

ORDINANCE NO. (O) 09-_____

AN ORDINANCE OF THE MAYOR AND COUNCIL OF THE TOWN OF ORO VALLEY, ARIZONA AMENDING CHAPTER 6, SECTION 6-1-7, “RESIDENTIAL CODE” OTHERWISE KNOWN AS THE “2006 INTERNATIONAL RESIDENTIAL CODE”, TO ADD A “RESIDENTIAL GRAY WATER ORDINANCE” REQUIRING THE INSTALLATION OF GRAY WATER PLUMBING IN RESIDENTIAL CONSTRUCTION; REPEALING ALL RESOLUTIONS, ORDINANCES, AND RULES OF THE TOWN OF ORO VALLEY IN CONFLICT THEREWITH; AND PRESERVING THE RIGHTS AND DUTIES THAT HAVE ALREADY MATURED AND PROCEEDINGS THAT HAVE ALREADY BEGUN THEREUNDER

WHEREAS, the Town of Oro Valley is a political subdivision of the State of Arizona vested with all associated rights, privileges and benefits and is entitled to the immunities and exemptions granted municipalities and political subdivision under the Constitution and laws of the State of Arizona and the United States; and

WHEREAS, on December 6, 1995, the Council approved Ordinance No. (O) 95-85, adopting that certain document entitled “Oro Valley Town Code, Chapter 6, Building” as the sixth chapter of the official Town Code; and

WHEREAS, the Town of Oro Valley’s adopted residential code is the “2006 International Residential Code”; and

WHEREAS, the State of Arizona’s Department of Environmental Quality instituted a general permit for homeowners whose gray water systems meet Best Management Practices; and

WHEREAS, gray water systems constructed and operated according to these Best Management Practices provide a safe method of reducing water demand; and

WHEREAS, gray water is a valuable resource as it makes “double” use of water that otherwise goes down the drain. Gray water systems divert some interior water from clothes washers, bathtubs, showers or bathroom sinks for use in outdoor irrigation; and

WHEREAS, installation of a gray water system in typical residential construction can save a household 13,000 gallons of potable water per year; and

WHEREAS, installation of a gray water system at the time of residential construction greatly facilitates the use of gray water in residences; and

WHEREAS, the Town desires to require the installation of gray water plumbing to conserve water, promote the conservation of water and provide a safe method of reducing water demand; and

WHEREAS, it is in the best interest of the Town to amend Oro Valley Town Code, Chapter 6, Building, Section 6-1-7, Residential Code, otherwise known as the “2006 International Residential Code”, adding the Residential Gray Water Ordinance, attached hereto as Exhibit “A” and incorporated herein by this reference.

NOW, THEREFORE, BE IT ORDAINED by the Mayor and Council of the Town of Oro Valley, Arizona, that:

SECTION 1. The certain document entitled Oro Valley Town Code, Chapter 6, Building, Section 6-1-7, Residential Code, otherwise known as the “2006 International Residential Code”, is hereby amended by adding the Residential Gray Water Ordinance, attached hereto as Exhibit “A” and incorporated herein by this reference.

SECTION 2. All Oro Valley ordinances, resolutions or motions and parts of ordinances, resolutions or motions of the Council in conflict with the provision of this Ordinance are hereby repealed.

SECTION 3. If any section, subsection, sentence, clause, phrase or portion of this Ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions thereof.

PASSED AND ADOPTED by the Mayor and Town Council of the Town of Oro Valley, Arizona, this _ day of _____, 2009.

TOWN OF ORO VALLEY

Paul H. Loomis, Mayor

ATTEST:

APPROVED AS TO FORM:

Kathryn E. Cuvelier, Town Clerk

Tobin Rosen, Town Attorney

Date: _____

Date: _____

EXHIBIT "A"

The 2006 International Residential Code adopted under Article 6-1 of the Town Code shall be revised with additions being shown in ALL CAPS and deletions in ~~Stikethrough text~~.

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SECTION P2602.1.1 GRAY WATER APPLICATIONS

1. ALL SINGLE FAMILY AND TWO FAMILY DWELLINGS SHALL HAVE PROVISIONS TO UTILIZE GRAY WATER. ALL GRAY WATER SYSTEMS SHALL BE DESIGNED AND OPERATED ACCORDING TO THE PROVISIONS OF THE ADEQ TYPE 1 GENERAL PERMIT (A.A.C. R18-9-711) AND APPENDIX O AS REVISED.

A. DWELLINGS LOCATED ON PROPERTIES LESS THAN 10,000 SQUARE FEET SHALL HAVE PLUMBING AND FIXTURES INSTALLED TO DIVERT CLOTHES WASHING MACHINE WATER FOR USE IN A DIRECT IRRIGATION SYSTEM. TWO DWELLINGS LOCATED ON THE SAME LOT OF LESS THAN 20,000 SQUARE FEET SHALL MEET THE SAME REQUIREMENT.

B. DWELLINGS LOCATED ON PROPERTIES 10,000 SQUARE FEET OR GREATER SHALL BE PROVIDED THE CLOTHES WASHING MACHINE WATER DIVERTER SYSTEM AND BE PROVIDED WHOLE HOUSE DRAINAGE PLUMBING FOR FUTURE INSTALLATION OF A DISTRIBUTED GRAY WATER SYSTEM. TWO DWELLINGS LOCATED ON THE SAME LOT OF 20,000 SQUARE FEET OR GREATER SHALL MEET THE SAME REQUIREMENT.

C. WHERE EVER POSSIBLE THE GRAY WATER SYSTEM SHALL UTILIZE GRAVITY FLOWS. THE PLUMBING INVERTS OF THE GRAY WATER DRAINS AND THE BUILDING SEWER SHALL BE INSTALLED TO FACILITATE THE USE OF GRAVITY TO DRAIN AND DISCHARGE THE GRAYWATER COLLECTOR THROUGH INDIRECT WASTE TO THE BUILDING SEWER. WHEN NOT PRACTICAL TO UTILIZE GRAVITY, PROVISIONS SHALL BE MADE TO PROVIDE ELECTRICAL POWER PER SECTION E3603.8.

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P2902.5.3 Lawn Irrigation Systems. The potable water supply to ~~lawn~~ irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker or a reduced pressure principle backflow preventer. A valve shall not be installed down stream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer. WHEN A WHOLE HOUSE GRAY WATER SYSTEM IS INSTALLED FOR IRRIGATION IN ACCORDANCE WITH SECTION P2602.1.1 AND WHERE AN IRRIGATION SYSTEM EXISTS THAT USES POTABLE WATER, THE DOMESTIC WATER SUPPLY TO THE HOME SHALL BE PROTECTED WITH A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER MEETING ASSE 1013.

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E3603.8 GRAY WATER EJECTOR PUMP CIRCUIT. A DEDICATED 20 AMPERE RATED BRANCH GFCI PROTECTED CIRCUIT SHALL BE PROVIDED AT THE LOCATION OF GRAY WATER EJECTOR SUMPS OR FUTURE SUMP LOCATIONS WHEN THE HOUSE IS PROVIDED WITH A WHOLE HOUSE GRAY WATER SYSTEM PLUMBING.

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GRAY WATER. Waste discharged from lavatories, bathtubs, showers, clothes washers and laundry trays. WASTE DISCHARGED THROUGH A SINK LOCATED IN A GARAGE OR SIMILAR LOCATION THAT MAY INTRODUCE CONTAMINATION IN VIOLATION OF THE ADEQ REQUIREMENTS (A.A.C. R18-9-711) SHALL NOT BE CONNECTED TO THE GRAY WATER SYSTEM. A WHOLE HOUSE SYSTEM IS A PIPING SYSTEM THAT COLLECTS GRAY WATER FROM MORE THAN TWO SOURCES.

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Figure AO101.1(2)

Gray Water Recycling System for Subsurface AND SURFACE landscape irrigation.

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Section AO101.3 Permits. Permits shall be required in accordance with Section R105 of the International Residence Code.

1. NO PERMIT FOR ANY GRAY WATER SYSTEM SHALL BE ISSUED UNTIL A PLOT PLAN WITH APPROPRIATE DATA SATISFACTORY TO THE AUTHORITY HAVING JURISDICTION HAS BEEN SUBMITTED AND APPROVED. WHEN LOT CONDITIONS DO NOT ALLOW FOR DISTRIBUTION OR SEPARATION FROM BUILDINGS OR OTHER STRUCTURES, AS DETERMINED BY THE BUILDING OFFICIAL, NO GRAY WATER SYSTEM SHALL BE PERMITTED.
2. NO PERMIT SHALL BE ISSUED FOR A GRAY WATER SYSTEM ON ANY PROPERTY SHOWN BY AN ENGINEERED SOILS REPORT TO BE NEGATIVELY AFFECTED BY ADDITIONAL GRAY WATER ABSORPTION AS DETERMINED BY THE BUILDING OFFICIAL.
3. THE PROVISIONS OF THIS CHAPTER MAY BE MODIFIED OR WAIVED WHEN IT CAN BE SATISFACTORILY DEMONSTRATED TO THE BUILDING OFFICIAL THAT COMPLIANCE WITH THESE REGULATIONS IS IMPRACTICAL DUE TO CONSTRUCTION CONSTRAINTS, AN ACCEPTABLE ALTERNATIVE METHOD OF COMPLIANCE THAT ALLOWS GRAY WATER USAGE IS PROPOSED, OR IF THE SEWER AUTHORITY HAS OBJECTIONS TO GRAY WATER UTILIZATION
4. PIMA COUNTY WASTE WATER MANAGEMENT SHALL REVIEW FOR LOCAL GRAVITY SEWER SYSTEM NEGATIVE IMPACTS.

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~~**AO101.8 Potable water connections.** Only connections in accordance with Section AO102.3 shall be made between a gray water recycling system and a potable water system.~~

AO101.8 POTABLE WATER CONNECTIONS.

NO DIRECT CONNECTIONS SHALL BE MADE BETWEEN POTABLE WATER AND GRAY WATER SYSTEMS UNDER ANY CIRCUMSTANCES, WITH OR

WITHOUT BACKFLOW PROTECTION. WHEN BOTH A GRAY WATER AND POTABLE WATER IRRIGATION SYSTEM EXISTS ON A SINGLE PROPERTY THE WATER SERVICE SHALL BE PROTECTED WITH AN RP BACKFLOW PREVENTER TO PROTECT THE PUBLIC WATER SUPPLY IN ACCORDANCE WITH SECTION P2902.5.3.

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AO101.11 Collection Reservoir. Gray water shall be collected in an approved reservoir constructed of durable, nonabsorbent and corrosion-resistant materials. ~~The reservoir shall be a closed and gas-tight vessel.~~ Access openings shall be provided to allow inspection and cleaning of the reservoir interior.

1. IF A COLLECTION RESERVOIR IS TO BE INCLUDED IN THE DESIGN OF A GRAY WATER RECYCLING SYSTEM, PLANS FOR THE COLLECTION RESERVOIR SHALL BE SUBMITTED TO THE BUILDING SAFETY DEPARTMENT FOR APPROVAL.
2. COLLECTION RESERVOIRS SHALL BE CONSTRUCTED OF SOLID, DURABLE MATERIALS, NOT SUBJECT TO EXCESSIVE CORROSION OR DECAY, AND SHALL BE WATERTIGHT.
3. EACH COLLECTION RESERVOIR SHALL BE VENTED AND SHALL HAVE A LOCKING, GASKETED ACCESS OPENING FOR INSPECTION AND CLEANING.
4. EACH COLLECTION RESERVOIR VENT SHALL BE SIZED IN ACCORDANCE WITH CHAPTER 31 OF THE INTERNATIONAL RESIDENTIAL CODE AND BASED ON THE DIAMETER OF THE RESERVOIR INLET PIPE.
5. EACH COLLECTION RESERVOIR AND RESERVOIR VENT SHALL BE DESIGNED TO RESTRICT ACCESS AND TO ELIMINATE HABITAT FOR MOSQUITOES OR OTHER VECTORS.
6. THE OVERFLOW AND EMERGENCY DRAINPIPES SHALL NOT BE LESS IN SIZE THAN THE INLET PIPE. THE CONNECTION TO THE SEPTIC SYSTEM OR HCS WILL BE BY INDIRECT WASTE.
7. UNIONS SHALL BE PROVIDED FOR ALL PIPING ATTACHMENTS TO THE COLLECTION RESERVOIR.
8. EACH COLLECTION RESERVOIR SHALL BE STRUCTURALLY DESIGNED TO WITHSTAND ALL ANTICIPATED EARTH OR OTHER LOADS. COVERS FOR COLLECTION RESERVOIRS DESIGNED FOR UNDERGROUND INSTALLATION SHALL BE CAPABLE OF SUPPORTING A MINIMUM OF 300 POUNDS PER SQUARE FOOT.

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AO 104 SURFACE IRRIGATION SYSTEMS

AO 104.1 DEFINITIONS.

SURFACE IRRIGATION SYSTEMS SHALL BE INSTALLED TO MEET THE PROVISIONS OF ADEQ PROVISIONS FOR RESIDENTIAL GRAY WATER SYSTEMS AS DESCRIBED BELOW. DIRECT REUSE OF GRAY WATER IS PERMITTED IN SINGLE-FAMILY DWELLINGS WITH A FLOW OF LESS THAN 400 GALLONS PER DAY. THE PROVISIONS OF THIS APPENDIX SHALL GOVERN THE PERFORMANCE, MATERIALS, DESIGN, CONSTRUCTION, AND INSTALLATION OF GRAY WATER SYSTEMS FOR HOUSEHOLD GARDENING,

COMPOSTING, LAWN WATERING, ORCHARD, OR LANDSCAPE IRRIGATION. THE FOLLOWING CONDITIONS MUST ALL BE MET:

1. HUMAN CONTACT WITH GRAY WATER AND SOIL IRRIGATED BY GRAY WATER IS AVOIDED,
2. GRAY WATER ORIGINATING FROM THE RESIDENCE IS USED AND CONTAINED WITHIN THE PROPERTY BOUNDARY FOR HOUSEHOLD GARDENING, COMPOSTING, LAWN WATERING, OR LANDSCAPE IRRIGATION,
3. SURFACE APPLICATION OF GRAY WATER IS NOT USED FOR IRRIGATION OF FOOD PLANTS, EXCEPT FOR CITRUS AND NUT TREES,
4. THE GRAY WATER DOES NOT CONTAIN HAZARDOUS CHEMICALS DERIVED FROM ACTIVITIES SUCH AS CLEANING CAR PARTS, WASHING GREASY OR OILY RAGS, OR DISPOSING OF WASTE SOLUTIONS FROM HOME PHOTO LABS OR SIMILAR HOBBYIST OR HOME OCCUPATIONAL ACTIVITIES,
5. THE APPLICATION OF GRAY WATER IS MANAGED TO MINIMIZE STANDING WATER ON THE SURFACE. ABSORPTION SHALL OCCUR WITHIN 24 HOURS,
6. THE GRAY WATER SYSTEM IS CONSTRUCTED SO THAT IF BLOCKAGE, PLUGGING, OR BACK UP OF THE SYSTEM OCCURS, GRAY WATER CAN BE DIRECTED INTO THE SEWAGE COLLECTION SYSTEM OR ON SITE WASTEWATER DISPOSAL SYSTEM, AS APPLICABLE. THE GRAY WATER SYSTEM MAY INCLUDE A MEANS OF FILTRATION TO REDUCE PLUGGING AND EXTEND SYSTEM LIFETIME,
7. ANY GRAY WATER STORAGE TANK IS COVERED TO RESTRICT ACCESS AND TO ELIMINATE HABITAT FOR MOSQUITOES OR OTHER VECTORS,
8. THE GRAY WATER SYSTEM IS SITED OUTSIDE OF A FLOODWAY,
9. THE GRAY WATER SYSTEM IS OPERATED TO MAINTAIN A MINIMUM VERTICAL SEPARATION DISTANCE OF AT LEAST 5 FEET FROM THE POINT OF GRAY WATER APPLICATION TO THE TOP OF THE SEASONALLY HIGH GROUND WATER TABLE,
10. FOR RESIDENCES USING AN ON SITE WASTEWATER TREATMENT FACILITY FOR BLACK WATER TREATMENT AND DISPOSAL, THE USE OF A GRAY WATER SYSTEM DOES NOT CHANGE THE DESIGN, CAPACITY, OR RESERVE AREA REQUIREMENTS FOR THE ON-SITE WASTEWATER TREATMENT FACILITY AT THE RESIDENCE, AND ENSURES THAT THE FACILITY CAN HANDLE A COMBINED BLACK WATER AND GRAY WATER FLOW IF THE GRAY WATER SYSTEM FAILS OR IS NOT FULLY USED,
11. ANY PRESSURE PIPING USED IN A GRAY WATER SYSTEM THAT MAY BE SUSCEPTIBLE TO CROSS CONNECTION WITH A POTABLE WATER SYSTEM CLEARLY INDICATES THAT THE PIPING DOES NOT CARRY POTABLE WATER,
12. GRAY WATER APPLIED BY SURFACE IRRIGATION DOES NOT CONTAIN WATER USED TO WASH DIAPERS OR SIMILARLY SOILED OR INFECTIOUS GARMENTS UNLESS THE GRAY WATER IS DISINFECTED BEFORE IRRIGATION,

13. SURFACE IRRIGATION BY GRAY WATER IS ONLY BY FLOOD OR DRIP IRRIGATION.

SECTION AO 104.2 PROHIBITED USES.

GRAY WATER USE UNDER THIS SECTION FOR PURPOSES OTHER THAN IRRIGATION AND THE USE OF GRAY WATER SPRAY IRRIGATION ARE PROHIBITED. FOUNTAINS, FISH PONDS, LANDSCAPE PONDS, AND OTHER SIMILAR USES SHALL NOT USE GRAY WATER TO FILL OR LEVEL THE WATER FEATURE.

SECTION AO104.3 INSTALLATION, CAPACITY.

THE TYPE OF SYSTEM SHALL BE APPROPRIATE FOR THE BUILDING LOT, TAKING INTO ACCOUNT SOIL TYPE, LANDSCAPING AND TYPES OF PLANTS RECEIVING THE WATER. THE DISCHARGE SHALL BE ABSORBED INTO THE SOIL WITHIN A 24 HOUR PERIOD.

SECTION AO104.4 IDENTIFICATION.

A SIGN STATING: **GRAY WATER IRRIGATION SYSTEM, DANGER – UNSAFE WATER** SHALL ALSO BE PERMANENTLY MARKED ON THE COLLECTION RESERVOIR AND AT ANY HOSE CONNECTION OUTLET.

SECTION AO104.5 SPECIAL CONDITIONS

1. OTHER GRAY WATER RECYCLING SYSTEMS MAY BE APPROVED BY THE AUTHORITY HAVING JURISDICTION AS ALLOWED UNDER SECTION R104.11, ALTERNATIVE MATERIALS, DESIGN AND METHODS OF CONSTRUCTION AND EQUIPMENT.