USING LIGHTS

The game engine does not allow one object to be illuminated with more than eight lights at once (including the direction light in the sector).
There are several ways around this. By creating sectors, lightmap (shadow texture applied to the entire terrain) or by creating terrain from multiple .bes objects. It is also possible to create a .bes object, for example terrain from multiple parts - sub-objects. In the editor, using the Q key or on the icon bar, we select the sub-entity selection (sub-object/entity - part of the main .bes object) and create light maps for individual sub-entities. This is useful when you have multiple indoor rooms.

GLASS AND WATER

For the glass it is necessary to use a texture with an 8-bit alpha channel (256 shades of gray). So DDS DXT5. You can use photoshop or gimp for this. For transparent objects, the texture does not have to be very detailed, a size of e.g. 256x256 is sufficient. To create an alpha, we can copy the entire image and paste it as an alpha channel. It will automatically convert to grayscale. Darker shades will be more transparent as a result, so it will probably be appropriate to invert the alpha (create a negative). Another option is to use the gradient tool or just fill the entire alpha with a certain shade. Alpha can be anything of the same size and grayscale. In 3ds max we have 2 options to create glass. As a 3D object (for example a cuboid with dimensions 1x1x0.05m - suitable for glass) or as a planar object. In the second case, there are again 2 options for proceeding further. We will create a plane (e.g. a 1x1m square) and apply a texture. It will be visible only from the front side of the polygon. So either in the texture manager in the properties we check 2-sided. As a result, the texture will be visible from both sides, but from the other side it will not collide - there is no polygon (suitable for the water surface). Or we duplicate the plane object, reverse the normals (select all surface polygons - FLIP). We merge the objects (ATTACH) and then we also merge the vertices (WELD). In the example of a 1x1m square (1 polygon), a twosided planar object (2 polygons, 4 vertices) would be created. This option is most suitable for window glass.
The water surface should be cut into not too large and preferably sharp-angled triangles. Large polygons cause fog to disappear below the surface and also make the surface more difficult to shade. Anyone who has studied how river surfaces are created from the game's original maps will surely have noticed that the levels are divided into large polygons from bank to bank. The authors used a lightmap texture to shade the surface of the layer. The environment that will be below the water level in the Z axis will have properties according to the settings in LEVEL.INI. In 3dsMax, if you set a collision material for water, for example HA, then the environment will have the properties specified in level.ini for HA.

WATER_fog=HA,30,30,0,0,3,0,30,15
WATER_sound=HA,2205

WATER_fog parameters:
[mat.name] [r g b] [fog start][fog end][backgrnd fog start][backgrnd fog end][max water depth]

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