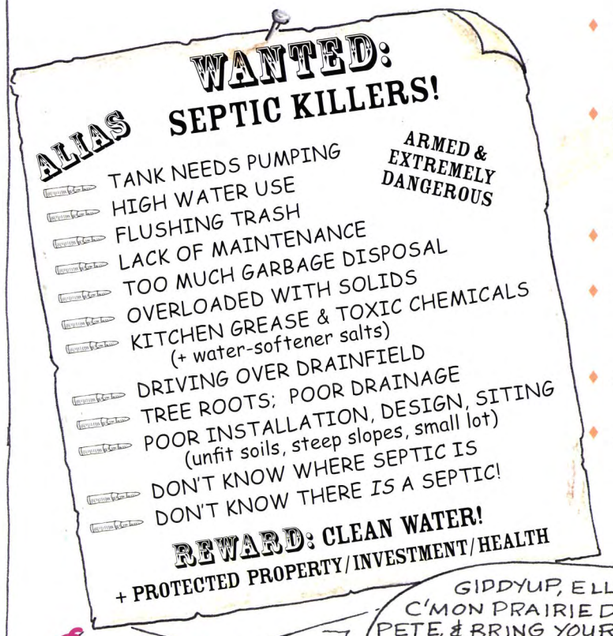
Ride Herd on Your Septic!

LOCATE *(find it!)*

INSPECT regularly

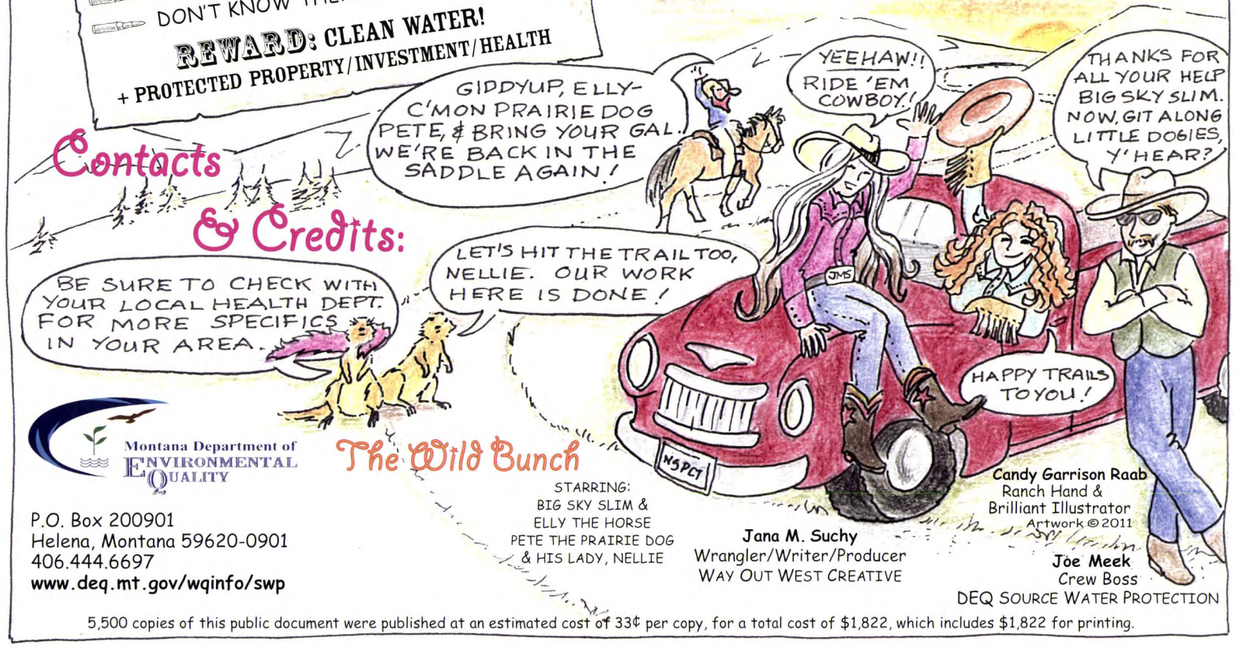
PUMP as needed

& PROTECT!



- Retrofit Risers & Effluent Filters
- Think Compost & Trash vs. Garbage Disposal
- Use Least Amount of Toxic Chemicals & Cleaners (USE RECOMMENDED DOSE, HANDLE & STORE CAREFULLY)
- Landscape Drainfield with Shallow-Rooted Plants, Not Deep
- Keep Sprinklers, Runoff, & Contaminants Away from Drainfield
- Protect Well—3 best ways:
  MONITOR WATER QUALITY (NITRATES, BACTERIA), SEPTIC MAINTENANCE, & CURB RUNOFF POLLUTION
- Watch Water Use & "Shock" Loads
- Keep Good Records—SEPTIC/WELL LOG (FIND IT, START IT, KEEP IT)
- Check Graywater Potential for Your County!
- And Remember, No Matter How Fancy or Expensive—ALL TANKS NEED TO BE PUMPED!

Contacts & Credits:



Montana Department of Environmental Quality

P.O. Box 200901
Helena, Montana 59620-0901
406.444.6697
www.deq.mt.gov/wqinfo/swp

The Wild Bunch

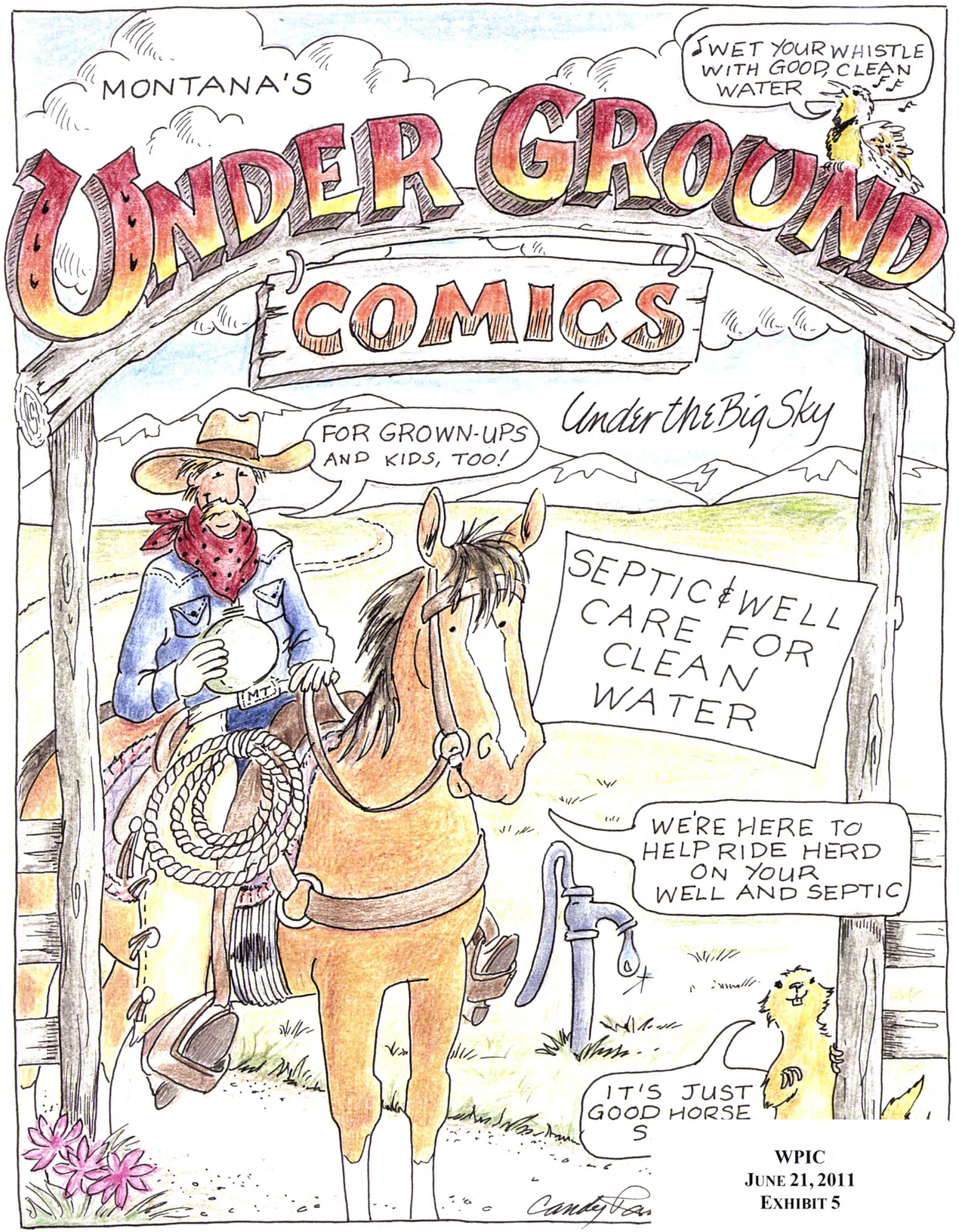
STARRING:
BIG SKY SLIM &
ELLY THE HORSE
PETE THE PRAIRIE DOG
& HIS LADY, NELLIE

Jana M. Suchy
Wrangler/Writer/Producer
WAY OUT WEST CREATIVE

Candy Garrison Raab
Ranch Hand &
Brilliant Illustrator
Artwork © 2011

Joe Meek
Crew Boss
DEQ SOURCE WATER PROTECTION

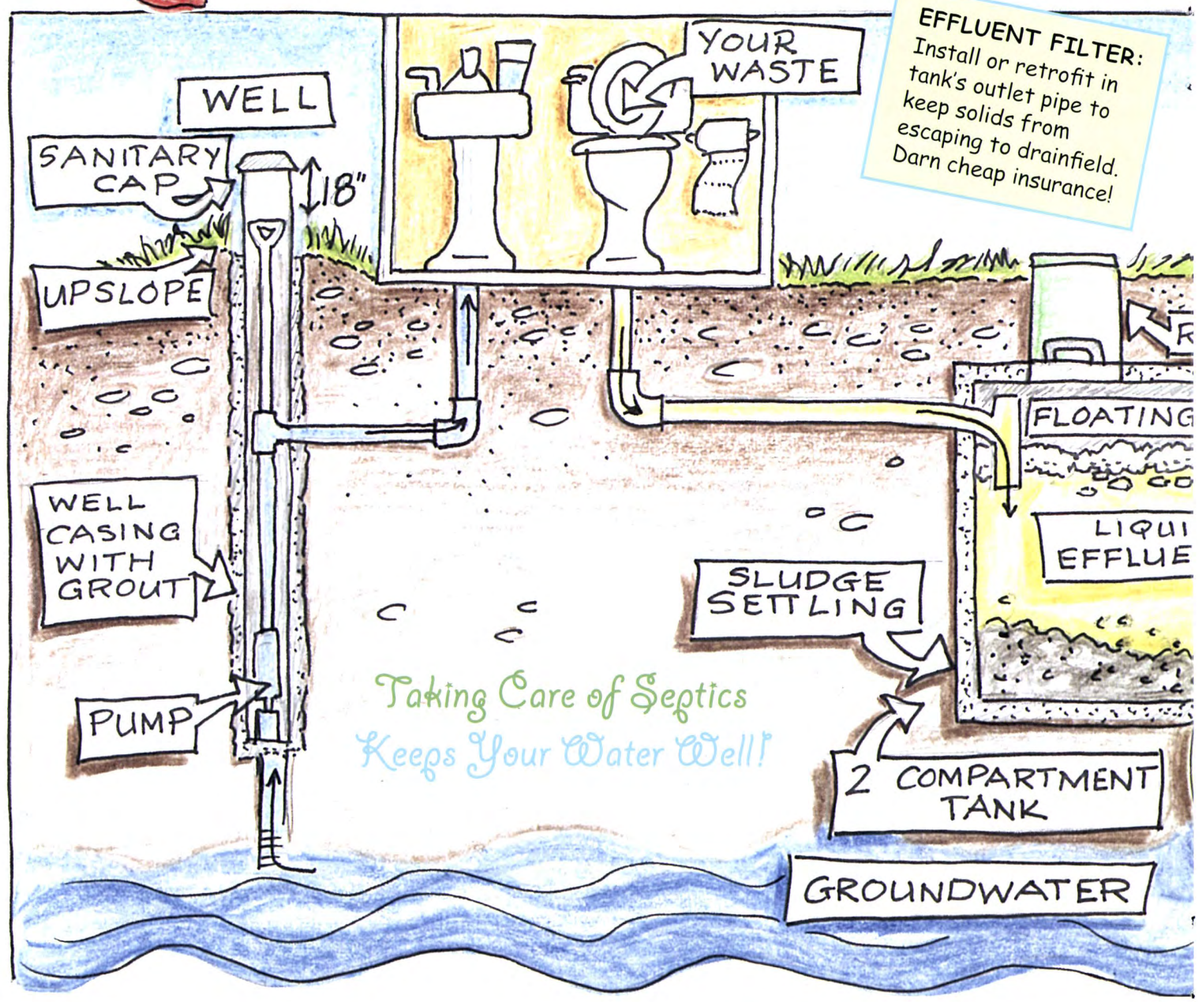
5,500 copies of this public document were published at an estimated cost of 33¢ per copy, for a total cost of $1,822, which includes $1,822 for printing.



WPIC
JUNE 21, 2011
EXHIBIT 5

Septics Anatomy:

HOWDY, PARDNER! IF YOU LIVE IN RURAL MONTANA YER PROB'LY THE PROUD OWNER/OPERATOR OF YOUR VERY OWN UNDERGROUND SEWAGE TREATMENT PLANT & WATER SUPPLY. IT'S YOUR SEPTIC SYSTEM & WELL!! BURIED OUT THERE IN THE BACKYARD.... SOMEWHERE.... AND, BY GOLLY, YOU ARE THE UTILITY COMPANY. SO TREAT YOUR SEPTIC RIGHT & YOUR WATER WELL, BECAUSE YER DRINKIN' IT!



EFFLUENT FILTER: Install or retrofit in tank's outlet pipe to keep solids from escaping to drainfield. Darn cheap insurance!

After sludge settles down, liquid effluent (your wastewater) flows out to the drainfield and seeps through drainpipe holes into the soil "filter" where it's purified by microbial critters in soil pores. Percolating down to recharge groundwater, your treated wastewater feeds your well, your neighbors' wells—plus gardens, irrigation, and our lakes & streams! You want it to be good soil, and clean water.

Bacteria in the tank work to break down the sludge layer, but eventually ... ALL TANKS NEED TO BE PUMPED! All tanks. All.

DO YOU KNOW...

WHERE YOUR TANK IS?
HOW BIG IT IS?
WHEN IT WAS LAST PUMPED?
WHERE YOUR DRAINFIELD IS?

Once you find it, map it!

HEY—Community Systems & Townies! Even if you're on a community system or live in town, these guidelines make smart sense too. It all goes somewhere, and our water's all connected!

YUP, IT'S DEAD, ALRIGHT ... or Turn Downright UGLY!

Clogged, sluggish, & backed-up, this is your sewage coming back to haunt you. *and your drinking water!*

Tank plugged full of solids overflows to clog pipes, soil pores—& plumbing! Clogg
You will be visited by seepage, leakage, & FAILURE—contaminat

You bet it is. Septic additives could harm—and pretty much don't help. Look at it this way: Caustic chemicals or biological agents designed to **BREAK DOWN SOLIDS** can ***BREAK SOLIDS DOWN*** to float out the tank & clog the drainfield. *Be careful what you wish for!*

ADDITIVES: TO ADD, OR NOT TO ADD, IS THAT THE QUESTION?

Are YOU drinking from nearby septic failures? Gives a whole new meaning to your Neighborhood Circle.

SEPTIC SYSTEMS & WELL SEPARATION

Wells & septic systems may be too close in some of our older communities, where a well's 100' setback Safety Circle could overlap with neighboring septics.

When Good Systems Go BAD ... A FAILURE WAITING TO HAPPEN

A tank full of solids leaves less room for liquid so it shortens settling time, flowing out to drainfield with solids mixed in.
Reduced wastewater-treatment capacity means your effluent's not always completely clean before reaching groundwater—and your well!

SEND IN THE RESERVES!

THERE'S NO FIXING A FAILED DRAINFIELD. With soil pores compacted or clogged with solids, no amount of air or water pumped in will flush 'em out or plump 'em up again. You'll have to put in a new drainfield, in a different area designated and protected for a replacement or "reserve." *Find yours!* Without suitable soils in reserve, folks might have to pump effluent off-site—or even buy more property!

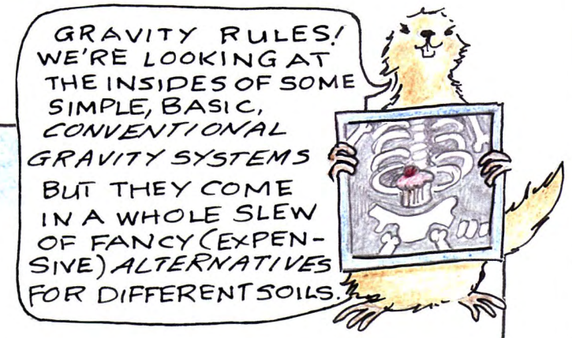
HOW THEY WORK & WHY THEY FAIL

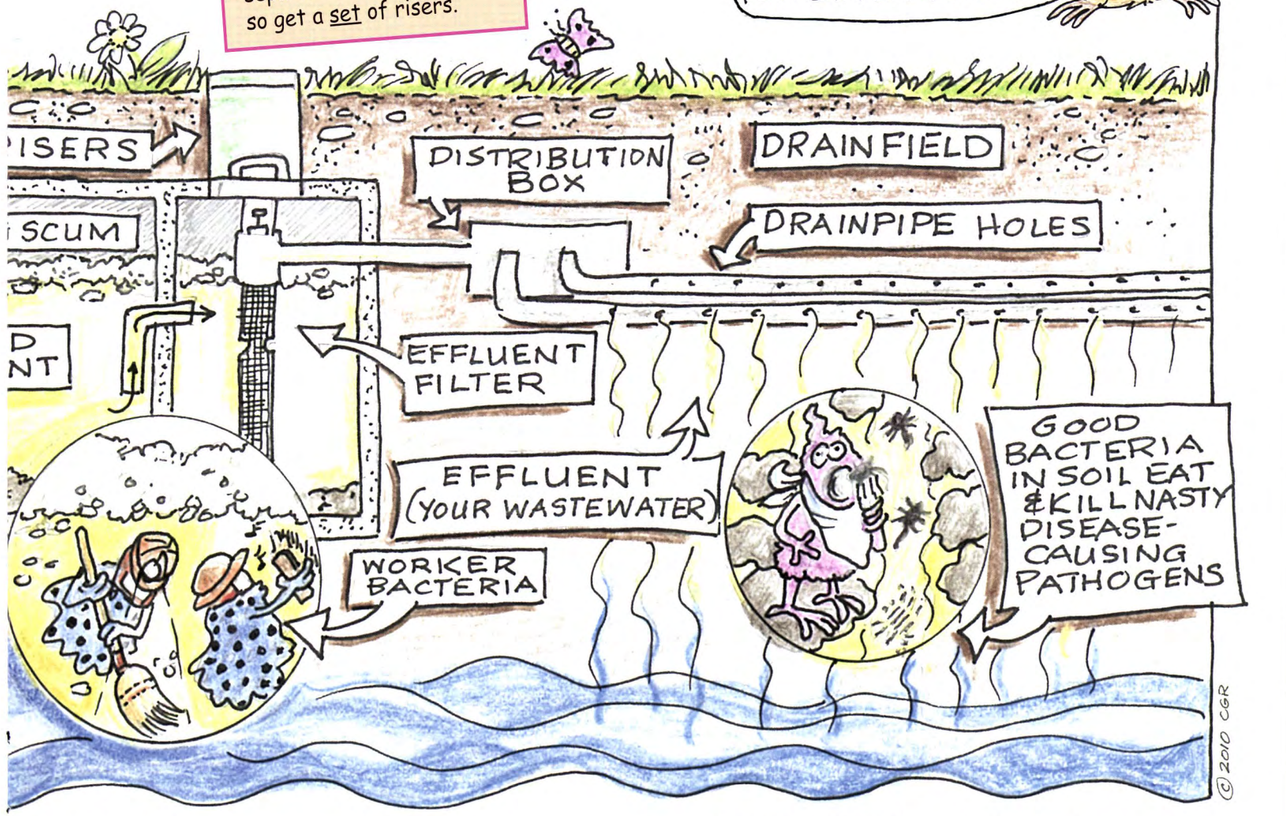
When Things Are GOOD,

IT'S A SMOOOTH OPERATION!

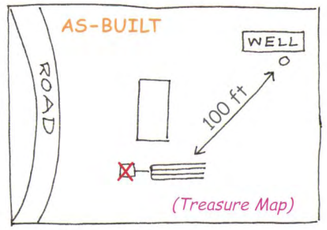
RISERS bring access up to ground level—like plastic culverts on end, *rising* to the surface as tall as the tank is deep (1-2 ft) & capped at grade with manhole covers. *But don't bury the lids!* Instead, Think: DECORATIVE LAWN ORNAMENTS.

Note: both tank compartments get pumped through separate access manholes, so get a set of risers.





Most counties now keep records of new systems with an AS-BUILT, a drawing of the house footprint & property lines in relation to the septic and well—*as it was built!* Ask the county for yours, or draw one yourself!



What's buried out in your backyard?

Doesn't matter where you live, in what kind of house, how big it is—or if your granddaddy homesteaded the place or you're a shiny new city slicker. What'll make YOUR septic the GOOD, the BAD, or the Downright UGLY is all about:
How you take care of it, &
How you live with it.
Follow us in the Pore of Discovery to explore how to protect your well & septic—*& how to discover signs of trouble!*

The GOOD...

THE ONLY BUTT IN HERE BETTER BE YOUR OWN! CIGARETTE BUTTS ARE A PERFECT FIT TO PLUG UP A DRAINPIPE HOLE

ONLY FLUSH TP & WHAT GOES THROUGH YOU FIRST! THAT MEANS NOTHING ELSE IN THE UNIVERSE GOES IN THERE — YOUR TOILET'S NOT A TRASH CAN. (IT'S A POT, NOT A CAN.)

SPREAD OUT YOUR BIG WATER USERS — LAUNDRY, SHOWER & BATH, DISHWASHER — DON'T SHOCK & AWE THE SEPTIC!

LA LA FLA LA

LOW-FLOW FIXTURES

SAVE WATER! SAVE SEPTICS! SCRAPE FOOD WASTE & GREASE INTO TRASH OR COMPOST.

NEWSPAPER WIPES GREASE OFF POTS & PANS.

TRASH

COMPOST

SANITARY CAP

WELLHEAD UPSLOPE & AT LEAST 18" ABOVE GROUND

50' SETBACK FROM WELL TO TANK, 100' TO D

FENCING PROTECTS WELLHEAD FROM DAMAGE & ANIMALS. UPSLOPE KEEPS RUNOFF FROM GETTING IN THE WELL CASING — & CONTAMINATING YOUR WATER!

INSPECT REGULARLY — PUMP WHEN NEEDED. THAT'S THE CODE OF THE WEST.

WELL CASING

GROUT KEEPS RUNOFF OUT

PUMP

WANT TO INSPECT YOURSELF?

REMEMBER IT'S NASTY DANGEROUS STUFF IN THERE. CALL YOUR COUNTY FIRST FOR INFO & INSTRUCTIONS. AND NEVER ENTER A TANK — EVER!! VERY BAD THINGS CAN HAPPEN IN THERE.

GROUNDWATER

TOR

OUTHOUSE (LOOK HOW FAR WE'VE COME OUT HERE IN THE WILD WEST)

GRANDADDY'S HOMESTEAD

!!!

EXPLODING SINK

Pop Away *works like magic!*

SEPTIC ADDITIVE

EXPLODING TOILET

ADDITION BUILT OVER TANK

OH, NO... THIS CAN'T BE GOOD.

KNAPWEED

WEED 'EM-N-WEEP

PLUGGED, OVER-FLOWING TANK

MIXING, SPILLING, STORING PESTICIDE & FERTILIZER

HOLD IT RIGHT THERE, PARDNER. TIME TO COWBOY UP AND GIT YOURSELF A BRAN' NEW DRAINFIELD. SO... WHERE YA GONNA PUT IT?

YOUR WELL WATER'S ONLY AS CLEAN AS YOUR SEPTIC MAINTENANCE ROUTINE! (AND YOUR NEIGHBOR'S ROUTINE!!)

DINOSAUR

TO YOUR WELL

YOUR GROUNDWATER

TO NEIGHBOR'S WELL

©2010 CGR

... and THE DOWNRIGHT UGLY!!

Bite the Bullet, It's Dead (R.I.P.

BAD WATER RANCH

WHERE ANTELOPE PLAY

AND BUFFALO ROAM

ABANDONED WELL (MISSING CAP)

Rodeo Rooter
We unclog your road

DUMPING OIL ("TO SETTLE THE DUST")

OIL

TURDINA
You dump
We pump

BLAZING SADDLES! I WISH THEY HAD BOTTLED WATER BIG ENOUGH FOR A HORSE.

ROAD APPLES

CRACKED, LEAKING CAP

SQUISH SQUISH

PONDED EFFLUENT: (THE "SQUISH SQUISH" TEST)

PARKING, DRIVING ON (COMPACTING) OR COVERING (SMOTHERING!) DRAINFIELD.

BROKEN PIPE

SATURATED SOIL (PORES FULL OF WATER)

UNTREATED WASTEWATER (RAW SEWAGE!)

Here in the Heart of the West!

BECAUSE RIVERS RUN THROUGH IT!

SETBACKS & WELL-MAINTAINED SEPTICS KEEP OUR RIVERS, LAKES & STREAMS CLEAN. GROUNDWATER & SURFACE WATERS ARE ALL CONNECTED - SO GET YOUR SEPTIC INSPECTED!

O.K. RANCH

I LOVE MONTANA'S WORLD CLASS FISHING!

100' SETBACK DRAINFIELD TO SURFACE WATER

MOVING MY BIRDBATH SURE BEATS DIGGING

DECORATIVE LAWN ORNAMENT CAMOUFLAGE - BENCH, BIRDBATH

SHALLOW-ROOTED PLANTS OVER DRAINFIELD KEEP ROOTS FROM CLOGGING PIPES - TRY NATIVE GRASSES!

DRAINFIELD

EFFLUENT FILTER

DRAINFIELD KEPT FREE FROM SOIL COMPACTION OR COVERING

RISERS

HOW YOU USE WATER & HOW YOU MAINTAIN YOUR SYSTEM ARE THE 2 MOST CRITICAL THINGS YOU CAN DO TO KEEP YOUR SEPTIC WORKING - & OUR WATER CLEAN. THAT'S HOW THE WEST WAS WON.

Inspect Regularly & Pump as Needed

GO NATIVE! NATIVE PLANTS ADAPTED TO CLIMATE NEED LITTLE ADDED WATER OR FERTILIZER. *DRAINFIELD'S ALREADY WORKING HARD TO GET RID OF YOUR OWN WATER & "FERTILIZER!"* AND I SURE KNOW HOW TO FERTILIZE!

LET'S RIDE OUT & SEE WHAT THE N-A-A-A-A-Y-BORS ARE DOING.

MT

© 2010 CGR

THE BAD ...

LIKE IT'S BEEN RODE HARD & PUT AWAY WET

USING WATER ALL AT ONCE REALLY STRESSES THE SYSTEM. *SPREAD IT OUT!!*

WATER RUNNING RUNNING RUNNING

LEAKY FAUCET

GREASY PAN

DISHWASHER

GARBAGE DISPOSAL: SOLIDS FILL TANK FASTER *SO THROW IT OUT!!*

WASHING TOO MANY LOADS

TOXIC CLEANERS

CHEMICALS

SMELLS LIKE TROUBLE

FLUSHING GUNK OR MEDS

LA LA LA

BATHING

SHAVING (WATER LEFT RUNNING)

Wasted Water Estates

SEARCHING FOR TANK, AVALANCHE-STYLE. (GOT RISERS?)

DANGER, DANGER! YOU COULD PUNCTURE WATERLINES, AN OLD, PUNKY TANK — OR *ELECTRIC CABLE!*

TELLTALE SIGNS OF FAILING SYSTEM: SLUGGISH DRAINS LUSH GROWTH OVER DRAINFIELD

SETBACK? WHAT SETBACK?

WELLHEAD

INSTANT OVERLOAD—JUST ADD WATER!

HOW BAD IS YOUR BAD? WELL, KEEP THIS UP AND... IT'S GONNA COST A FISTFUL OF DOLLARS!!

UH OH! THEY REALLY JUST DON'T KNOW!

GROW 'EM BIG

NO RISERS

FERTILIZED & WATERED

WAY TOO MUCH WATER RUNNING IN HERE!!

MIXING—NOT SETTLING!

NO EFFLUENT FILTER

CONTAMINATED RUNOFF DOWN WELL CASING

GROUNDWATER

EFFLUENT ONLY PARTLY CLEANSED

ARE YOU EATING THAT? YUCK!

DRAINFIELD GARDEN (IT DRINKS EFFLUENT!)

DEEP ROOTS CLOG PIPES (WORST? WILLOWS!) & CHOKE!

ESCAPING SOLIDS (THINK "CHUNKY PEANUT BUTTER") CLOG PIPES & SOIL!

MT

©2010 CGR

QUIETLY OVERLOOKED, TOO OFTEN IGNORED & NEGLECTED. ARE YOU KILLING CLEAN WATER BY **FAILING TO TREAT YOUR WASTE?**