







Storage and production

Permanent Storage Sites

	Capacity	Percent of total
Drysdale (page 62)	7.1 million CY	64%
Weisenbeck (page 63)	1.9 million CY	17%
Flury (page 64)	1.5 million CY	13%
Wabasha Sand (page 65)	0.6 million CY	6%
Total storage capacity	11.1 million CY	100%

Sand Production

Yearly total (CY/year, page 21)	266,250
Total production (40 years)	10.65 million CY

Trucks: “loads” vs “trips”

Remember: for every **load** to a location there are two **trips**, an outbound and a return

From page A-11 of the report:

“up to a maximum of 200 trucks [loads] in one day, each carrying 16 tons of sand from one of the designated transfer sites to one of the eventual placement sites. As previously noted, in order to evaluate an estimated highest impact scenario, it was assumed that all 200 truck ~~trips~~ [loads] would be serviced within the specific time window of 7:00am to 5:00pm (10 hours). By assuming a consistent arrival/departure rate, it yields an estimate of 40 trips entering and leaving the site each hour. This equates to one truck every 90 seconds.”

This refers to truck **loads** per day

This is an error, it should say “truck **loads per day**” not “trips”

This is correct – referring to true trips per hour

40 trips/hour x 10 hrs/day =

400 trips/day

600 minutes/day ÷ 400 trips/day = 1.5 minutes between each trip, or...

Average of 90 seconds between trucks passing a location on the haul route

Trips per year

Trips/year by truck-type	Truck capacity (Appendix A-3, CY)	Annual dredging production (p. 21, CY)	Average trips per year	Average trucking-days per year (200 trips/yr.)
10-Wheel/tandem	12	266,250	22,188	111
12-Wheel/tridem	15	266,250	17,750	89
18-Wheel Belly Dump	20	266,250	13,313	67
18-Wheel Belly Dump	21	266,250	12,679	63

Questions:

- Can 10-wheel/tandems be eliminated as a hauling option for all contracts?
- Can Large Belly-Dumps be the preferred option for all contracts?

Trips/year to site	Site storage capacity	Average trips per year			
		10-Wheel	12-Wheel (this size was used in study projections)	Small Belly Dump	Large Belly Dump
Drysdale (page 62)	7.1 million CY 64%	14,200	11,360	8,520	8,114
Weisenbeck (page 63)	1.9 million CY 17%	3,772	3,018	2,263	2,155
Flury (page 64)	1.5 million CY 13%	2,884	2,308	1,731	1,648
Wabasha Sand (page 65)	0.6 million CY 6%	1,331	1,065	799	761

Projected days of trucking

(assuming 12-Wheel dumper)				
Trucking to storage Locations	Average Loads/Year	Loads/Day	Average Days/Year	Through Town(s)
Drysdale (page 62)	11,360	200	57	Wabasha
Weisenbeck (page 63)	3,018	200	15	Wabasha and Nelson
Flury (page 64)	2,308	200	12	Alma
Wabasha Sand (page 65)	1,065	200	5	Wabasha

Avg. days/year through:	To Drysdale	To Weisenbeck	To Flury	To Wabasha Sand	Total
Wabasha	57	15		5	77
Nelson		15			15
Alma			12		12

But...

Use of averages makes it impossible to assess true impact

- hauling from temporary locations varies from once every 1.2 years up to once every 2.2 years
- thus, the schedule of hauling sand to permanent locations can't be predicted using average/year
- there is a good possibility that towns will see many more days/year of trucks in some years
- this study does not provide enough information to estimate these traffic volumes by location
- this approach to planning appears to be focused on optimizing COE operations, not impact on communities