



Environmental Services Department
Water & Waste Management
On-Site Wastewater Treatment Program

LEACH BED

Design Guide For a Conventional* ON-SITE WASTEWATER TREATMENT FACILITY (OSWTF)

This packet is a guide to design and submit a complete application called the Notice of Intent to Discharge (NOID) for a Conventional OSWTF with Leach Bed Disposal.

* A Conventional OSWTF is a septic tank with Trench, Leach Bed, Seepage Pit or Chamber Technologies for the disposal field. The type of OSWTF selected is based on the Aquifer Protection Permit Rule, Site Investigation - R18-9-A310 and Facility Selection - R18-9-A311.

Water & Waste Management Division, 1001 North Central Ave, Suite 150, Phoenix, Arizona 85004

Office hours 8:00am to 5:00pm Monday thru Friday except Holidays

Telephone: (602) 506-6666 FAX (602) 506-6925 Web: www.maricopa.gov/EnvSvs/ E-mail septicquestions@mail.maricopa.gov

December 2012



Maricopa County

Environmental Services Department
Water and Waste Management Division

1001 N Central Ave, Suite 150
Phoenix, Arizona 85004
Phone: (602) 506-6666
Fax: (602) 506-6925
TDD: (602) 506-6704
www.maricopa.gov/envsvc

PERMIT APPLICATION PROCESS NOTICE

Onsite Wastewater Program

Steps required to obtain A Notice of Intent to Discharge (NOID) permit for a conventional or alternative onsite wastewater treatment system are as follows:

1. **Submit** NOID application—signed by the property owner. Include all supporting documentation and applicable fees. The permit/tracking number remains the same for all segments of the project.
2. **Review** of the NOID submission in accordance with applicable rules and regulations is done by MCESD.
3. **A Construction Authorization** is issued for the installation of the on onsite system, citing any required stipulation. MCESD will release the P&D Building Permit, if applicable.
4. **Notification** of the owner by phone, fax or e-mail when the Construction Authorization is ready to be picked up at the office.
5. **A Contractor**, licensed by the State of Arizona, installs the system according to the approved plans.
6. **Submit Request** for Discharge Authorization (Yellow Form) for final inspection.
7. **Final Inspection** by MCESD is to verify the installation has been done as described in the Construction Authorization, the water tightness test on the tank and open trench inspection. Alternative systems, if stipulated, may allow the design engineer to submit as built drawings, stamped and signed for review and approval.
8. **Approved** construction inspection results in a White Tag being placed at the site.
9. **Disapproved** construction inspection results in a Red Tag placed at the site.
10. **Corrections** or deficiencies are completed by the contractor and a request for a re-inspection is made. Alternative system design engineer will submit revised stamped and signed plans for review.
11. **A Discharge Authorization** is issued to the owner by MCESD upon completion of an administrative review.
12. **Operation and Maintenance** by the owner keeps the onsite system in good operational condition for many years.

The Department will approve or deny the application, by type, in the number a business days listed in the table on the following page, excluding any days the application is returned to the applicant for additional information. The licensing timeframes are set by the Arizona Department of Environmental Quality, Delegation Agreement #06-0024 as required by A.R.S. §11-1605.

Department contact information regarding your application

Telephone: 602-506-6616, ask for the Onsite Program

E-mail: septicquestions@mail.maricopa.gov

Website: <http://www.maricopa.gov/EnvSvc/WaterWaste/OWS/OWS.aspx>

You may request a clarification from the Department of its interpretation or application of a statute, ordinance, regulation, delegation agreement or authorized substantive policy statement as provided in A.R.S. §11-1609. Contact us by in by e-mail or telephone, or in person or mail at the address listed at the top of the page, marked attention Onsite Wastewater Program.



Maricopa County Environmental Services Department



Environmental Services
Department

Application Addendum:

Supplemental Requests for Additional Information

Arizona law, A.R.S. 11-1605, limits Maricopa County Environmental Services Department (MCESD) to one request for additional information (set of review comments) when reviewing your application, unless the applicant agrees to allow additional requests.

A County Ordinance requires MCESD and the applicant to agree to extend the time frame by 25% if an agreement is made to allow MCESD to submit supplemental requests for additional information.

Please select one of the following statements to indicate your choice. This agreement will remain in place for the duration of the licensing process unless a revised agreement is approved by both parties.

Please Select One:

- I agree that MCESD may submit supplemental requests for additional information and I agree to an extension of 25% of the supplemental review and overall licensing timeframe.
- I acknowledge that MCESD is limited to one set of review comments. MCESD will approve or deny my application based on my application materials and my response to not more than one set of review comments.

Project Name/Location: _____

Applicant Name: _____ Title: _____

Signature _____ Date _____

Department Approval:

Name _____ Title _____

Signature _____ Date _____

Project Number: _____

Licensing Time Frames Onsite Wastewater

Permit Category	Overall time (days)
Alteration	30
Alteration with Inspection	30
Composting Toilet <3000 Gal/Day	73
Septic tank with Additional Alternative Features	95
Septic Tank, Conventional Disposal <3000Gal/Day	73
Aerobic System with Surface Disposal	95
Onsite Wastewater Treatment Facility, Flow 3000 to <24000Gal/Day	136
Reconnect/Remodel Review (Minor Plan Review)	30
Reconnect/Remodel Review (minor Plan Review) with Inspection	30



Maricopa County

Environmental Services

Notice of Intent to Discharge (NOID) Application

Submission Checklist for Phase II or Alterations

NOID APPLICATIONS MUST INCLUDE ALL ITEMS ON THIS CHECKLIST

Water & Waste Mgmt. Division
Onsite Wastewater Program
1001 N. Central Ave. Suite 150
Phoenix, AZ 85004-1940
Phone: 602-506-6666
Fax: 602-506-6925
Web: www.maricopa.gov/EnvSvc/
Email:
septicquestion@mail.maricopa.gov

INCOMPLETE OR INACCURATE NOID APPLICATIONS WILL BE PUT ON HOLD UNTIL ALL SUBMISSIONS ARE COMPLETE AND ACCURATE. THE REVIEW & APPROVAL PROCESS WILL BE DELAYED OR MAY BE CANCELLED IF LICENSING TIME FRAMES ARE EXCEEDED.

- Complete NOID application signed by owner **OR** owners written designation of agent attached to application.
- Existing Septic Records identified by a Public Records Search Request. Not required for first build or have a copy.
- Recorded deed with legal description Parcel number
- Sewer Availability required for every application. (directions for sewer determination attached)
- Vicinity map and detailed driving directions to the site, with distance from nearest paved cross streets.
- 2 site plans to scale 1"/10; 1"/20; 1"/30 with North Arrow. **NOTE:** Site plans submitted to MCESD must be identical to the site plans submitted to any city, county, or state entity. Any site plans that are not identical will result in additional review and approval fees, delays in the review and permitting process, and possible withdrawal of previously issued approvals or permits.
- One (1) floor plan with all rooms identified and plumbing fixtures clearly labeled (sample attached)
- Applicable fees, cash, check, Visa, MasterCard, Discover or American Express due at time of submittal.
- City, Town or County Building permit number required _____ (DA not issued until supplied)
- Location of floodway and floodplain (Floodway/Floodplain instructions attached)
- Copies of soil/site evaluations, percolation tests or seepage pit performance tests
- Water Source: Company or City, Private Well. Other Submit a Recorded Shared Well Agreement with survey, OR Recorded Affidavit of Agreement to Encroach.
- List of estimated materials, components, and equipment for constructing the on-site treatment facility
- Two (2) complete site plans: with **north arrow**, scale of 1"=30', 1"=20', or 1"=10'. For larger parcels use an appropriate scale to fit parcel on one sheet of paper. Maximum paper size is 24"x36. The proposed Onsite system, the structure(s) it serves, and the immediate area may be contained within the dimensions of the parcel drawing or on a separate sheet. (Example site plans attached).
- Information Block with property owner, site address, subdivision name and lot number or legal description, and parcel number.
- Indicate, in feet, the distance from two adjacent property lines to: test holes, structures, driveways, washes, and/or drainage easements, setbacks, earth fissures, wells, water line from well or meter to building. Show all set backs from structures, driveways, wells, etc. Also show on bordering lots, vacant or built-on, any feature less than 200' that may impact the locations of septic tank, distribution box, distribution lines, primary and reserve disposal areas.
- Revisions must be clearly labeled as a revision and must include the permit number and date.

FOR YOUR USE IN DESIGNING AND SIZING THE ONSITE WASTEWATER TREATMENT FACILITY ARE:

Fixture unit and Bedroom Equivalent Determination, SAR and Daily Flow for Calculation of System Size, Plan and Profile with pipe elevations of tank and Cross Sections of disposal components.

All sheets must be signed by the designer and dated (examples attached)

Applicant's Signature _____

Date _____

November 2012

(Permit / File #)



NOTICE OF INTENT TO DISCHARGE (NOID)
 Under a General Aquifer Protection Permit for an
 Onsite Wastewater Treatment Facility (OSWTF)

Web: www.maricopa.gov/EnvSvc/
E-mail: Septicquestion@mail.maricopa.gov

OSWTF Permit # _____

An application is required to license or permit an activity regulated though statute, rule, code or ordinance may require inspection(s) at the premises. An inspection report is provided as required by A.R.S. §41-1009; in person, via mail, e-mail, or FAX.

THIS IS A TWO (3) PAGE DOCUMENT; BOTH PAGES MUST BE COMPLETED BEFORE SUBMITTING TO MCESD.

NOID Application Instructions: Print or type in **black or blue INK** pencil is not acceptable. To avoid delay in the permitting process, complete the NOID fully before submission. Pay applicable fees by cash, check or credit card.

If the NOID review is approved a Construction Authorization will be issued for a conventional or alternative onsite wastewater treatment facility or For an Alteration of an existing system that has the proper Aquifer Protection Permit.

- Notes: 1)** Alternative onsite wastewater treatment facilities have yearly operating permit review and inspection fee.
2) This application will expire one year from the date of submittal if a Construction Authorization has **not** been issued.

1.	<p>Site Location: Subject Property Address: _____ Maricopa County, AZ _____ <small>Required at time the Construction Authorization is issued Street Name and City (if applicable) Zip Code</small></p> <p>Cross Streets _____ Parcel Number _____ - _____ - _____</p> <p>Subdivision Name (if applicable): _____ Lot #(s) _____</p> <p>Legal Description: Section _____ Township _____ Range _____ Acreage _____</p>
2.	<p>Property Owner Name: _____ Phone # _____</p> <p>Current Mailing Address*: _____ Fax or e-mail _____ <small>Street Name and Number City State Zip Code</small></p> <p>Mobile # _____</p> <p><small>*Any changes to this address shall be submitted in writing to MCESD within 15 days of the change. All documents from MCESD will be mailed to this address unless otherwise noted below. Returned mail will not be forwarded.</small></p>
3.	<p>Authorized Agent for Property Owner, (if none, then leave blank): Business Name: _____ Contractor License # _____</p> <p>Agent _____ Phone # _____</p> <p>Mailing Address: _____ Fax # _____ <small>Street Name and Number City State Zip Code</small></p> <p>Mobile # _____</p> <p>After 30 Days, unclaimed Construction Authorizations will be mailed to the Property Owner. E-mail _____</p>
4.	<p>Onsite Installer Business Name: _____ Contractor License # _____</p> <p>Agent _____ Phone # _____</p> <p>Mailing Address: _____ Fax # _____ <small>Street Name and Number City State Zip Code</small></p> <p>Mobile # _____</p> <p>E-mail _____</p>
5.	<p>Existing Environmental Permits: List any state or federal environmental permits issued for, or needed by, this facility, including individual permit, Ground Water Quality Protection Permit, or Notice of Disposal that may have previously authorized the discharge (check all that apply) : ___ New installation of an on-site wastewater treatment facility. ___ No other environmental permits exist. ___ Other environmental permits required (list all): _____</p>
6.	<p>Request to install a system other than septic tank and disposal in R-18-9-E302 with a system in R18-9-E303 through E322:</p> <p>I, _____ (Property Owner), am aware that although a septic tank and disposal works system described in R18-9-E302 is appropriate for the site, I desire to install a treatment works or disposal works authorized under R18-9-E303 through R18-9-E322. (R18-9-A311(D) (1). I am also aware that a treatment works or disposal works authorized under R18-9-E303 through R18-9-E322 may result in higher capital, operation, and maintenance costs. (R18-9-A311(D) (2).</p> <p>_____ Date _____ Signature of Owner</p>

7. Site Details:

WATER SOURCE: (check one) Water Company: Water Company Name _____
 Holding Tank (hauling water)
 Private Well Well Identification # _____
 Shared Well * Affidavit of Agreement to Encroach *

*One of these documents must be submitted for review of the setback requirement to a property line or property lines.
 Shared Well Agreement Recording # _____
 OR
 Affidavit of Agreement to Encroach into Property Line Setback Recording # _____

8. Narrative Description of Project:

NEW - General Permit 4.02 (conventional OSWTF which consists solely of a septic tank **AND** disposal field circled below):

(circle one) Trench Seepage Pit Leach Bed Chamber Technology

ALTERATION - General Permit 4.02 (repair or replacement of the OSWTF septic tank **OR** disposal field circled below):

(circle one) Tank Trench Seepage Pit Leach Bed Chamber Technology

Any Other OSWTF. Describe proposed treatment and disposal train and indicate all applicable general permit numbers; indicate design flow and expected date of operation; describe sewage source and characteristics: _____

THE OSWTF WAS DESIGNED USING A SEPTIC TANK SIZE AND A DESIGN FLOW TO:

Serve a Single-Family Residence with typical household sewage.

Serve a Single-Family Residence with typical household sewage and _____
List all other sources and characteristics of the wastewater

Serve Other Than a Single-Family Residence with typical household sewage.

Serve Other Than a Single-Family Residence with other than typical household sewage. Provide the following information:
 Type of Facility _____ Number of Employees/Users _____
 Sources and characteristics of the wastewater _____

9. Certification: (READ CAREFULLY AND SIGN BELOW, to be completed by the property owner identified in Item Two (2) on the front of this application:

I _____, certify that this Notice of Intent to Discharge and all attachments were prepared
Print Name

under my direction or authorization and all information is, to the best of my knowledge, true, accurate and complete. I also certify that the on-site wastewater treatment facility described in this form is or will be designed, constructed, and operated in accordance with terms and conditions of the authorized general aquifer protection permit(s) and applicable requirements of A.R.S. Title 49, Chapter 2, the Arizona Administrative Code Title 18, Chapter 9 and the Maricopa County Environmental Health Code. **I am aware that there are significant penalties for submitting false information including permit revocation and the possibility of fine and imprisonment for known violations.**

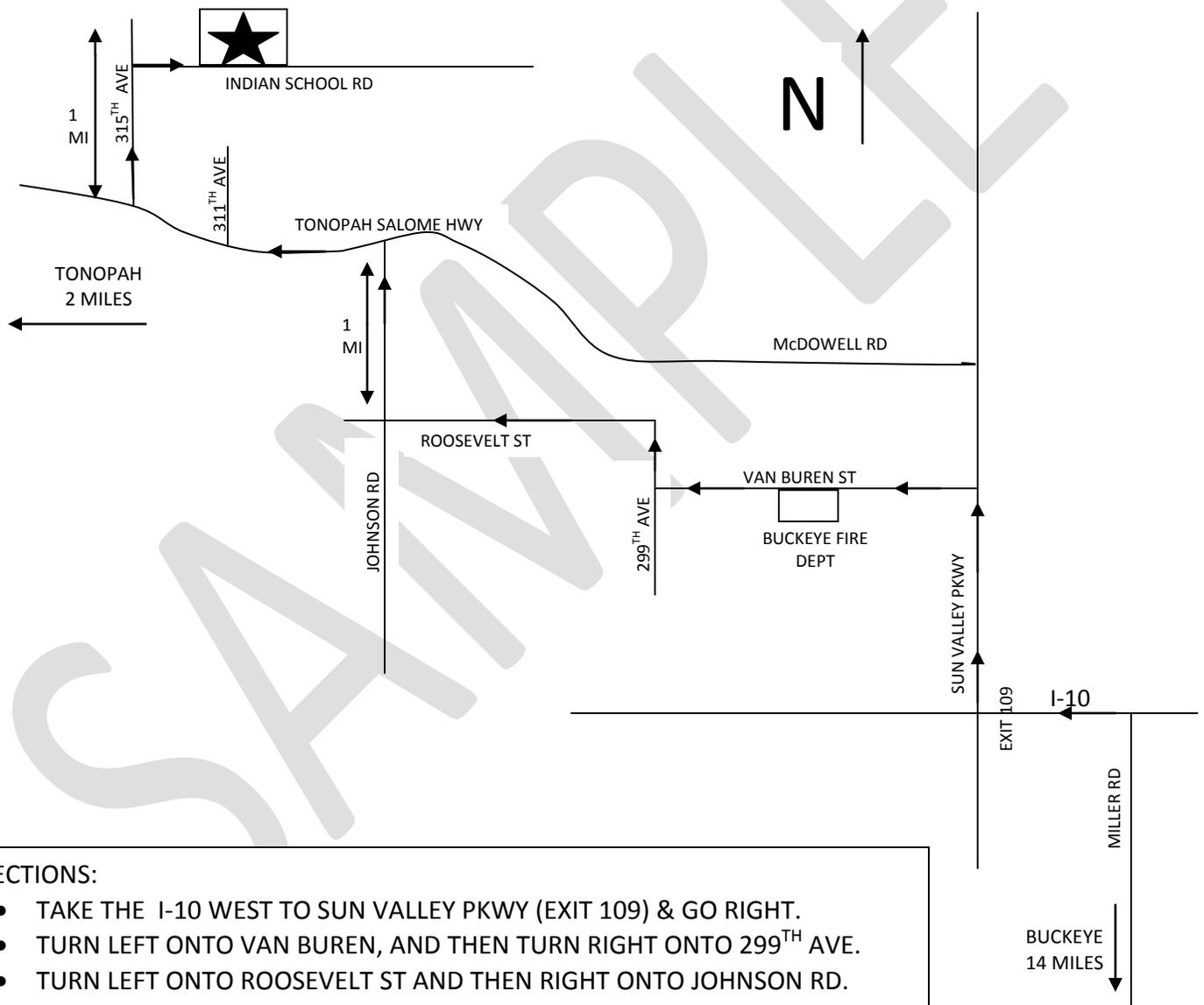
Signature _____ Date _____

THIS SPACE FOR OFFICE USE ONLY

NOID Log in Date _____ By _____ ACR Completed _____ By _____ <small>Paperwork Review</small> ACR Incomplete/HOLD _____ By _____ SR Pre Const Completed _____ By _____ <small>Plan Review</small> SR Pre Const -Incomplete/HOLD _____ By _____ SR Post Const Completed _____ By _____ <small>Inspection</small> Site Code: _____	MC P/D Tracking # B _____ APPROVALS: General Permit (circle one): 4.02 Other _____ Design Flow: _____gpd System Type: _____																
	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">BILLING PURPOSE</th> <th style="width: 17%;">AMT PD</th> <th style="width: 17%;">RECEIPT #</th> <th style="width: 33%;">DATE PD</th> </tr> </thead> <tbody> <tr> <td>PLAN REVIEW / SITE</td> <td></td> <td></td> <td></td> </tr> <tr> <td>PLAN REVIEW / SITE</td> <td></td> <td></td> <td></td> </tr> <tr> <td>OTHER</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	BILLING PURPOSE	AMT PD	RECEIPT #	DATE PD	PLAN REVIEW / SITE				PLAN REVIEW / SITE				OTHER			
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VICINITY MAP WITH WRITTEN DIRECTIONS

**DIRECTIONS TO: 12345 W. INDIAN SCHOOL RD
BUCKEYE, AZ 85326
APN: 504-08-XXX**



DIRECTIONS:

- TAKE THE I-10 WEST TO SUN VALLEY PKWY (EXIT 109) & GO RIGHT.
- TURN LEFT ONTO VAN BUREN, AND THEN TURN RIGHT ONTO 299TH AVE.
- TURN LEFT ONTO ROOSEVELT ST AND THEN RIGHT ONTO JOHNSON RD.
- GO 1 MILE AND TURN LEFT ONTO THE TONOPAH-SALOME HWY.
- GO 1 MILE TO 315TH AVE AND THEN TURN RIGHT ONTO INDIAN SCHOOL RD.
- THE SITE IS THE SECOND ON THE LEFT.
- THE LAST TWO MILES ARE ON DIRT ROAD.

**MARICOPA COUNTY ENVIRONMENTAL HEALTH CODE CHAPTER 1
WATER WASTE MANAGEMENT DIVISION-ONSITE WASTEWATER AND WELL PROGRAM
FEE SCHEDULE EXCERPT*** EFFECTIVE AUGUST 1, 2010**

BASE ONSITE FEES

Onsite System Site Inspection	\$325
Onsite Additional Inspection	\$325
*Septic Tank Conventional Disposal, less than 3,000 gal/day	\$550
Onsite System Alteration Permit	\$205
Onsite System Alteration Permit and One Inspection	\$400
Onsite System Reconnect/Remodel Review (Minor Plan Review)	\$205
Onsite System Reconnect/Remodel review with one inspection	\$400
Aerobic System with Surface Disposal	\$1,050
Septic tank with one additional alternative element**	\$1,050
Septic tank with more than one additional alternative element**	\$1,050
each additional alternative element	\$250
Onsite System Design Requiring Interceptor	\$200 per interceptor
Onsite Facility with flow from 3,000 to less than 24,000 gal/day	\$1,800
Composting Toilet, less than 3,000 gal/day	\$400
Onsite System Abandon Site	\$175

DOMESTIC WELL APPROVAL

Domestic Well Location Approval (ADWR Form)	\$175
Domestic Well: drill, deepen, replace or modify - no inspection	\$175

REVIEW AND COMPARISON OF REVISIONS TO APPROVED CONSTRUCTION OR DISCHARGE AUTHORIZATION

Onsite System Plan Revision	\$205
Planning and Development Plan Review	\$80

REQUEST FOR CHANGE PERMITTED BY RULE

Onsite System Request for Alternate Design, Installation or Operational Feature (A 312 G)	\$75
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TRANSFER OF OWNERSHIP

Onsite System Transfer of Ownership	\$50
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OPERATING PERMIT FOR OPERATION AND MAINTENANCE RECORD REVIEW AND SYSTEM INSPECTION

Individual Onsite Treatment Plant Operating Permit (Alternative Systems)	\$100 per year
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INVESTIGATION

Investigation: Onsite	\$130 per hour
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EXPEDITED PLAN REVIEW

Expedited Plan Review Fees are twice the fee for that category Expedited Plan Reviews require prior Program Management Approval
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* Gravity fed trenches, seepage pits, leach beds or chambers. Includes up to three (3) plan reviews and three (3) construction inspections.

** These alternative disposal elements are for all systems of less than 3,000 gal/day and include: pressure distribution, gravelless trenches, natural seal evapotranspiration beds, Wisconsin Mounds, engineered pad, intermittent sand filters, peat filters, Ruck® Systems, sewage vaults, aerobic systems with surface or with subsurface disposal, cap systems, constructed wetlands, sand lined trenches, disinfection devices, sequencing batch reactors, and subsurface drip irrigation systems.

***To see the entire fee schedule go to: www.maricopa.gov/envsvc

QUESTIONS REGARDING THESE FEES CONTACT MCESD, WWMD 602-506-6666



Maricopa County

Environmental Services

Water & Waste Mgmt. Division
Onsite Wastewater Program
1001 N. Central Ave. Suite 150
Phoenix, AZ 85004-1940
Phone: 602-506-6666
Fax: 602-506-6925
Web: www.maricopa.gov/EnvSvc/
Email:
septicquestion@mail.maricopa.gov

SEWER DETERMINATION

REQUIRED

- Sewer Determination statement is required if the parcel is within city or town limits.
- Sewer Determination statement is required if the parcel is a county island within city or town limits.
- Sewer Determination statement is required if the parcel is in a sanitary sewer district service area.

SUGGESTED

- Applicants living in close approximation to a city or town limits or the boundaries of a sanitary sewer district may want to get the sewer determination statement.

OTHER

- During plan review there may be a request for a sewer determination statement on the parcel.

THE ONSITE PROGRAM REQUIRES A SEWER DETERMINATION WITH ALL APPLICATIONS. THIS REQUIREMENT IS TO ASSIST THE APPLICANT/OWNER AVOID DIFFICULTIES WITH A LOCAL SEWER AUTHORITY NOW OR IN THE FUTURE.

Both the Arizona Administrative Code and the Maricopa County Environmental Health Code have provisions where connection to a sewer collection system may be required.

The Maricopa County Environmental Health Code Chapter II, Section 8 Regulation 4 states:

- a. When connection may reasonably and practicably be made to an approved municipal, community, or similar sewerage system.....
- e. ...when an onsite wastewater treatment facility fails, ...

The Arizona Administrative Code R 18-9-A309 A. 5 states:

A person constructing a new on-site wastewater treatment facility or replacing the treatment works or disposal works of an existing on-site wastewater treatment facility shall connect to a sewage collection system **if**:

- a. **One** of the following applies:
 - i. A provision of a Nitrogen Management Area designated under R18-9-A317(C) requires connection;
 - ii. A county, municipal, or sanitary district ordinance requires connection; or
 - iii. The on-site wastewater treatment facility is located within an area identified for connection to a sewage collection system by a Certified Area-wide Water Quality Management Plan adopted under 18 A.A.C. 5 or a master plan adopted by a majority of the elected officials of a board or council for a county, municipality, or sanitary district; **or**
- b. A sewer line extension is available at the property boundary and both of the following apply:
 - i. The service connection fess is not more than \$6000 for a dwelling or \$10 times the daily design flow in gallons for a source other than a dwelling, and
 - ii. The cost of constructing the building sewer from the wastewater source to the service connection is not more the \$3000 for a dwelling or \$5 times the daily design flow for a source other than a dwelling.

NOTE: SOME MUNICIPALITIES HAVE STRINGENT REQUIREMENTS THAT MANDATE CONNECTION TO THE SEWAGE COLLECTION SYSTEM.

TO ASSIST YOU IN SEWER DETERMINATION, MARICOPA COUNTY ENVIRONMENTAL SERVICES IS PROVIDING CONTACTS, PHONE NUMBERS AND E-MAIL ADDRESSES ON THE FOLLOWING PAGE. A STATEMENT FROM THE LOCAL SEWER AUTHORITY INDICATING THEIR DETERMINATION OF CONNECTION OR NO CONNECTION TO THE SEWER IS ADVISED PRIOR TO ANY SUBMITTAL TO THE ENVIRONMENTAL SERVICES DEPARTMENT. MARICOPA COUNTY ENVIRONMENTAL SERVICES MAKES EVERY ATTEMPT TO PROVIDE ACCURATE INFORMATION. CONTACTS, PHONE NUMBERS AND E-MAIL ADDRESSES MAY CHANGE WITHOUT OUR KNOWLEDGE.

If you find errors in this list, please let us know at septicquestion@mail.maricopa.gov Thank you

City	Sewer Availability Contact Information	Web/Email Address
AVONDALE	Michael Yracheta, Wastewater Collections Supervisor, 623-333-4414	myracheta@avondale.org
BUCKEYE	Manuel Alvarez, Utilities Services Supervisor, 623-349-6106	malvarez@buckeyeaz.gov
CAVE CREEK	Jessica Marlow, PE, Utilities Manager, 480-488-6618,	jmarlow@cavecreek.org
CAREFREE	Black Mountain Sewer Company, 480-488-4152	www.libertywater.com
CHANDLER	Warren White, P.E. Principal Engineer 480-782-3337, fax 480-782-3350	warren.white@chandleraz.gov
EL MIRAGE	Dave Emon, Wastewater Superintendent, 623-876-4251	demon@cityofelmirage.org
GILBERT	Tom Condit, PE, Development Engineer, 480-503-6815	Tom.Condit@gilbertaz.gov
GLENDALE	Mark Ivanich, Land Development Engineer, 623-930-3654	mivanich@glendaleaz.com
GOODYEAR	Engineering Office: Darren Farar or Tammy Valadez,Paz, at 623-882-3110	darren.farar@goodyearaz.gov tammy.valadezpaz@goodyearaz.gov
MESA	Beth Hughes-Ornelas, 480-644-3254	beth.hughes-ornelas@mesaaz.gov
PARADISE VALLEY	Richard Edwards, Senior Engineering Technician, 480-348-3528 <u>Note: No letter is required for Clearwater Hills Subdivision no sewer is available.</u>	redwards@paradisevalleyaz.gov
PEORIA	Rebecca Zook, Sr. Development Engineer, 623-773-7589	rebecca.zook@peoriaaz.gov
PHOENIX	Larry D. Valenzuela, 602 262-4035 or Nazario Preto 602-534-4198	larry.valenzuela@phoenix.gov nazario.preito@phoenix.gov
QUEEN CREEK	Building Department 480-987-0496	www.queencreek.org
SCOTTSDALE	Doug Mann, Water Resources Engineer, 480-312-5636	dmann@scottsdaleaz.gov
SURPRISE	James P. Shano, Utilities CIP – Division Manager, 623-222-7000	water@surpriseaz.com
TEMPE	Mark Weber, PE, Water Engineering Manager, 480-350-8526	mark_weber@Tempe.gov
TOLLESON	David L. Tyler, Superintendant Wastewater Utilities – 623-478-8722	dtyler@Tollesonaz.org
WICKENBURG	Mark Lemon, Chief WWTP/WS/WD Operator, 928-684-5873	wwtp@ci.wickenburg.az.us



Maricopa County

Environmental Services

FLOODWAYS AND FLOOD PLAINS

The Arizona Aquifer Protection Permit Program (Rule) and the Maricopa County Environmental Health Code (Code) have regulations on where an Onsite Wastewater Treatment Facility, commonly known as a Septic System, can be installed.

It is important to determine if your parcel is in a floodway or floodplain.

Each submittal for a permit to install a septic system must identify all washes, drainage easements, floodway and flood plain boundaries. In some instances Grading and Drainage plans may be required.

No permit for an Onsite Wastewater Treatment Facility will be issued if the proposed structures are in a floodway.

A permit **may** be issued for an Onsite Wastewater Treatment Facility on the parcel if: 1) a flood plain use permit is approved by the Maricopa County Flood Control Department, 2) allowed by cities and towns that conduct their own floodplain management, and 3) the installation will meet all setbacks established by Rule and Code.

The cities and towns that conduct their own floodplain management are: Avondale, Gilbert, Glendale, Goodyear, Peoria, Phoenix, Scottsdale, Tempe and Youngstown. They should be consulted for flood way and floodplain issues for your parcel.

In unincorporated Maricopa County or in cities and towns that do not conduct their own floodplain management, go to the web site below or call 602-506-1501 to determine if the parcel is in a floodway or flood plain:

<http://www.fcd.maricopa.gov>

This opens the Flood Control Home page.

1. Click on MAPS tab located on the upper task bar to the right of the Flood Control Seal
2. Click on View Current 100-Year FEMA Effective and Preliminary Flood Plain Maps
3. Click OK on the disclaimer page
4. A large map page will open
5. Click on Search by... on the top task bar
6. The parcel search page will open
7. Enter the parcel number and click on zoom to
8. On the next page on the right side click yes on Highlight Parcel
9. If there are blue, red or purple areas shown they note flood plains or flood ways
10. On the top task bar, to the left of search by is the print icon-click, print and include it in the submission package

SETBACK DISTANCE CHART

The design of the On-Site Wastewater Treatment Facility shall comply with the setbacks indicated below.

Features Requiring Setbacks	Setback For An On-Site Wastewater Treatment Facility, Including Reserve Area (In Feet)	Special Provisions
1. Building	10	Includes porches, decks, and steps (covered or uncovered), breezeways, roofed patios, carports, covered walks, and similar structures and appurtenances.
2. Property line shared with any adjoining lot or parcel not served by a common drinking water system* or an existing drinking water well	50	<p>A person may reduce the setback to a minimum of 5 feet from the property line if:</p> <ul style="list-style-type: none"> a. The owners of any affected undeveloped adjacent properties agree, as evidenced by an appropriately recorded document, to limit the location of any new well on their property to at least 100 feet from the proposed treatment works and primary and reserve disposal works; and b. The arrangements and documentation are approved by the Department. <p>* A "common drinking water system" means a system that currently serves or is under legal obligation to serve the property and may include a drinking water utility, a well-sharing agreement, or other viable water supply agreement.</p>
3. All other property lines.	5	None
4. Public or private water supply well.	100	None
5. Perennial or intermittent stream	100	Measured horizontally from the high water line of the peak streamflow from a 10-year, 24-hour rainfall event.
6. Lake, reservoir, or canal	100	Measured horizontally from the high water line from a 10-year, 24-hour rainfall event at the lake or reservoir.
7. Drinking water intake from a surface water source (includes an open water body, downslope spring or a well tapping streamside saturated alluvium)	200	Measured horizontally from the on-site wastewater treatment facility to the structure or mechanism for withdrawing raw water such as a pipe inlet, grate, pump, intake or diversion box, spring box, well, or similar structure.
8. Wash or drainage easement with a drainage area more than 20 acres	50	Measured horizontally from the nearest edge of the defined natural channel bank or drainage easement boundary. A person may reduce the setback to 25 feet if natural or constructed erosion protection is approved by the appropriate floodplain administrator.
9. Water main or branch water line	10	None

10. Domestic service water line	5	<p>Measured horizontally between the water line and the wastewater pipe, except that the following are allowed:</p> <ul style="list-style-type: none"> a. A water line may cross above a wastewater pipe if the crossing angle is between 45 and 90 degrees and the vertical separation distance is 1 foot or more. b. A water line may parallel a wastewater pipe with a horizontal separation distance of 1 foot to 5 feet if the bottom of the water line is 1 foot or more above the top of the wastewater pipe and is in a separate trench or on a bench in the same trench.
<p>11. Downslopes or cut banks greater than 15 percent, culverts, and ditches from:</p> <ul style="list-style-type: none"> a. Treatment works components b. Trench, bed, chamber technology, or gravelless trench with: <ul style="list-style-type: none"> i. No limiting subsurface condition specified in R18-9-A310(D)(2), ii. A limiting subsurface condition. c. Subsurface drip lines. 	<p>10</p> <p>20</p> <p>50</p> <p>3</p>	<p>Measured horizontally from the bottom of the treatment works component to the closest point of daylighting on the surface.</p> <p>Measured horizontally from the bottom of the lowest point of the disposal pipe or drip lines, as applicable, to the closest point of daylighting on the surface.</p> <p>Measured horizontally from the bottom of the lowest point of the disposal pipe or drip lines, as applicable, to the closest point of daylighting on the surface.</p>
12. Driveway	5	<p>Measured horizontally to the nearest edge of an on-site wastewater treatment facility excavation. A person may place a properly reinforced and protected wastewater treatment facility, except for disposal works, at any location relative to a driveway if access openings, risers, and covers carry the design load and are protected from inflow.</p>
13. Swimming pool excavation	5	<p>Except if soil loading or stability concerns indicate the need for a greater separation distance.</p>
14. Easement (except drainage easement)	5	None
15. Earth fissures	100	None



SHARED WELL EASEMENTS/AGREEMENTS

Shared well agreements may provide an adjustment to property line setback requirements as stated in the Arizona Aquifer Permit Rule, R-18-9-A312 C.

All shared well agreements MUST be recorded at the county recorders office and contain the following information:

- Effective date
- Parties involved (Grantor and Grantees; Parties to the Agreement)
- Recorded document number
- Full legal description of all the well site, easement and Servant parcels sharing the well with instrument number (all the parcels benefiting from sharing the well and easements)
- How the agreement will run with the land/deed for the parcels
- The relationship of each parcel to: (construction, operation and expenses)
 - General provisions
 - Management of the provisions of the agreement
 - Percentage ownership
 - Percentage share of cost for operation and maintenance of the well and easements
 - Resolution of conflicts
 - Conditions and Limitations
- Survey map (drawing or graphic showing the impacted parcels with dimensions, well site and easements). Recorded as part of document or as a separate document
- Title and Signature with date, of Grantor/Grantee (Parties to the Agreement) of all parcels
- Notary stamp, signature and date.
- Unofficial document will not be accepted

If you have questions or need additional information please contact us at the numbers listed above.



Maricopa County

Environmental Services Department

Water and Waste Management
Division
Onsite Program
1001 N. Central Avenue #150
Phoenix, Arizona 85004
Phone: (602) 506-6666
Fax: (602) 506-6925

Instructions for Obtaining an Affidavit of Agreement to Encroach into Property Line Setback (Wastewater Disposal)

A setback of 50 feet from onsite wastewater systems (septic systems) to undeveloped property lines is required in areas where water is supplied by individual wells (a setback of 100 feet is required to all wells). When this setback cannot be met, an alternative is to have your neighbor sign a legal agreement allowing your onsite wastewater system to encroach upon his/her property line. This agreement may have the effect of limiting your neighbor's ability to develop his/her property in the vicinity of your onsite wastewater system, as all wells must be 100 feet from all septic system components.

Procedure:

1. The property owner allowing the encroachment must complete the affidavit. The information requested on lines 1 and 3, applies to the property being encroached upon. The information requested on lines 5 and 7 refer to the property on which the new onsite wastewater system is proposed to encroach into the 50 feet property line setback.
2. In the presence of a public notary, the property owner referenced in lines 1 and 3 must sign at line 20 and date the affidavit on line 22, fill in (print) the name of the property owner on line 25 and address on line 28. The form must be notarized.
3. The completed form is taken to the Maricopa County Recorder's Office at 1111 West Jefferson Street, Phoenix AZ, for recording. There is a fee for this service. The turnaround time for a recorded document varies, and can take up to approximately 6 weeks.
4. If you cannot wait an extended time for the Recorder's Office to send official recorded documents, you can ask for a certified copy at the Recorder's intake counter. The certified copies will have a fee in addition to the recording fee. You may hand-carry the certified copy to us. The Recording Number and/or certificate number and the affidavit will be added to the NOID application file.

Thank you.



Maricopa County
Environmental Services Department

Water and Waste Management Division
1001 N. Central Avenue #150
Phoenix, Arizona 85004
Phone: (602) 506-6666
Fax: (602) 506-6925

AFFIDAVIT OF AGREEMENT TO ENCROACH INTO PROPERTY
LINE SETBACK (Wastewater Disposal)

1 I, _____, owner of record of Assessor's Parcel Number (APN)
2
3 _____ and legal description Section ____ Township ____ Range ____
4
5 agree to the wastewater disposal system or its replacement serving APN _____
6
7 and legal description Section ____ Township ____ Range ____ being placed in such a
8
9 manner as to encroach within the property line setback of 50 feet as required by the Arizona
10 Department of Environmental Quality.

11
12 I understand that my agreement to this encroachment may limit my ability to install a water
13 well on my property since I will be required by the Arizona Department of Water Resources
14 to maintain a minimum of 100 feet between the well and all sewage disposal systems.
15 Should I sell this property, I agree to inform the purchaser in writing of this limitation.

16
17 I have read this affidavit and do understand its meaning and its impact on the potential
18 development of my property.

19
20 Signatures: _____

21
22 Date: _____

23
24
25 Print Names _____

26
27
28 Address _____

29
30
31 This instrument was acknowledged before me this ____ day of _____, 2____.

32
33 My commission expires: _____

34
35
36 Notary Public: _____

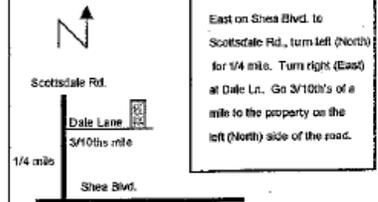
SAMPLE SITE PLAN

PERMIT/FILE # 00-0000

Owner: John Smith
 Site Address: 11111 E. Dale Lane
 Parcel # 222-22-001B
 Subdivision: Lost Acres, Lot 1023
 Legal Desc: E1/2, NW1/4, NE1/4, NE1/4, SW1/4 of Sec. 10,
 T5N, R4E of the Gila and Salt River Base and Meridian,
 Maricopa County, Arizona

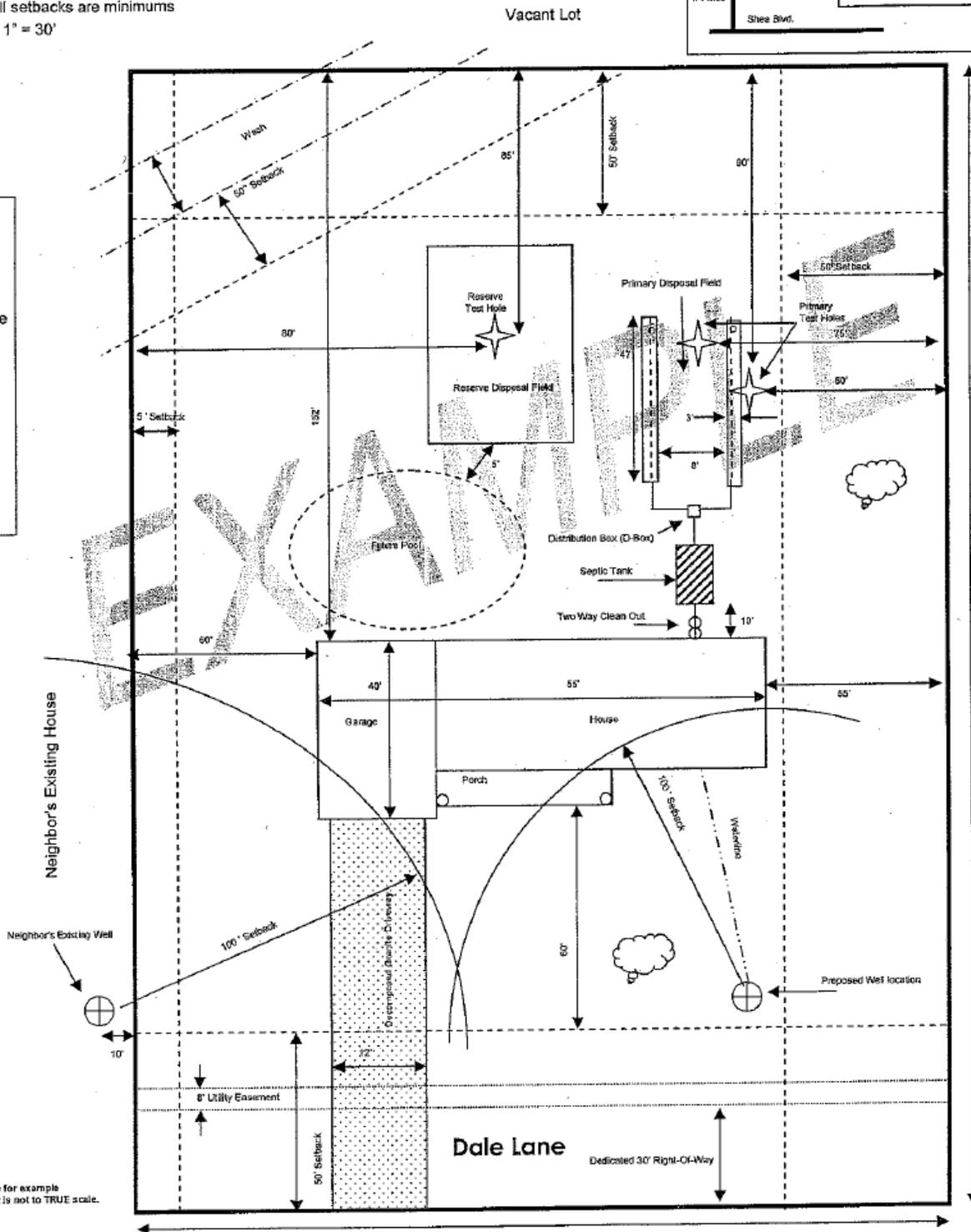
OSWTF Design by: Mary Brown
 Hm. Ph. # -602-333-5555
 Cell Ph. # - 602-444-9999
 Fax # - 623-546-6666
 Design/Revision Date: 1/1/10

Vicinity Map and Directions, NTS



Note: all setbacks are minimums

*Scale: 1" = 30'



Designed by: Mary Brown Date: 01/01/2010

Vacant Lot

*This Site Plan is for example purposes only, it is not to TRUE scale.

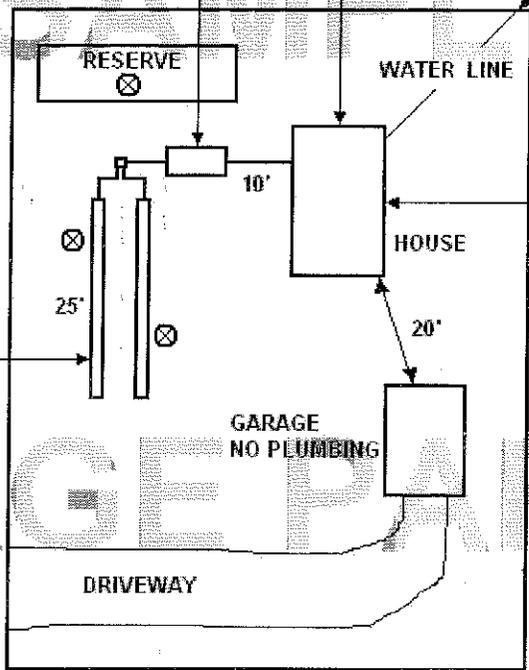
605'

INSIDE BOX
SCALE = 1" = 30'

245'

240'

250' WELL



370'

100'

901'

901'

N

80'

OUTSIDE BOX
NOT TO SCALE

325'

SITE PLAN

WASH

605'

ENVIRONMENTAL SERVICES
DEPARTMENT
John Kolman, RS, MBA, Director
1001 North Central, Ste. 150
Phoenix, AZ 85004



DIVISION OF WATER AND
WASTE MANAGEMENT
Kevin S. Chadwick, PE, Division Manager
(602) 506-6666
FAX (602) 506-6925

MATERIALS LIST FOR ON-SITE WASTEWATER TREATMENT FACILITY

PERMIT: _____

OWNER: _____

ADDRESS: _____

_____ **Zip** _____

TANK MANUFACTURER: _____

TANK SIZE: _____ gallons.

- A. Concrete: _____
- B. Fiberglass: _____
- C. Polyethylene: _____

D-BOX: _____ 4 hole. _____ 6 hole. _____ Other: _____

Material: _____ Concrete _____ Polyethylene

TYPE OF AGGREGATE TO BE USED: _____ . _____ tons.

WASHED RE-CYCLED CONCRETE: _____ . _____ tons.

LENGTH OF PIPE:

- A. SOLID: _____ Feet
- B. PERFORATED _____ Feet
- C. SDR 35: _____ YES _____ NO

CHAMBERS:

- A. TYPE: _____
- B. NUMBER: _____

OTHER COMPONENTS:

- A. GEO-TEXTILE _____ Feet.
- B. OTHER NON-POROUS MATERIAL: Type: _____ . _____ Feet.

ALTERNATIVE SYSTEMS:

Describe materials list in detail-attach separate sheet

PRESSURE DRIP SYSTEMS:

Materials and quantity-attach separate sheet

PRINT DESIGNER NAME: _____

PRINT INSTALLER NAME: _____ **ROC:** _____

SEPTIC SYSTEM SIZING CHARTS

Use the charts below to complete the Design Worksheet on the following page.

SELECTING THE PROPER SIZE SYSTEM			
No. of Bedrooms*	Fixture Count	Minimum Septic Tank Size (gallons)	System Daily Design Flow (gallons per day)
1	7 or less	1000	150
	more than 7	1000	300
2	14 or less	1000	300
	more than 14	1000	450
3	21 or less	1000	450
	more than 21	1250	600
4	28 or less	1250	600
	more than 28	1500	750
5	35 or less	1500	750
	more than 35	2000	900
6	42 or less	2000	900
	more than 42	2500	1050
7	49 or less	2500	1050
	more than 49	3000	1200
8	56 or less	3000	1200
	more than 56	3000	1350

*For a single residence with more than 8 bedrooms, use either the bedroom count or the fixture count, whichever is greater, and the following formulas: **For Septic Tank Size:** multiply the number of bedrooms by 150, then multiply that total by 2.1. This will equal the minimum septic tank size in gallons. **OR** multiply the total fixture units by 25, then multiply that total by 2.1. **For System Daily Design Flow:** multiply the number of bedrooms by 150, this will equal the minimum Design Flow in gallons per day. **OR** multiply the total fixture units by 25.

Obtain perc rate from soil report. Use the chart below to determine Soil Absorption Rate (SAR). Then, use the Design Flow determined from the above chart. The formula used to determine the required square footage of disposal area is: DESIGN FLOW ÷ SAR. (Example: 600 ÷ 0.63 = 952 sqft)

DESIGN FLOW CALCULATION TABLE-LEACH BED								
		Design Flow--Gallons per Day						
		450	600	750	900	1050	1200	1350
PERC RATE (min/inch)	SAR (gpd/sqft)	Required Square Footage of Disposal Area						
<1		NOT ALLOWED FOR CONVENTIONAL DISPOSAL						
1 to <3	0.93	484	645	806	968	1129	1290	1452
3	0.73	616	822	1027	1266	1438	1644	1849
4	0.67	672	896	1119	1343	1567	1791	2015
5	0.6	750	1000	1250	1500	1750	2000	2250
7	0.5	900	1200	1500	1800	2100	2400	2700
10	0.42	1071	1429	1786	2143	2500	2857	3214
15	0.33	1364	1818	2273	2727	3182	3636	4091
20	0.29	1552	2069	2586	3103	3621	4138	4655
25	0.27	1667	2222	2778	3333	3899	4444	5000
30	0.24	1875	2500	3125	3750	4375	5000	5625
35	0.22	2045	2727	3409	4091	4773	5455	6136
40	0.21	2143	2857	3571	4286	5000	5714	6429
45	0.2	2250	3000	3750	4500	5250	6000	6750
50	0.19	2368	3158	3947	4737	5526	6316	7105
55	0.18	2500	3333	4167	5000	5833	6667	7500
55 to <60	0.17	2647	3529	4412	5294	6176	7059	7941
60 to <120	0.13	3642	4615	5769	6923	8077	9231	10385
>120		NOT ALLOWED FOR CONVENTIONAL DISPOSAL						

LEACH BED WORKSHEET

(to be submitted with NOID Application Packet)

FIXTURE COUNT CALCULATION CHART					
FIXTURE TYPE	FIXTURE UNIT	#	# OF FIXTURES	=	TOTAL UNITS
Bath Tub	2	X		=	
Bidet	2	X		=	
Clothes Washer	2	X		=	
Dishwasher	2	X		=	
Lavatory (bathroom sink), single	1	X		=	
Lavatory, double in master bedroom	1	X		=	
Shower, single stall	2	X		=	
Sink, bar	1	X		=	
Sink, kitchen	2	X		=	
Sink, service	3	X		=	
Utility tub or Sink	2	X		=	
Water Closet (toilet), 1.6 GPF	3	X		=	
Water Closet (toilet), >1.6-3.2 GPF	4	X		=	
Water Closet (toilet), >3.2 GPF	6	X		=	
TOTAL FIXTURE UNITS					

Items in BOLD are the most commonly used fixtures.

"Bedroom" means, for the purposes of determining design flow for an on-site wastewater treatment facility for a dwelling, any room has:

- a). A floor space of at least 70 square feet in area, excluding closets;
- b). A ceiling height of at least 7 feet;
- c). Electrical service and ventilation;
- d). A closet or area where a closet could be constructed;
- e). At least one window capable of being opened and used for emergency egress; and
- f). A method of entry and exit into the room which allows it to be considered distinct from other rooms in the dwelling to afford a level of privacy customarily expected for such a room.

Bedroom/Equivalent Worksheet	
Room Type	Number of Rooms
Bedroom	
Den	
Office	
Other:	
Other:	
Other:	
Total:	

A LEACH BED HAS A MAXIMUM OVERALL DEPTH OF FIVE FEET (5').

Fill in the TANK SIZE from the OSWTF Sizing Chart Worksheet.

Fill in the DESIGN FLOW from the OSWTF Sizing Chart Worksheet.

Fill in the PERCOLATION RATE from the Soils Report

Divide DESIGN FLOW by the SAR from the Conversion Chart.

This equals the total square footage of disposal area required.

TOTAL SQUARE FOOTAGE OF DISPOSAL AREA REQUIRED = _____

(See Example Calculations for detailed instructions)

TANK SIZE = _____

DESIGN FLOW = _____

PERC. RATE = _____

SAR = _____

DIVISOR USED = _____

Divide the total square footage by the divisor, this will equal the total linear length of bed required.

TOTAL LINEAR LENGTH OF BED = _____

If the total linear length of bed is greater than 50' it is recommended that the total is divided into more than one bed of equal size separated by a distribution box.

The separation between piping in the bed is 5' or twice the effective depth, whichever is greater.

The maximum length for any disposal field is 100'. Additional inspection risers are required for any bed greater than 50' in length, placed in the center of the bed and halfway between other risers.

Effective Length of Bed	<input type="text"/>
Effective Width of Bed	<input type="text"/>
Number of Lines per Bed	<input type="text"/>
Proposed Overall Depth of Bed	<input type="text"/>
Number of Beds	<input type="text"/>

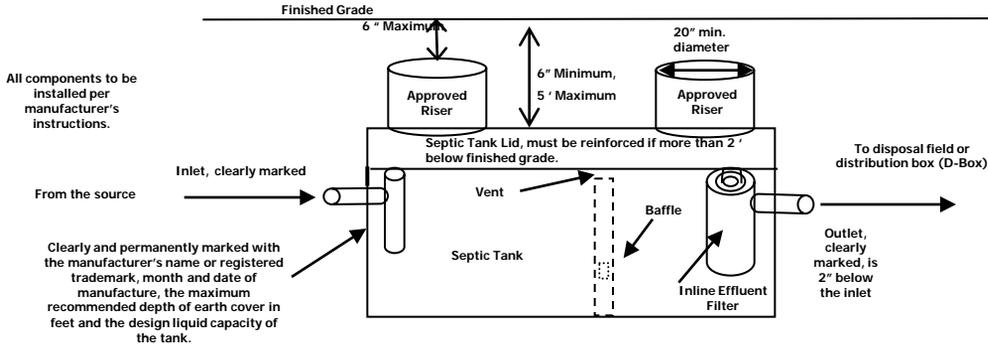
Permit / File #

Date:

SEPTIC TANK AND DISTRIBUTION BOX (D-BOX) TIPS

(to be submitted with NOID Application Packet)

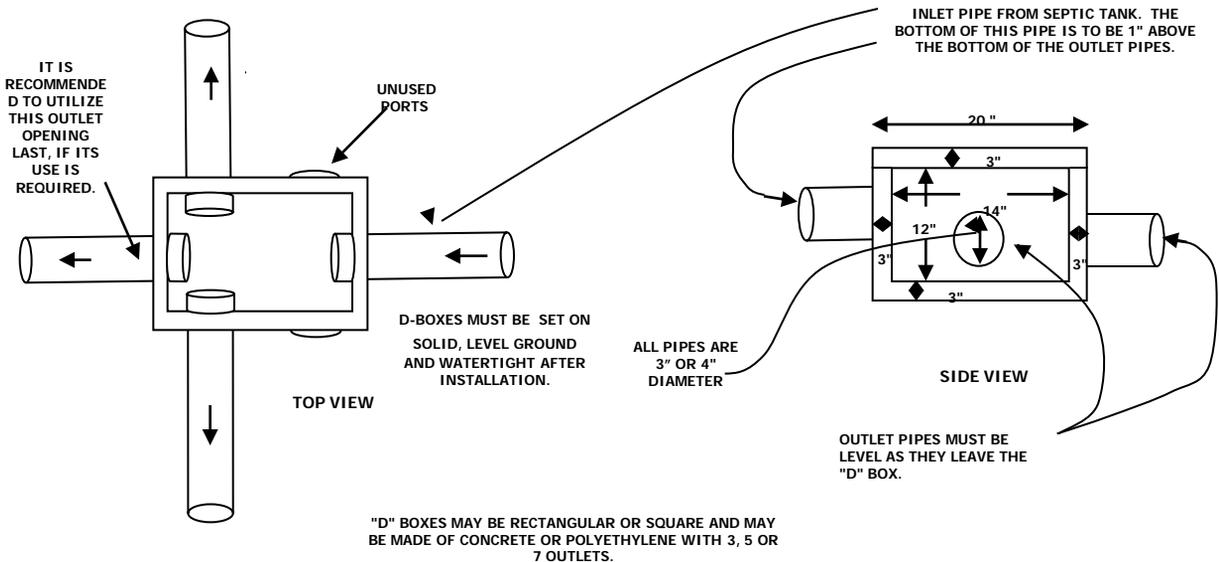
Consideration of how deep the plumbing stub-out is at the proposed septic tank location will determine how deep the tank and disposal field must be. Septic tanks that are installed so the top of the tank is two feet (2') to five feet (5') below finished grade will require additional reinforcement in the lid and risers. Tank lids that are greater than six inches (6") below finished grade are required to have risers installed so access openings on the top of the tank are within six inches (6") of finished grade. **Tanks that are installed so the top of the tank is greater than five feet (5') deep are not allowed.** In cases where the plumbing stub out is too deep to install the tank as described above the sewage may have to be pumped up to the tank from the source. If the designated reserve disposal field is at a higher elevation than the septic tank, across a wash or too far away (100' is the maximum separation between septic tank and disposal field), it may be required to have a lift station engineered and approved prior to utilizing the primary or reserve disposal fields.



It is recommended that the OSWTF be installed as shallow as possible to utilize the benefit of evaporation through the top soils.

TYPICAL DISTRIBUTION, "D", BOX

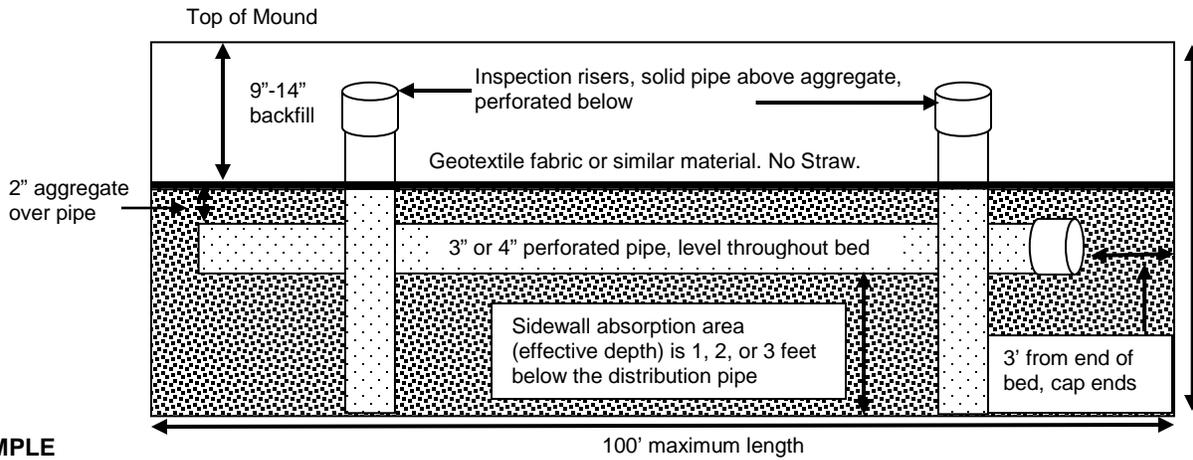
THE PURPOSE OF THE D-BOX IS TO DIVIDE THE LIQUID FLOW EVENLY THROUGHOUT THE DISPOSAL FIELD.



Cross Section for Leach Bed

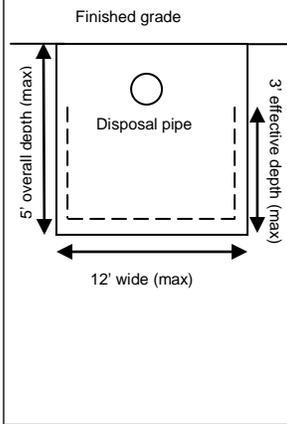
(to be submitted with NOID Application Packet)

Side View



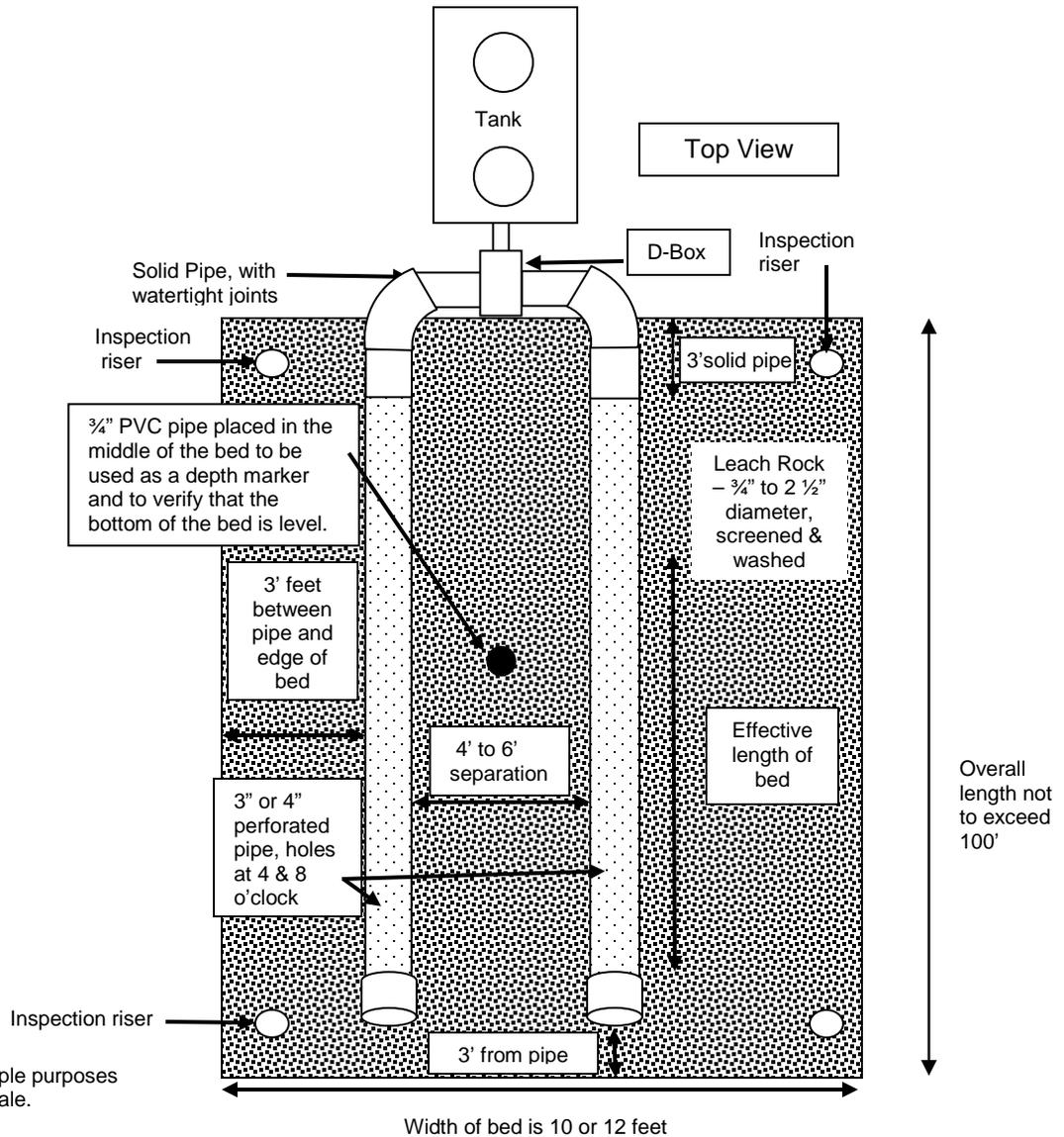
EXAMPLE CALCULATION

To calculate the divisor per linear foot of bed, add both sides of the sidewall absorption area (effective depth) plus the bottom absorption area (width). In the example below, the effective depth is 3' and the width is 12'. The divisor would be 18 ($3 + 3 + 12 = 18$). The maximum allowable divisor is 18.



These diagrams are for example purposes only; they are not to TRUE scale.

Top View



(Permit / File #)

Designed by:

Date: