

**Ministerial Decision
No. (191/2000)**

A' Dakhiliyah Region Water Supply Wellfield Protection Zones

- Pursuant to the Law for Conservation of the Environment and Prevention of Pollution issued by Royal Decree No. (10/82)
- And the Law for Protection of Water Resources issued by the Royal Decree No. (29/2000)
- And the Royal Decree No. (47/2001) for Ministerial Amendments
- And to the General Public best of interest,

DECIDED

Article 1: Determining Dhahira Region Water Supply Wellfield Protection Zones in Wilayats of Nizwa (WadiEzz , WadiEin and Wadi al Abyadh) Manah, Adam, Samail and Bedbid in the A' Dakhiliyah Region as per the attached maps in Appendix 1, to develop the water resources as well as protecting water resources and public water supply wellfields against pollution, exhaustion and intrusion of saline water.

Each Region is to be divided into three areas each determined according to the co-ordinates given in Appendix 2.

Article 2: Determines the extent of permission to practice activities and works in the protected Regions mentioned in Article 1 and in accordance with Appendix 3. These activities and works should be carried out in accordance with the Regulations and as given in Appendix 4.

Article 3: The Ministry of Regional Municipalities, Environment and Water Resources is to manage A' Dakhiliyah Region water supply wellfields in co-ordination with all concerned parties in order to achieve the requirements given in Article 1.

Article 4: The Minister of Regional Municipalities, Environment and Water Resources shall issue Decisions to form a Working Committee to carry out the necessary work to achieve the aims of determination in the protected areas mentioned in Article 1.

This committee is to co-ordinate with all government parties and take all necessary action to remove any obstacles which may affect the safety of the groundwater and to fulfill the conditions of protecting water resources in the determined Regions. The committee may form sub-committees to carry out specific works. The committee is to raise a report to the Minister every four months.

Article 5: This Decision shall be published in the Official Gazette and shall be effective from the date of publication.

Issued on 24/3/1422H

Dr. Khamis Bin Mubarak Bin Essa Al-Alawi

Minister of Regional Municipalities, Environment and Water Resources

APPENDIX (1)

Maps for the Water Supply Wellfields Protection Zones in the Region of A' Dakhiliyah

APPENDIX (2)

Coordinates for the Water Supply Wellfields Protection Zones in the Region of A' Dakhiliyah

Bidbid District Water Supply Wellfield Protection Zones

District	Water Collection Area	Red Zone		Orange Zone		Yellow Zone
Bidbid	Wadi Dabaun	In the stream of Wadi Dabaun near to Fanja bridge. It covers an area of 7 Km ² . The coordinates of the area as follows:		The area surrounding the red red zone which covers an area of 1.8 Km ² . Its coordinates are:		The rest of the water collection area.
		North	east	North	east	
		2590237	0614250	2589008	0612525	
		2591475	0614448	2589008	0612017	
		2591325	0613500	2590060	0612017	
		2589675	0613425	2590658	0614366	
		2589975	0614025	2590909	0614371	
				2591701	0613955	
				2592187	0614016	
				2592635	0614360	
				2593334	0614405	
				2593384	0614571	
				2592565	0614421	
				2592077	0614089	
				2591715	0614116	
				2591337	0614421	
				2590576	0614549	
				2590316	0614371	
				2590176	0614360	
				2589882	0614144	
				2589603	0613212	

APPENDIX (2)
Coordinates for the Water Supply Wellfields Protection Zones in the Region of A' Dakhiliyah

Samail District Water Supply Wellfield Protection Zones

District	Water Collection Area	Red Zone	Orange Zone	Yellow Zone																																																																																												
Samail	Wadi Al Ibrahimiyah	Part of Al Ibrahimiyah water way covers an area of 8 Km ² . The coordinates of the area as follows:	The area surrounding the red zone and covers an area of 2.5 Km ² . Its coordinates are:	The rest of the water collection area.																																																																																												
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APPENDIX (2)
Coordinates for the Water Supply Wellfields Protection Zones in the Region of A' Dakhiliyah

Wadi Izz- Nizwa District Water Supply Wellfield Protection Zones

District	Water Collection Area	Red Zone	Orange Zone		Yellow Zone	
Nizwa	Wadi Izz	In the middle of Manah major plateau about 8 Km ² south of the district of Manah, and 4.5 Km ² east of Izz village and covers 20.6 Km ² . The coordinates of the area as follows:	The area surrounding the red zone and covers an area of 21 Km ² . Its coordinates are:		The rest of the water collection area.	
		North	east	North		east
		2515300	0560600	2518036		0563707
		2515300	0563400	2512528	0564285	
		2506900	0561400	2506286	0563655	
		2507300	0563300	2506233	0560922	
		2511900	0563800	2514889	0560239	
				2518823	0560817	

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Coordinates for the Water Supply Wellfields Protection Zones in the Region of A' Dakhiliyah

Manah District Water Supply Wellfield Protection Zones

District	Water Collection Area	Red Zone	Orange Zone		Yellow Zone	
Manah	Manah	In the middle of Manah major plateau about 8 Km ² south of the district of Manah, and 4.5 Km ² east of Izz village and covers 20.6 Km ² . The coordinates of the area as follows:	The area surrounding the red zone and covers an area of 21 Km ² . Its coordinates are:		The rest of the water collection area.	
		North	east	North		east
		2515300	0560600	2518036		0563707
		2515300	0563400	2512528	0564285	
		2506900	0561400	2506286	0563655	
		2507300	0563300	2506233	0560922	
		2511900	0563800	2514889	0560239	
				2518823	0560817	

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Wadi Al-abyad - Nizwa District Water Supply Wellfield Protection Zones

District	Water Collection Area	Red Zone		Orange Zone		Yellow Zone
Nizwa	Wadi Al-abyad	Flood plain of Wadi Al-abyad covers an area of 3.6 Km ² . The coordinates of the area as follows:		Flood plain of Wadi Al-abyad surrounding the red zone Its coordinates are:		The rest of the water collection area.
		North	east	North	east	
		2535000	0552600	2538563	0554105	
		2546000	0554000	2543985	0554015	
		2539100	0556200	2543985	0558079	
		2539100	0556700	2538563	0558079	
		2541000	0557900			

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Coordinates for the Water Supply Wellfields Protection Zones in the Region of A' Dakhiliyah

WadiEin - Nizwa District Water Supply Wellfield Protection Zones

District	Water Collection Area	Red Zone		Orange Zone		Yellow Zone
Nizwa	WadiEin	The area surrounding the productive wells Any – 1 and Any – 1, which covers an area of 8 Km ² . The coordinates of the area as follows:		The area surrounding the red zone and covers an area of 1.8 Km ² . Its coordinates are:		The rest of the water collection area.
		North	east	North	east	
		2535600	0552100	2535990	0551706	
		2535600	0553100	2535990	0551390	
		2534750	0552100	2534057	0551390	
2534750	0553100	2534467	0551706			

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Coordinates for the Water Supply Wellfields Protection Zones in the Region of A' Dakhiliyah

Bahla District Water Supply Wellfield Protection Zones

District	Water Collection Area	Red Zone		Orange Zone		Yellow Zone
Bahla	Wadi Bahla in Safeha district	In the main stream of Wadi Bahla in Safeha district covering Km2. The coordinates of the area as follows:		The area surrounding the red zone and covers an area of 35 Km2. Its coordinates are:		The rest of the water collection area.
		North	east	North	east	
		2534100	0527600	2540986	0527016	
		2534100	0529100	2540986	0531995	
		2530500	0529100	2537029	0531995	
2530600	0530000	2536014	0530012			
		2530005	0530478			
		2530005	0528693			
		2534010	0527005			

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Adam District Water Supply Wellfield Protection Zones

District	Water Collection Area	Red Zone		Orange Zone		Yellow Zone
Adam	Wadi Adam	The sedimentary plain of the area north and northeast of Khaddilah mountain covering an area of 48 Km2. The coordinates of the area as follows:		The area surrounding the red zone including the sedimentary plains of the area north, northeast and northwest of Khaddilah mountain covering an area of 315 Km2. The coordinates of the area as follows:		The rest of the water collection area.
		North	east	North	east	
		2484000	0546000	22492981	0536815	
		2484000	0553000	2492981	0553389	
		2470800	0546000	2470078	0553389	
		2470800	0550630	2470078	0535638	
		2478000	0553000			

APPENDIX (3)

Regulations of the various activities that could be practiced within the water supply wellfield protection zones in the Region of A' Dakhiliyah

Activities and Practices	AREA			
	Red	Orange	Yellow	Blue
Agriculture:				
– Raising of Farm animals and related activities	A	C	C	C
– Traditional and Seasonal Farming	B	C	C	C
– The use of synthetic fertilizers, insecticides, and weedcides.	A	B	C	C
– Use of biodegradable insecticides.	B	C	C	C
– Construction of grave yards	A	B	C	C
– Usage of evaporative ponds for the treatment of waste generated from desalination plants.	C	C	C	C
– Usage of injection wells to inject waste generated from desalination plants.	A	B	C	C
– Constructing governmental dams.	C	B	B	C
– Constructing private dams.	B	B	B	C
– Constructing residential areas.	B	C	C	C
– Construction of above ground fuel storage tanks.	A	C	C	C
– Construction of underground fuel storage tanks.	A	C	C	C
– Establishment of industrial facilities, and the excursion of any industrial related activities.	A	B	C	C
– Establishment of quarries.	A	C	C	C
– Establishment of Mines.	A	B	C	C
Oil exploration and production:				
– Drilling and laying out oil transmission pipelines.	A	B	C	C
– Disposal of waste water produced during drilling activities.	A	A	A	B
– Construction of roads with barriers and corridors.	B	C	C	C
– Construction of roads without barriers and corridors.	A	B	C	C
Construction of sewage systems:				
– Construction of septic tanks	A	A	B	B
– Construction of collection tanks	A	C	C	C
Small trading businesses	B	C	C	C
– Construction of solid waste disposal facilities	A	B	C	C
– Construction of liquid waste disposal facilities	A	A	C	C
– Construction of hazardous waste disposal facilities	A	A	A	A
– Erecting temporary construction camps	A	C	C	C
– Drilling of public wells	C	C	C	C
– Drilling of private wells	B	B	D	D
Development Activities:				
– Execution of projects not related to Water Authority	A	C	C	C
– Changing and developing exiting activities	B	C	C	C

Note:

A: Not Allowed

B: Allowed only if the proper authorization from concerned governmental authority was obtained, and that is only if there are no other choices.

C: Allowed

D: Allowed only if the maximum volume of liquid to be pumped is specified in the permit obtained prior proceeding with the activity.

APPENDIX (4)

Regulating and controlling all possible activities and practices within the water supply wellfield protection zones in the Region of A' Dakhiliyah

Activities and practices	Regulations and controls must be followed
<p>Agriculture:</p> <ul style="list-style-type: none"> - Rising of Farm animals and related activities - Traditional and Seasonal Farming - The use of synthetic fertilizers, insecticides, and weedcides. - Use of biodegradable insecticides. 	<ul style="list-style-type: none"> - Storing all kinds of fertilizers and pesticides above concrete bases or closed rooms dedicated for this purpose. - Using the specified amounts of fertilizers and pesticides. - Using modern techniques for irrigation. - Moving pumps that work by fuel away from the water source. - Getting rid of all animals slaughtered or dead parts in sites authorized for this purpose. <ul style="list-style-type: none"> - Processing waste from dairy manufacturing and slaughterhouses in plants designated for this purpose. - Drilling lined pits for the collection and disposal of waste unless there are specially designated stations.
<ul style="list-style-type: none"> - Construction of grave yards 	<ul style="list-style-type: none"> - Fencing the grave yards and directing all surface water streams beyond their borders. Not allowing rainwater to be collected.
<ul style="list-style-type: none"> - Usage of evaporation ponds for the treatment of waste generated from desalination plants. - Usage of injection wells to inject waste generated from desalination plants. 	<ul style="list-style-type: none"> - Providing concrete steaming pools lined with plastic sealing products to get rid of desalination on the surface. - Injecting products of desalination in the ground in an isolated geological layer to be deeper than the layers containing fresh water according to the necessary technical specifications.
<ul style="list-style-type: none"> - Constructing governmental dams. - Constructing private dams. 	<ul style="list-style-type: none"> - Storage dams higher the fields of water supply wells must not be constructed.
<p>Constructing residential areas.</p>	<ul style="list-style-type: none"> - Prohibiting the establishment of absorption drilling as a way to get rid of sewage. - Constructing a sewage network.
<ul style="list-style-type: none"> - Construction of fuel storage tanks. 	<ul style="list-style-type: none"> - Tanks to be of two layers of steel or one layer of glass-reinforced with fiber-optic that tanks are placed in rooms lined with concrete cement provide a high volume of at least a third of the size of the tank. - Tanks state must be observed and taps must be locked. - Monitoring levels and stock quantities of fuel carefully by electronic devices have the ability to register in Loggers. - Pressure to be tested annually. - Constructing inspection rooms allow observing tanks emerging pipes.
<p>Establishment of industrial facilities, and the execution of any industrial related activities.</p>	<ul style="list-style-type: none"> - Conducting an environmental survey to determine the industrial waste and ways to process them before disposal. - Choosing the best way to get rid of waste according to their nature.
<ul style="list-style-type: none"> - Establishment of quarries. - Establishment of Mines. 	<ul style="list-style-type: none"> - Strict adherence to the specified depth of dredging. - Not to change the valleys main streams. - Not to throw acoustic material in the valleys.

Activities and practices	Regulations and controls must be followed
<p>Oil exploration and production:</p> <ul style="list-style-type: none"> - Drilling and laying out oil transmission pipelines. - Disposal of waste water produced during drilling activities. 	<ul style="list-style-type: none"> - Not to expose fresh water aquifers to drilling fluids of high salinity. - Layers of fresh water shall not be left uncovered when drilling saltwater aquifers - Provide the pipes with electronic devices connecting to the central alarm device to determine leakage. - All pipelines have to be equipped with leakage monitoring equipments with a central alarm system - Injecting water accompanied with oil in its original aquifer - Conducting EIA's for the disposal of waste water produced as a result of oil drilling
<ul style="list-style-type: none"> - Construction of roads with barriers and corridors. - Construction of roads without barriers and corridors. 	<ul style="list-style-type: none"> - Constructing water channels on both sides of the road in addition to insulated water collection pits every 1 km - Minimizing the number of road exists as much as possible
<p>Construction of sewage systems:</p> <ul style="list-style-type: none"> - Construction of septic tanks - Construction of collection tanks 	<ul style="list-style-type: none"> - Designing the water waste treatment stations with the proper technical standards depending on the use of the treated water is used for - Discharging of water into the aquifer is not allowed, unless the quality of that water is of potable water - Separation of oil and all chemical compounds from water and have it treated separately, before discharging of water into the sewer system - Providing well lined septic tanks, in the absence of the proper sewage system
<p>Small trading businesses</p>	<ul style="list-style-type: none"> - Using soak away pits for the disposal of waste water is not allowed
<ul style="list-style-type: none"> - Construction of solid waste disposal facilities - Construction of liquid waste disposal facilities - Construction of hazardous waste disposal facilities 	<ul style="list-style-type: none"> - Choosing the facility location after conducting the proper hydrological surveys only - Lining the landfills properly - Comparing of waste and covering it daily - Designing the facility to fit the nature of the waste
<ul style="list-style-type: none"> - Erecting temporary construction camps 	<ul style="list-style-type: none"> - Prohibiting the construction of Soak Away Pits, and demanding the establishment of collection pits
<ul style="list-style-type: none"> - Drilling of public wells - Drilling of private wells 	<ul style="list-style-type: none"> - Should comply with the conditions and standards listed in the Falaj and Well regulatory Law issued by Ministerial Decree No. (264/2000)
<p>Development Activities:</p> <ul style="list-style-type: none"> - Execution of projects not related to Water Authority - Changing and developing exiting activities 	<ul style="list-style-type: none"> - Storing of all Hazardous chemicals, oil and paint containers on a concrete base - water is to be recycled - All cleaning and construction activities are to be done in the designated concrete lined areas. - collecting all solid waste in the proper containers prior to transferring into the designated disposal facilities

	– complying with all activities related to the protection of water resources according to the nature of these activities.
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