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## WELL PROTECTION ZONE LIMITS IN URBAN AREAS: KENITRA CITY, MOROCCO

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### ABSTRACT

*Protection zones surrounding pumping groundwater wells play a significant role in maintaining good water quality. The importance of this concept has resulted in its introduction into laws regulating the use and the protection of groundwater resources. In Morocco, law 10/95 relating to water, institutes protection perimeters in Chapter VII, Article 63. The establishment of the protection zone is easy in a rural or suburban zone but not in an urban zone. Indeed, the protection of wells in this zone becomes complicated because the sources of pollution in the urban zone are many and varied. The most significant risk within the urban zone perimeter is domestic pollution resulting from the infiltration of runoff water from the urban surfaces after rains. In this context a well has little chance to escape pollution. In the urban zone of Kenitra city in northwest Morocco, several pumping wells are inside the urban perimeter. The outdated network of storm water drainage, the infiltration of rainwater from urban runoff and the shallow saturated zone threaten the quality of water and pose a problem for the city drinking water supply.*

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