs for each stage of construction, including practices such as sediment traps, check dams, stabilized construction entrances, storm inlet protection, silt fencing, mulching, or other means of protection.
		Site will be cleared in accordance with the Port's Forest Management Plan
		Slopes which are to be undercut will be stabilized. Stormwater SWPPP will include temporary measures to stabilize all soils including steep slopes. Specifically, the treatment of steep slopes will include laying them back to stable gradients, installing jute matting, seeding, and fertilizing, and other soil stabilization measures
Air	Emissions	During construction the Contractor will be required to use best management practices to minimize and control fugitive dust, including watering or other techniques to minimize the quantity of airborne dust
		The proposed plant will be using the Best Available Control Technology to minimize regulated air pollutants from the proposed plant, thus at the same time minimizing the potential air quality impacts on the surrounding environment
		A BFB Boiler was selected which operates at a lower combustion temperature than conventional boilers, which minimizes the production of thermal NOx during the combustion process
		The BFB Boiler will employ Selective Catalytic Reduction (SCR)
		A BFB has been selected because the fluidized bed combustion process operates in a highly turbulent environment, which results in higher combustion efficiency and lower CO and VOC emissions
		The utilization of a fuel efficient BFB boiler and the low sulfur content of woody biomass fuel minimizes SO ₂ and H ₂ SO ₄ emissions
		The BFB will employ a Baghouse which provides the highest level of PM control
		To control PM releases from materials handling, control methods will include paving of interior access roads, covered conveyors, partially enclosed conveyor drop points, and minimization of pile drop discharge distance.

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Water	Surface Water	To prevent the inadvertent discharge of spilled materials to surface waters, prior to construction, a Construction SWPPP, an Industrial SWPPP, and a SPCC will be prepared and implemented based on the final design
	Ground Water	The site design is such that excavations should remain above the water table
		Stormwater will be managed on Site in accordance with the site Industrial NPDES permit and the Mason County Stormwater Manual. A Preliminary Storm Drainage Report will be prepared based on the final design
		If dewatering is required, appropriate permits and approvals will be obtained prior to proceeding and clean extracted groundwater will be managed on site through the use of sedimentation basins and infiltration galleries using appropriate best management practices
Stormwater	Runoff	Stormwater runoff will be captured by the use of drainage swales, catchbasins, and diversions berms and diverted to the stormwater management system
		Stormwater which contains significant amounts of wood or sediment materials will be screened using a debris trap, to avoid contamination and fouling of the biological treatment structures which follow
Wetlands	Wetlands	Install a minimum of 4 36-inch diameter culverts to maintain hydrologic contact between wetland areas impacted by road construction
		Install temporary fencing and access control in wetland area during construction to prevent additional traffic in wetland and buffer area .
		Install permanent fencing in wetland and buffer area to prevent traffic in to wetland area. Install educational signage along fencing.
		Fund a wetland mitigation program in Mason County. Work with the Mason County Conservation Distric to select a project and to obtain buy-in from affected landowners and/or regulatory agencies
Noise	Operation	The site design and layout has been developed to locate the equipment and systems away from residential areas and as close as feasible to other industrial operations.
		Buffer areas will be maintained in their native vegetated state to provide screening from ground level sources of noise. Where necessary, understory plantings will be added to provide additional screening around existing residential areas.
		Where feasible, equipment will be housed in permanent structures that contain noise.
		Where equipment must be accessible, the equipment will be housed in structures designed and oriented to divert noise away from residential areas.
		Mobile equipment will be supplied with mufflers and other noise attenuation systems

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Environmental Health	Aqueous Ammonia	A spill containment facility with perimeter concrete walls and covered roof will be provided around the aqueous ammonia storage tank capable of holding the liquid volume of the tank plus incidental liquids
		The truck unloading area will be sloped to prevent the aqueous ammonia from entering the storm water system if a spill were to occur during truck unloading
	Oil Filled Transformer	A spill containment facility with perimeter concrete walls and covered roof will be provided around the aqueous ammonia storage tank capable of holding the liquid volume of the tank plus incidental liquids
	Sorbent Un-Loading Area	The truck unloading area will be sloped to prevent the trona from entering the storm water system if a spill were to occur during truck unloading
		Area will be graded to minimize storm water run-off from adjacent areas
		Area will be swept to remove accumulated dry materials which will be properly disposed of
	Diesel Fueling Station	Discourage "topping-off" of fuel tanks.
		Absorbent spill cleanup materials and spill kits se in fueling areas and on fueling trucks
		Drip pans or absorbent pads used during vehicle and equipment fueling
		Use absorbent materials on small spills. Do not hose down or bury the spill
		Avoid mobile fueling of mobile equipment around the site; rather, transport the equipment to designated fueling areas.
		Train employees and subcontractors in proper fueling and cleanup procedures.
		Dedicated fueling areas will be protected from stormwater runon and runoff, and located at least 50 ft away from downstream drainage facilities and watercourses
		Protect fueling areas with berms and dikes to prevent runon, runoff, and to contain spills.
		Nozzles used in vehicle and equipment fueling should be equipped with an automatic shutoff to control drips. Fueling operations should not be left unattended

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Energy	Conservation	Reduce pollution from construction activities by controlling soil erosion, sedimentation and airborne dust generation as described elsewhere in this document
		Conserve existing natural areas to the extent possible as described elsewhere in this document
		Control stormwater quantity and quality as described elsewhere in this document
		Minimizing light trespass from the site, reduce sky glow, improve nighttime visibility through glare reduction, and reduce development impact on nocturnal environments.
		Provide water efficient landscaping
		Use recycled materials to the extent possible in the facility construction materials.
		Use air cooling to minimize water consumption.
Land Use	Future Development	The facility is laid out in such a way to locate the mechanical systems with consideration to property that is zoned residential, to limit impact to surrounding property owners.
		Appropriate buffering will be placed along site boundaries near residential areas to mitigate noise and lighting impacts in accordance with City of Shelton and Mason County requirements.
		A noise study was conducted to evaluate potential sources of noise at the site and to propose measures to mitigate their impacts
		A traffic study was conducted to evaluate potential sources with traffic to and from the site and to propose measures to mitigate traffic impacts
		Directional lighting will be used in work area to direct lights downward, minimizing the impacts on the adjoining property
Visual	Landscaping	Maintaining a minimum 50 – 100 foot buffer for existing trees and vegetation that would be left around the western, southern, northern and eastern edges of the site, excluding entrances and exits.
		Developing a facility color scheme for the exteriors of the buildings and equipment that blend with the existing vegetation.
	Lighting	Over-illumination will be reduced to avoid excessive scattering of light into the atmosphere. Luminaries will utilize cutoff lenses which restrict the lateral light distribution to greatly reduce the lighting which spills onto adjacent properties.

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Vegetation	Landscaping	The proposed site development is intended to maintain a minimum 50 – 100 foot buffer for existing trees and vegetation that would be left around the western, southern, and northern edges of the site, excluding entrances and exits.
		Plantings would also be added along the north, east, and west sides of the building and main entrance
		Proposed native plants would be added near the maintenance drive, the south building entry, storm water management facilities on the east side of the property, and the main parking area
Traffic	County Road	To provide circulation, a County road will be constructed around the perimeter of the Site to connect East Production Road on the north to East Capital Prairie Road on the south. This road will reroute the unimproved private road that crosses the site, but has never been open for public use.
	Johns Prarie Road	Provide radius treatment (widening of the road) on East Johns Prairie Road at East Production Road. In addition, ADAGE will study the need for acceleration and bypass lanes at the intersection of East Johns Prairie Road and East Production Road.
		Make a pro-rata contribution towards any WSDOT improvements at the intersection of Johns Prairie Road and SR-3.
Public Services	Fire	Contact local fire marshal to develop fire management plan. Plan will be maintained on site.
		Fire Management plan to include 1) requirement to conduct onsite fire fighting training and the identification of potential fire hazards for plant personnel and 2) install and maintain equipment for fighting fires. The local fire department will be invited to participate in training,
		Daily observations of the woody biomass storage areas will be performed by plant personnel to identify potential fire hazards. Plant personnel will be trained on identification of potential fire hazards.
		Signs will be posted at the plant, which identify potential fire hazards.
		Follow procedures established by the National Fire Protection Agency (NFPA) for outdoor storage piles.
		Incoming unprocessed materials will be stored in areas with a clearance between each storage area.
		Fine woody biomass material will be minimized in the storage areas.
		Compaction of woody biomass in storage areas will be controlled as necessary to maintain proper storage conditions