Burrow Pit Surface Volume Calculations - March to September

In [ ]:
```
import arcpy
arcpy.env.workspace = r'P:\GIS\Projects\2023\City_Employees\PS\Fariyal\Burrow_Pit_Check\Burrow_Pit_Check.gdb'
```

In [ ]:
```
# Calculate the difference between the 2 rasters. This subtracts in this fashion.
# March Dirt Totals - September Dirt Totals = Extracted Layer
arcpy.Minus_3d('Extract_March_Final', 'Extract_September_Final', 'Extract_September_Mar_Minus_Final')

# Calculate the change in volume from the new layer.
arcpy.SurfaceVolume_3d('Extract_September_Mar_Minus', 'SEP_MAR_VOL_DIF_FINAL.txt', 'ABOVE', '', 1)
print('Volume Calculated')
```

```
Volume Calculated
```

Difference Estimates Calculated

In [ ]:
```
# Open the file arcpy creates with the different calculations.
with open('SEP_MAR_VOL_DIF_FINAL.txt') as f:
    contents = f.read()
print(contents)

cubic_ft = contents.split(',')[-1]
# print(cubic_ft)

# Calculate the cubic yards by using the conversion from cubic ft.
cubic_yrds = round(float(cubic_ft) * 0.037037)

print(f'Approximate difference estimates: {cubic_yrds} cubic yards.')
```

```
Dataset, Plane_Height, Reference, Z_Factor, Area_2D, Area_3D, Volume
..db\Extract_September_Mar_Minus, -25.89, ABOVE, 1.000000, 89626.206734623, 134538.27404994, 2648962.1921087

Approximate difference estimates: 98110 cubic yards.
```