Sanitary Sewer Report

FOR

TAKE-5 OIL CHANGE

80 Posse Ground Road
Sedona, AZ 86336

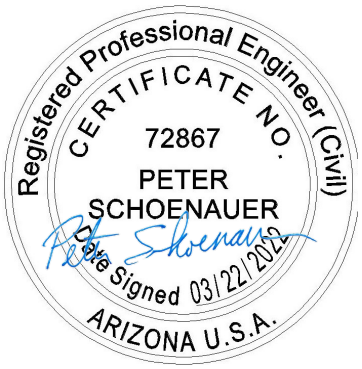
PREPARED FOR:

Sedona Take Five, LLC
106 Foster Avenue
Charlotte, NC 28203
(704) 496-7120

TIDEWATER
ENGINEERING, INC.

200 Plantation Chase, Suite 16
St. Simons Island, GA 31522
(912) 268-2164

August 24, 2022



Sedona Take Five Oil Change

August 24, 2022

Sewer Design Report:

The proposed building has one bathroom for employees.

There are three bays.

Using Table 1 of ADEQ Title 18, Chapter 9:

1,000 gpd for first bay and 500 gpd for the other two bays.

Total anticipated flow is 2,000 gpd. (see attached ADEQ Table 1)

See attached calculation for pipe flow.

Industrial facility		
Without showers	Employee	25
With showers	Employee	35
Cafeteria, add	Employee	5
Institutions		
Resident	Person	75
Nursing home	Person	125
Rest home	Person	125
Laundry		
Self service	Wash cycle	50
Commercial	Washing machine	Per manufacturer, if consistent with this Chapter
Office Building	Employee	20
Park (temporary use)		
Picnic, with showers, flush toilets	Parking space	40
Picnic, with flush toilets only	Parking space	20
Recreational vehicle, no water or sewer connections	Vehicle space	75
Recreational vehicle, with water and sewer connections	Vehicle space	100
Mobile home/Trailer	Space	250
Restaurant/Cafeteria	Employee	20
With toilet, add	Customer	7
Kitchen waste, add	Meal	6
Garbage disposal, add	Meal	1
Cocktail lounge, add	Customer	2
Kitchen waste disposal service, add	Meal	2
Restroom, public	Toilet	200
School		
Staff and office	Person	20
Elementary, add	Student	15
Middle and High, add	Student	20
with gym & showers, add	Student	5
with cafeteria, add	Student	3
Boarding, total flow	Person	100
Service Station with toilets	First bay	1000
	Each additional bay	500
Shopping Center, no food or laundry	Square foot of retail space	0.1
Store	Employee	20
Public restroom, add	Square foot of retail space	0.1
Swimming Pool, Public	Person	10
Theater		
Indoor	Seat	5
Drive-in	Car space	10

Note: Unit flow rates published in standard texts, literature sources, or relevant area or regional studies are considered by the Department, if appropriate to the project.

Historical Note

New Section adopted by final rulemaking at 7 A.A.R. 235, effective January 1, 2001 (Supp. 00-4). Amended by final rulemaking at 11 A.A.R. 4544, effective November 12, 2005 (05-3).

ARTICLE 4. NITROGEN MANAGEMENT GENERAL PERMITS

R18-9-401. Definitions

In addition to the definitions established in A.R.S. §§ 49-101 and 49-201 and A.A.C. R18-9-101, the following terms apply to this Article:

1. "Application of nitrogen fertilizer" means any use of a substance containing nitrogen for the commercial production of a crop or plant. The commercial production of a crop or plant includes commercial sod farms and nurseries.
2. "Contact stormwater" means stormwater that comes in contact with animals or animal wastes within a concentrated animal feeding operation.
3. "Crop or plant needs" means the amount of water and nitrogen required to meet the physiological demands of a crop or plant to achieve a defined yield.
4. "Crop or plant uptake" means the amount of water and nitrogen that can be physiologically absorbed by the roots and vegetative parts of a crop or plant following the application of water.
5. "Impoundment" means any structure, other than a tank or a sump, designed and maintained to contain liquids. A structure that stores or impounds only non-contact stormwater is not an impoundment under this Article.
6. "Liner" or "lining system" means any natural, amendment, or synthetic material used to reduce seepage of impounded liquids into a vadose zone or aquifer.

Channel Report

Hydraflow Express Extension for Autodesk® AutoCAD® Civil 3D® by Autodesk, Inc. Wednesday, Aug 24 2022

<Name>

Circular

Diameter (ft)	= 0.33
Invert Elev (ft)	= 4416.88
Slope (%)	= 7.40
N-Value	= 0.011

Calculations

Compute by:	Q vs Depth
No. Increments	= 10

Highlighted

Depth (ft)	= 0.03
Q (cfs)	= 0.013
Area (sqft)	= 0.00
Velocity (ft/s)	= 2.80
Wetted Perim (ft)	= 0.21
Crit Depth, Yc (ft)	= 0.07
Top Width (ft)	= 0.20
EGL (ft)	= 0.15