Fountains play important role in urban landscape as well as being a cultural mark in a city than they also have an environmental function. For example, their effect in the control of the microclimate is well known. The paper deals with the sound effects which big fountains located in large squares, have on the urban soundscape of the area. In particular, we deal with how their natural character can change the global perception of the site. Indeed, the representation of water sounds is positively appreciated by most city-dwellers. Depending on their size, their shape, they are able to give a quiet or a dynamic character to the site. But in the case of areas with a lot of traffic we ask ourselves what are the interactions with strong background noise level and others sound sources are. GRECAU uses the soundwalk method to assess the acoustic environment. The following case studies, Plaza de Cataluna in Barcelona and Piazza Ferrari in Genoa, are two examples of such a situation. Some of the results we give here try to answer the previous questions.