HOW MANY TANKER TRUCKS DOES IT TAKE TO SUPPLY WATER TO, AND REMOVE WASTE FROM , A HORIZONTALLY-DRILLED AND HYDROFRACKED WELLSITE?
LET'S DO THE MATH!

There are several factors to consider in determining an estimated range, because there can be an enormous difference in water usage (and resultant toxic waste production), between one drill pad and another. The answer (in bold text, at bottom), after doing the math, conveys a real sense of the meaning of "industrial" zone.

A) GALLONS FRESH WATER PER WELL: 2 to 9 million.

Source:SRBC June 12, 2008 Elmira, New York presentation PDF:
http://www.srbc.net/whatsnew/docs/MarcellusShaleandGasWellDrillingPowerpoint061208.pdf
page 19: "The fracturing process uses an average of 2 to 9 million gallons of fresh water per well"

B) TRUCKTRIPS PER WELL FRACKING:
320 trucktrips for a 2 million gallon fracking
1,440 trucktrips for a 9 million gallon fracking.

Source: Summary below of Texas info supplied by Earthworks:
http://www.earthworksaction.org/pubs/OGAPMarcellusShaleReport-6-12-08.pdf:
*For a single horizontal well fracturing, requiring 5 million gallons of fresh water, expect **100** large freshwater-hauler loads of driving to the well during fracture. Then, another **700** smaller waste-hauler truckloads to transport the toxic waste away to a disposal facility. That's **800** trucks with a gross weight of up to 40 tons.*

800 trucks divided by 5 million gallons = 160 truckloads per million gallons
**100 divided by 5 = 20 large freshwater hauling trucks per million gallons fresh water used.*
**700 divided by 5= 140 smaller toxic waste hauling trucks per million gallons of fresh water used.*

C) MULTIPLE HORIZONTAL WELLS PER PAD: 2 to 20

http://oil-gas.state.co.us/Library/Presentations/NW%20Colorado%20Oil%20and%20Gas%20Forum%2012-7-06/Williams update 06070 7.pdf

2 to 6 wells per pad using old conventional rigs; 10 to 20 wells per pad using new HP rigs.

D) FRACKINGS REQUIRED OVER 30-YEAR WELL LIFE: 1 to 6.

The earthworks PDF referenced above states that Halliburton says: "It is important to note that a well drilled in the Marcellus shale may have to be fracked several times overthe course of its life to keep the gas flowing, and that each fracking operation may require more water than the previous one."

Source: http://www.texaswatermatters.org/pdfs/news363.pdf:
"Estimates vary on how many times a gas well must be fractured again to keep the gas flowing — from zero to once every several years over the 20- to 30-year life of the gas well."

So, for "several years" let's assume 5 year intervals, when multiple frackings are required.

For a well not requiring later fracking ("restimulation"): 1 fracking
Possible frackings for wells requiring restimulation: . 30 years divided by 5 = 6 frackings

E) **DURATION OF FRACKING: 3 weeks (21 days)**

Source: http://oil-gas.state.co.us/RuleMaking/WorkGroups/StudiesGroup/COGCCdrilling101.pdf
See "Estimated Time Table"on pg. 20:

21 is the number days fresh water would be hauled to the well pad.

CONCLUSION:

Halliburton advises that more water (and we should assume more "produced water" or toxic waste) is required for each successive fracking, but does not provide any estimate of how much more water would be required. The following estimates conservatively assume that fresh water used and toxic waste produced remains the same for each successive fracking.

MINIMUM TRUCKING:

Minimum 1 well on a pad, with only 1 fracking over 30 years:
2 to 9 million gallons of fresh water used per pad.
40 to 180 large fresh-water tanker trucks hauling fresh water.
(2 to 9 loads per day for 21 days of fracking).
280 to 1,260 smaller waste-materials tanker trucks hauling toxic wastes.
(14 to 53 days of toxic waste hauling at 20 truckloads per day of removal.)

Overall, 320 to 1,440 possible tanker truck trips over well pad life.

MAXIMUM TRUCKING

Maximum 20 wells on 1 pad, with 6 frackings over 30 years. fresh-water
240 million to 1.08 billion gallons of fresh water used per pad.
4,800 to 21,600 large fresh-water tanker trucks hauling fresh water.
(2 to 9 loads per day for 2,520 days of fracking)
33,600 to 151,200 smaller waste-materials tanker trucks hauling toxic waste.
(1680 to 7560 days of toxic waste hauling at 20 truckloads per day of removal)

Overall, 38,400 to 172,800 possible tanker truck trips over well pad life.

There are 21 wells being drilled or already producing in Chenango County. Why haven't we seen this kind of water/toxicwaste traffic?

The drilling activity in Chenango County is of vertical wells being drilled into deeper, more pressurized shale formations, where hydrofracking is rarely necessary. They are also wells with shorter lifespans. While drilling proponents like to direct people's attention to these wells, the more accurate comparison is with horizontally-drilled, hydrofracked operations in the Barnett Shale in Texas, and elsewhere. The Department of Environmental Conservation is producing a new Generic Environmental Impact Statement (GEIS) that will guide it in permitting new drilling in the future, but meanwhile

The DEC permitted 14 *horizontal* wells in 2008, and has taken applications for 5 more, *all* of which will start drilling/fracking when the GEIS is completed in 2009.

Source: http://www.dec.ny.gov/cfmx/extapps/GasOil/search/wells/index.cfm