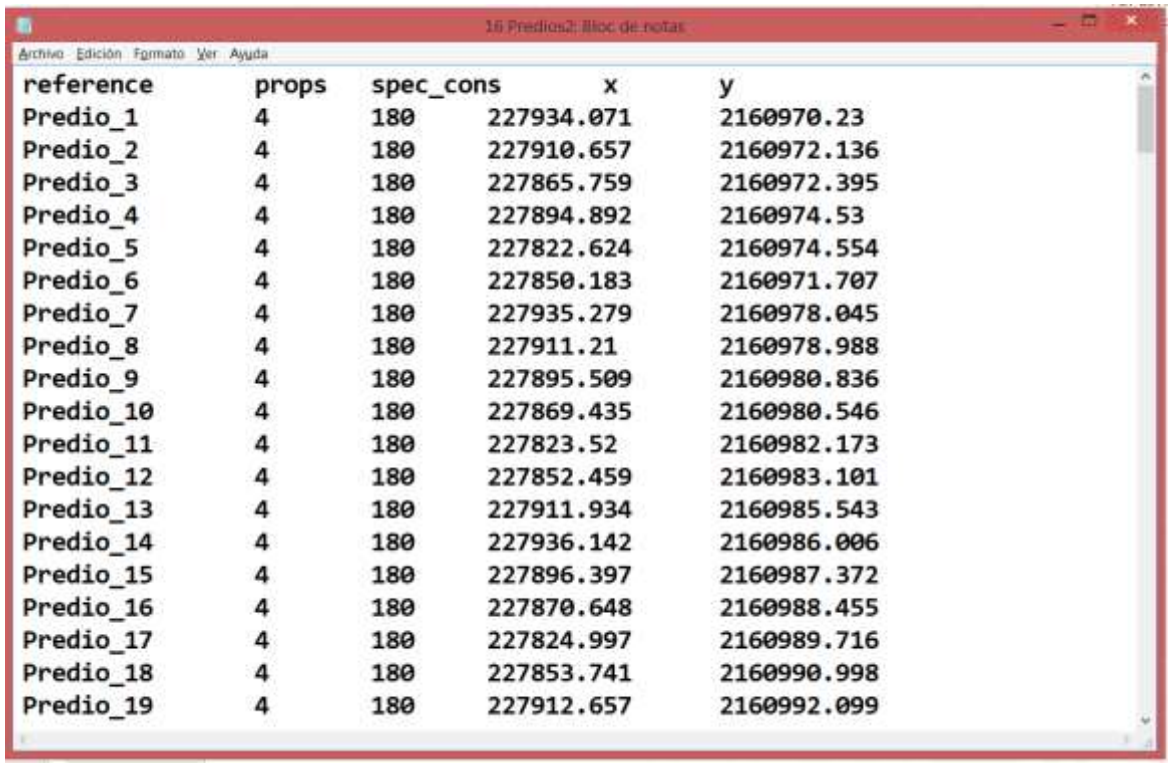
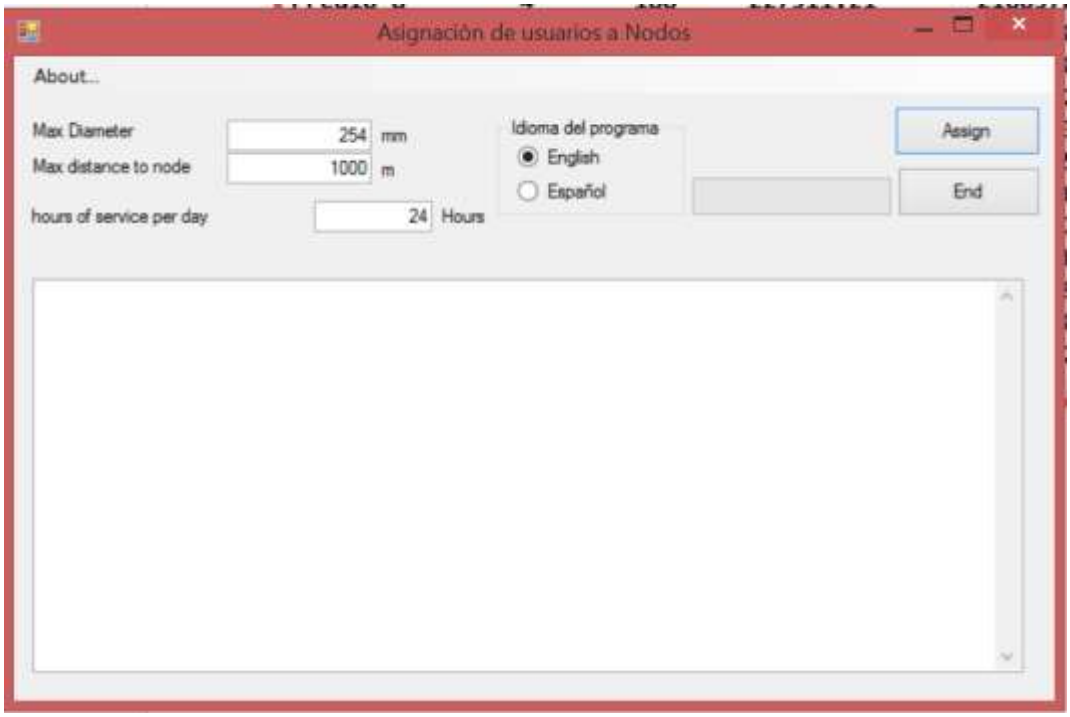
Using the NODOS program

Generate a text file including the headers and save it with a * .txt ending.



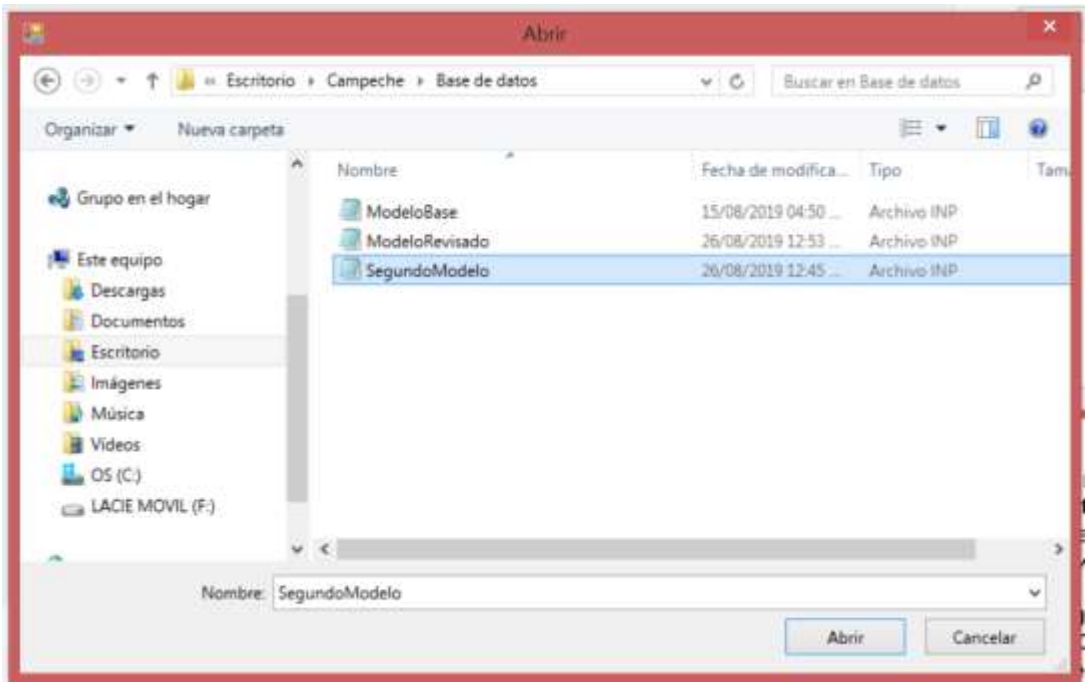
reference	props	spec_cons	x	y
Predio_1	4	180	227934.071	2160970.23
Predio_2	4	180	227910.657	2160972.136
Predio_3	4	180	227865.759	2160972.395
Predio_4	4	180	227894.892	2160974.53
Predio_5	4	180	227822.624	2160974.554
Predio_6	4	180	227850.183	2160971.707
Predio_7	4	180	227935.279	2160978.045
Predio_8	4	180	227911.21	2160978.988
Predio_9	4	180	227895.509	2160980.836
Predio_10	4	180	227869.435	2160980.546
Predio_11	4	180	227823.52	2160982.173
Predio_12	4	180	227852.459	2160983.101
Predio_13	4	180	227911.934	2160985.543
Predio_14	4	180	227936.142	2160986.006
Predio_15	4	180	227896.397	2160987.372
Predio_16	4	180	227870.648	2160988.455
Predio_17	4	180	227824.997	2160989.716
Predio_18	4	180	227853.741	2160990.998
Predio_19	4	180	227912.657	2160992.099

Run the NODOS application.

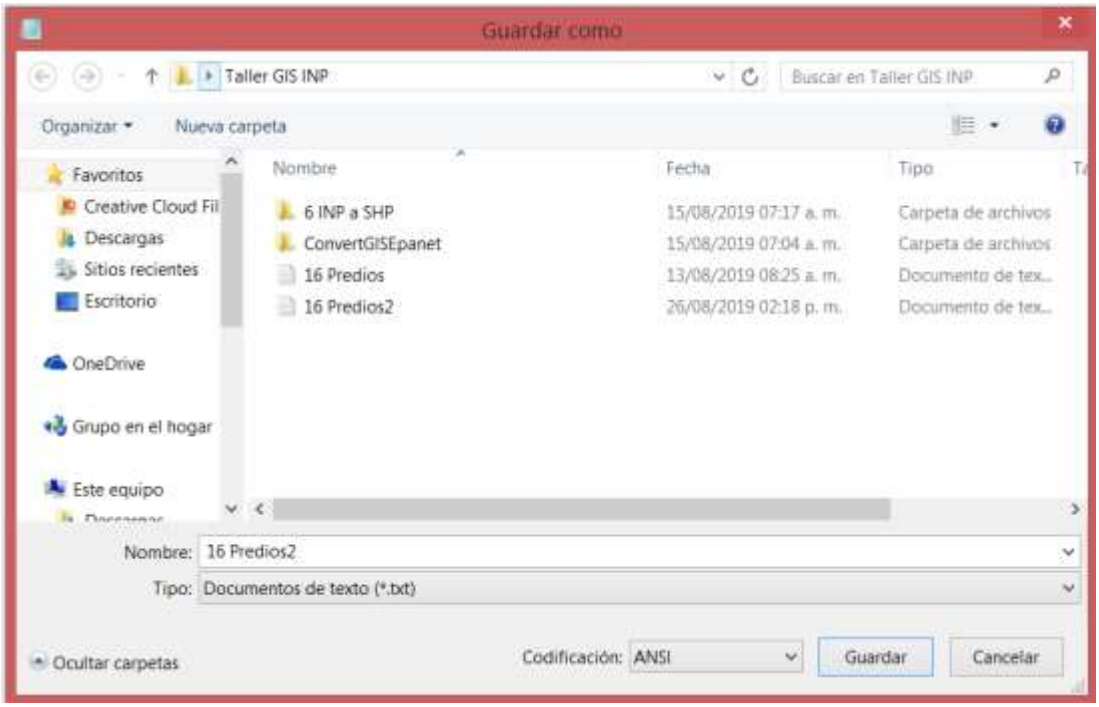


Three parameters must be defined: "Max Diameter" defines the maximum pipe diameter to which a property can be assigned. If within the network there are pipes that are main pipes to which users are not connected, a limit can be established as to which pipes should be considered. "Max distance to node", establishes a limit distance up to which a property can be connected to a node, this will avoid considering properties that are outside the range of the network. By default, the program considers 254mm as the maximum diameter and 1000 meters as the maximum distance to the nodes. In the case of hours of service per day, it allows establishing the daily supply time to the network, this value will be used to calculate the instantaneous demand in each node, only modify it if it is required to consider a value less than 24 hours of service.

Pressing the Assign button will open the open dialog box, where you must identify the * .inp file to which the properties will be assigned..

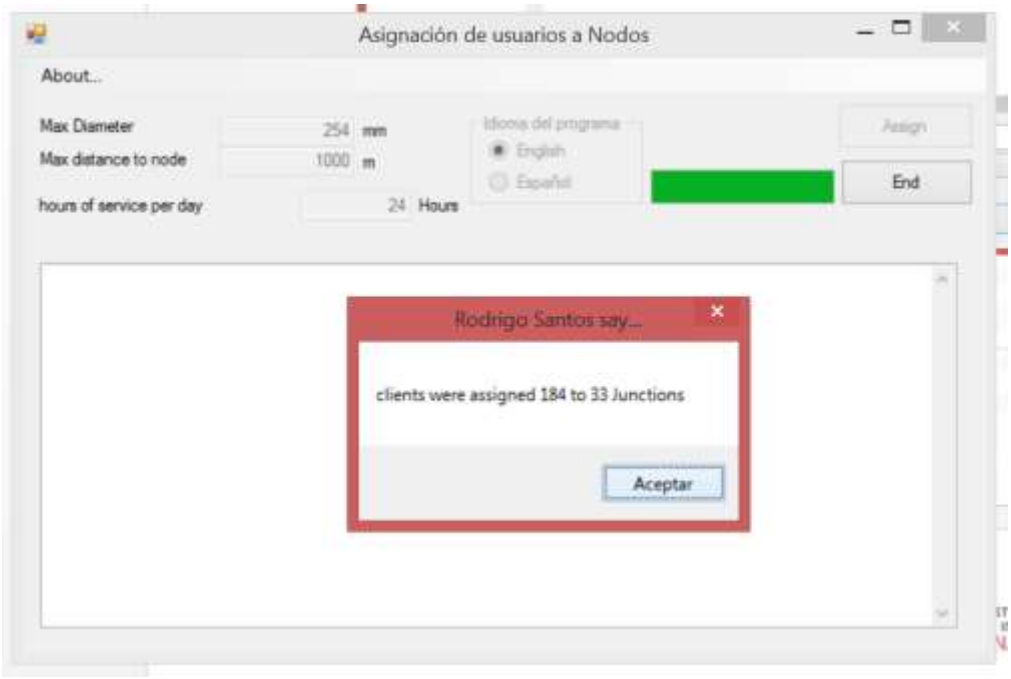


When opening it, the program will indicate the number of nodes, pipes and pumps found for the assignment, then the open dialog box will reopen to indicate the * .txt file of the properties.

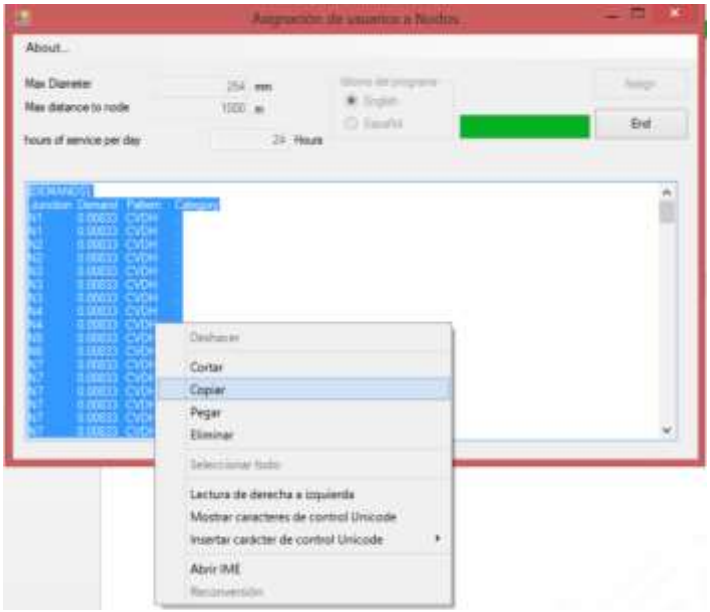


The program will indicate how many properties I identify in the file and it will show you a dialog box where you are asked if you want to assign a pattern of hourly variation (pattern) to the properties, if you have one, enter the ID of the pattern, otherwise you can use the one with Default.

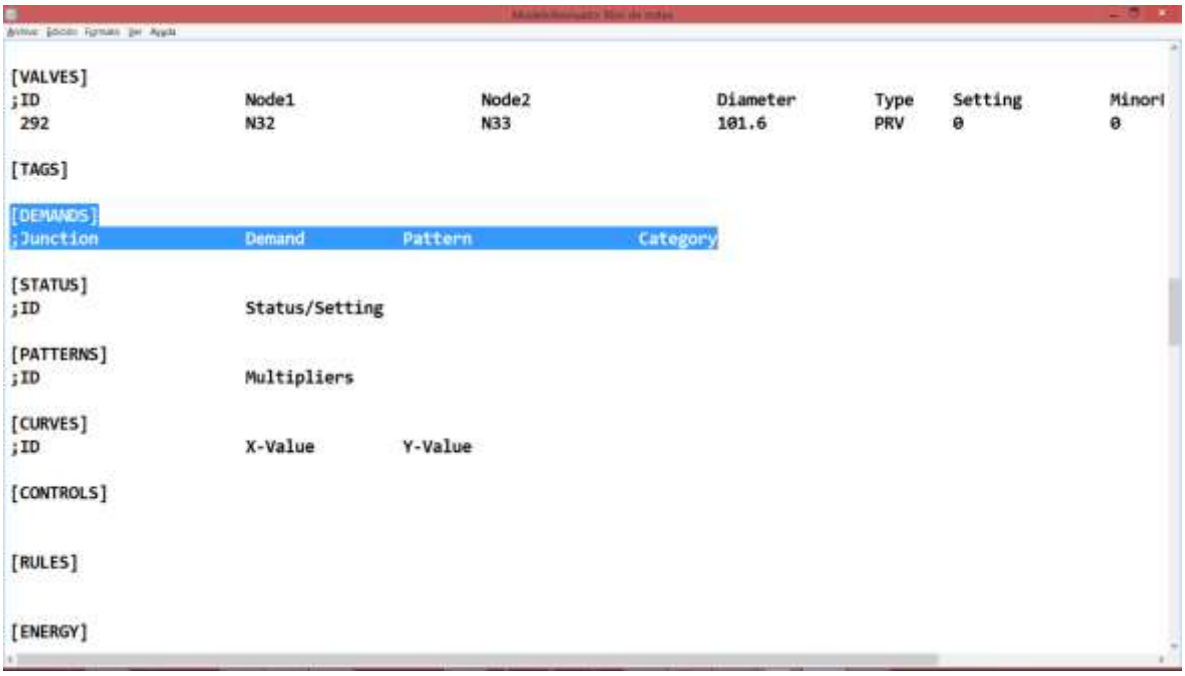
The program will indicate the number of properties assigned to which number of nodes.



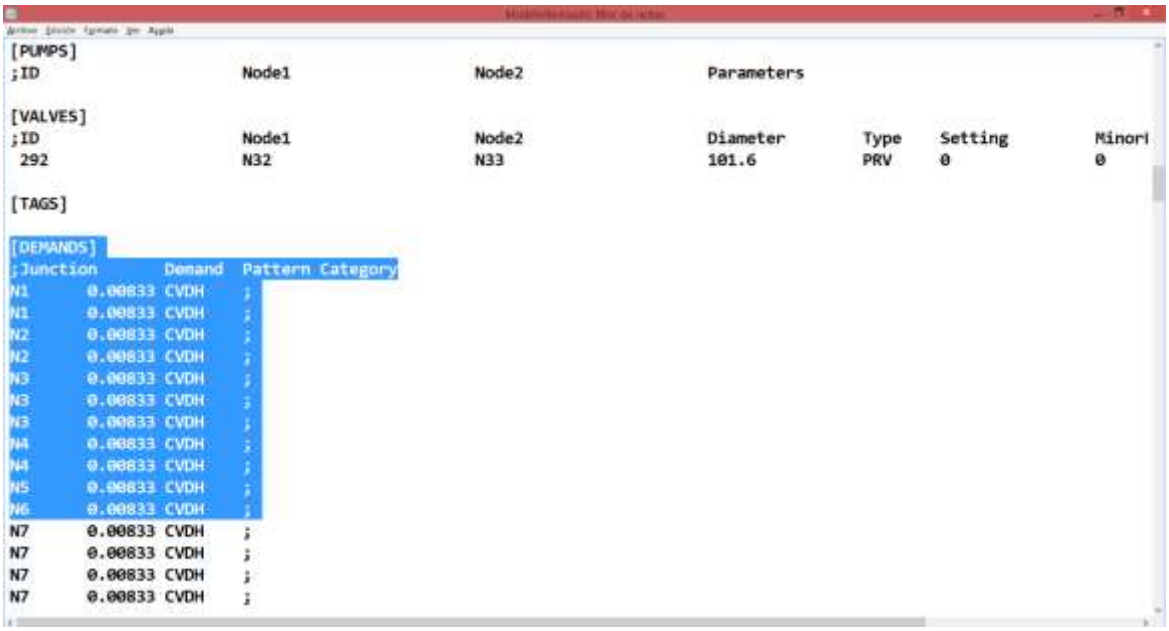
Within the text box of the program the assignment will be shown and by default it will be selected, with right click copy the information.



Open the model * .inp file with the notepad, find the demands section, and paste the copied information here.



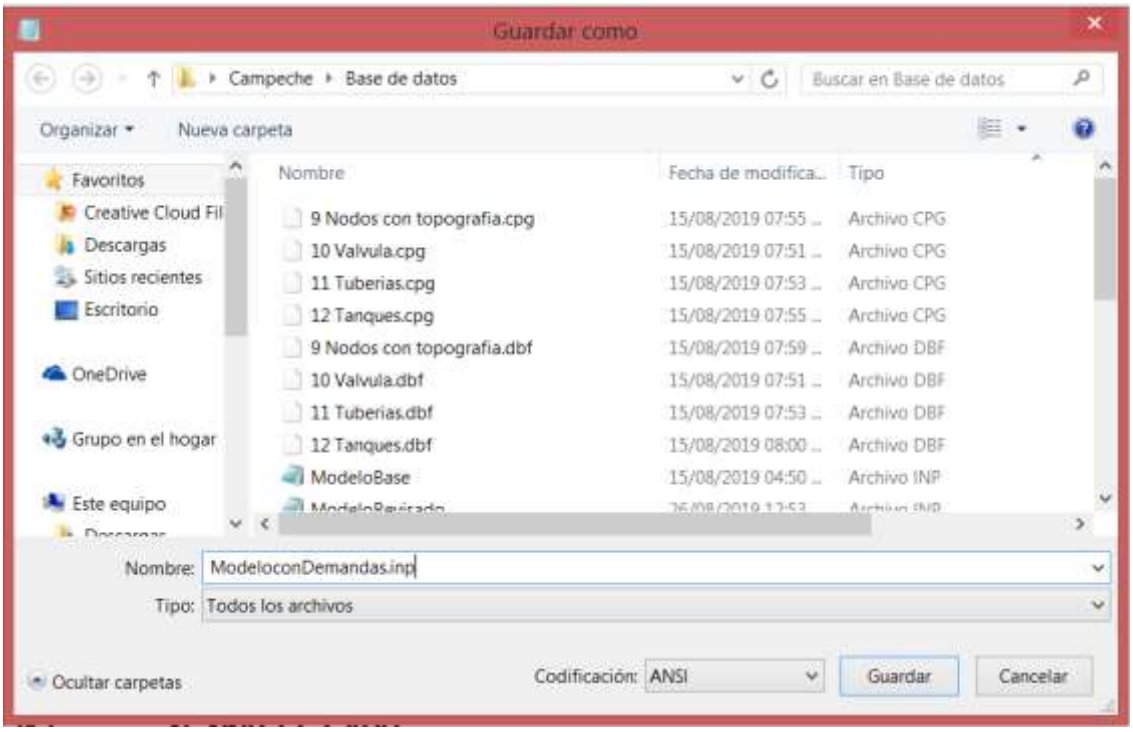
Be careful not to duplicate the headers, or to affect the [STATUS] section of the * .inp file, and after pasting the values, the file should look like the beginning and end of the [DEMANDS] section.



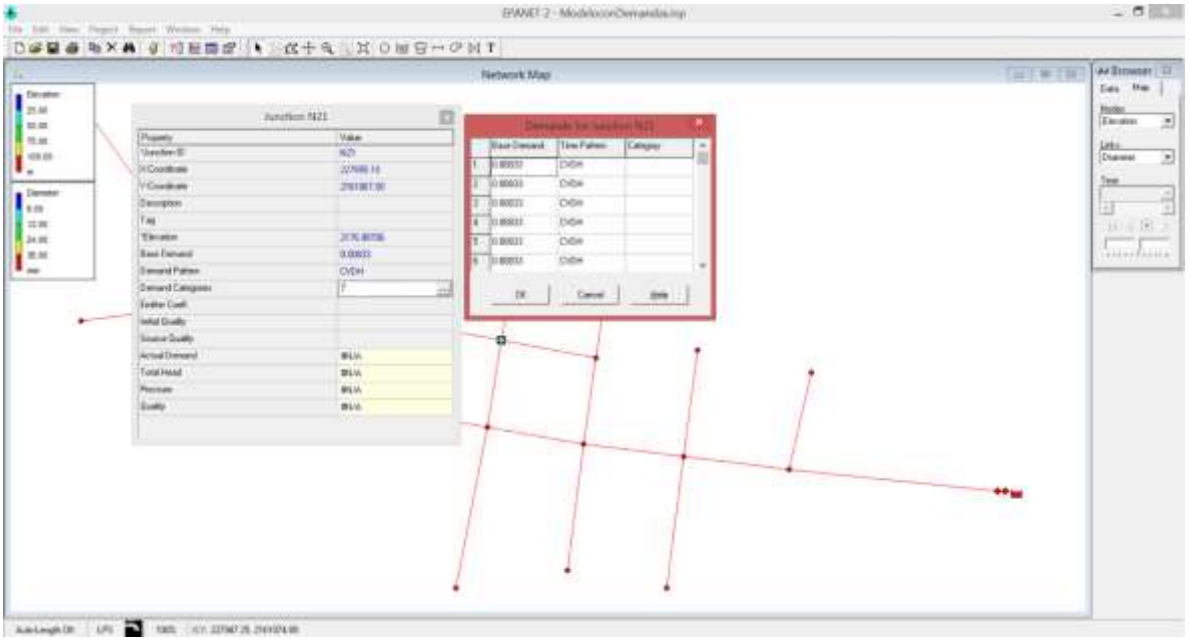
```
[PUMPS]
;ID                     Node1                   Node2                   Parameters

[VALVES]
;ID                     Node1                   Node2                   Diameter        Type    Setting         Minori
 292                    N32                     N33                     101.6           PRV     0               0

[TAGS]

[DEMANDS]
;Junction       Demand  Pattern Category
N1      0.00833 CVDH    ;
N1      0.00833 CVDH    ;
N2      0.00833 CVDH    ;
N2      0.00833 CVDH    ;
N3      0.00833 CVDH    ;
N3      0.00833 CVDH    ;
N3      0.00833 CVDH    ;
N4      0.00833 CVDH    ;
N4      0.00833 CVDH    ;
N5      0.00833 CVDH    ;
N6      0.00833 CVDH    ;
N7      0.00833 CVDH    ;
N7      0.00833 CVDH    ;
N7      0.00833 CVDH    ;
N7      0.00833 CVDH    ;
```

```
N31     0.00833 CVDH    ;
N32     0.00833 CVDH    ;
N32     0.00833 CVDH    ;
N32     0.00833 CVDH    ;
N32     0.00833 CVDH    ;
N32     0.00833 CVDH    ;
N32     0.00833 CVDH    ;
N33     0.00833 CVDH    ;

[STATUS]
;ID                     Status/Setting

[PATTERNS]
;ID                     Multipliers
```

Save the file with * .inp ending, do not forget in the file type section to set "All files".



Abra el archivo desde Epanet y podrá verificar que ahora cada nodo tiene un numero de predios asignados y cada predio tiene una demanda base, también en el campo Demand Pattern se establece el ID que gue definido en el programa.



It is necessary that the Epanet model is correctly georeferenced in UTM coordinates and that the clients (properties) are also in the same coordinate system. The NODOS program is designed to

use LPS units and is only for the English version of EPANET (original version), the Spanish option is exclusive for the texts of the program and does not affect the result of the assignment.