Buildout Analysis Tool Documentation

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Language: Python 2.7

Tool Overview

This tool was developed as a Python-scripted version of the NJ DEP Buildout Analysis Model Builder Model. Various methods were developed, mainly those that calculated minimum lot size for zoning data and buildout numbers for both pre- and post- environmental constraint areas.

Imported Libraries

- sets
- math
- arcpy

Method Overview

minimumLotSize(zoningData, outputWorkspace)

- Takes zoning data and appends a "MINLOT" field. Using the zoning schedules of Oldmans, Hopewell, and Carney's Point, python dictionaries were created that assigned a minimum lot value to each zone. The input zoning data (shapefile or geodatabase feature class) is then updated. For each new town that would want to use this model, this method would have to be updated.
- Only works for Hopewell, Oldmans, and Carney's Point Townships right now.

uglyFieldManagement(fc)

- After a long series of "Identity" tool calculations, there are a lot of left over FID fields that are unnecessary once the model is finished. This method eliminates these fields.

nitrate_BO(minlot, septicDensity, shapeArea, isSeptic, CZ_BO_number)

- Calculates and returns buildout numbers under Nitrate Dilution standards.

currentZoning_BO(minLot, shapeArea)

- Calculates and returns the buildout numbers under current zoning.

canSplit(NO3_val, CZ_val)

- Returns a Boolean value that pertains to whether or not a parcel can be split, based on Nitrate dilution buildout and current zoning buildout numbers

buildoutCalculations(featureClass, isPost)

- Using the previous two methods, appends the GIS data with buildout numbers.
- Run twice, for pre- and post-constraint erase