

Vail's Grove Cooperative, Inc.

Five Vail Boulevard • Peach Lake
Brewster, NY 10509
(914) 669-5100 • Fax: (914) 669-5064
E-mail: VailsGroveCoop@gmail.com

May 27, 2011

Ms. Anne Bittner, M.S.P.H.
Sr. Public Health Sanitarian
Putnam County Health Department
One Geneva Road
Brewster, New York 10509

RE: Vail's Grove Cooperative
Federal Public Water Supply Identification No. 3902654
Annual Water Quality Report for Year 2009

Dear Ms. Bittner:

Enclosed is a copy of Vail's Grove Cooperative's Annual (2010) Water Quality Report.

As always, if you have any questions, feel free to call this office.

Sincerely,
For The Public Health Committee of the Board of Directors



Cindy R. Battreall
Assistant Secretary
Board of Directors

Cc: New York State Department of Health – Commissioner
Att: Director, Bureau of Public Water Supply Protection
Flanigan Square, 547 River Street – Room 400
Troy, New York 12180-2216

Northeast Laboratories Incorporated
129 Mill Street
Berlin, CT. 06037-9990

VAIL'S GROVE COOPERATIVE, INC.
Five Vail Boulevard
Brewster, New York 10509
PHONE 914-669-5100
FAX 914-669-5064

TO: All Shareholders/Residents Vail's Grove Cooperative, Inc.

FROM: The Public Health Committee of the Board of Directors
Vail's Grove Cooperative, Inc.

RE: Annual Water Quality Report (AWQR)
For Vail's Grove Cooperative For Calendar Year 2010
5 Vail Boulevard
Brewster, NY 10509
(Federal Public Water Supply Identification Number 3903654)

DATE: May 27, 2011

To comply with State regulations, Vail's Grove Cooperative annually issues a report describing the quality of your drinking water. The purpose of this report is to raise your understanding of drinking water and awareness of the need to protect our drinking water sources. We test your drinking water in accordance with the requirements of New York State for numerous contaminants including, total coliform, inorganic compounds, nitrate, nitrite, lead and copper, volatile organic compounds (VOC's), total trihalomethanes, synthetic organic compounds (SOC's), and purgeable organic compounds (POC's). Last year, we conducted tests for contaminants, of which none was a level higher than the State allows.

In general, the sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals, and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activities. Contaminants that may be present in source water include: microbial contaminants, inorganic contaminants; pesticides and herbicides; organic chemical contaminants; and radioactive contaminants. In order to ensure that tap water is safe to drink, the State and the EPA prescribe regulations which limit the amount of certain contaminants in water provided by public water systems. The State Health Department's and the FDA's regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

This Annual Water Quality Report (AWQR) is to keep you informed about the water and services delivered to you during calendar year 2010. The Cooperative's goal is to provide a safe and dependable supply of drinking water. Our water source is from three subterranean bedrock wells (each at an approximate depth of 300 feet) located near the pump house at the North end of Vail's Lake Shore Drive. The water is pumped from the wells into two (2) 20,000-gallon storage (40,000 gallons total) tanks after chlorination, and then pumped to the homes and Pavilion of the Vail's Grove community at between 60 and 80 pounds per square inch. NY State certifies operators who serve on our Public

Health Committee who test chlorine levels daily. During 2010 the wells produced and delivered 9,229,000 gallons of potable water. In 2003, The Department of Health completed a Source Water Assessment Summary and Final report regarding the three wells at Vail's Grove. The full report is available at the Vail's Grove Office should you wish to read it.

For more information or to discuss any drinking water issues, feel free to call us at (914) 669-5100, or you may call the Putnam County Department of Health located at One Geneva Road, Brewster, NY 10509 at (845) 803-1370. Jack Waltzer, Vail's Grove's "Principal Operator in Charge" will also answer any questions on drinking water quality. He may be reached (days) at (845) 669-8085. K. Heuschkel (Operator) may be reached at (845) 669-5976. J. Moore may be reached at (845) 803- 2786/(914) 669-9606. Any issues concerning drinking water quality may also be discussed at our regular monthly board meetings on the 3rd Tuesday of each month.

In the light of recent terrorist activities, in the event of suspected vandalism or sabotage at the pump house: contact Jack Waltzer, or the State Police at (845) 279-6161 or the Putnam County Sheriff's Office at (845) 225-4300.

Vail's Grove Cooperative, Inc. routinely monitors (by a laboratory certified by New York State) for various substances and possible contaminants in our drinking water, according to Federal and State laws and on a schedule as determined by the State of New York. The attached tables back through 2007 show results of some of our monitoring and lists **only detected contaminants**. On the New York State schedule, our water is tested for inorganic contaminants, nitrate, lead and copper, volatile organic contaminants, synthetic organic contaminants, and total trihalomethanes. Our water is tested for coliform bacteria once per month. A coliform violation occurs when a total coliform positive sample is positive for E coli and a repeat total coliform sample is positive, or when a total coliform positive sample is negative for E coli, but a repeat coliform sample is positive for total coliforms *and* E coli. The MCL for coliform is 0 per 100 ml.

During the year, there were no positive coliform bacteria detected. We also monitored for the following Purgeable Organic Compounds in Drinking Water which were all **below detectable limits**:

Dichlorodifluoromethane, Chloromethane, Vinyl chloride, Bromomethane, Chloroethane, Trichlorofluoromethane, 1,1-Dichloroethene, Methylene Chloride, Trans-1,2-Dichloroethene, 1,1-Dichloroethane, Cis-1,2-Dichloroethene, 2,2-Dichloropropane, Bromochloromethane, 1,1,1-Trichloroethane, 1,1-Dichloropropene, 1,2-Dichloroethane, Carbon Tetrachloride, Benzene, Trichloroethene, 1,2-Dichloropropane, Dibromomethane, Cis-1,3-Dichloropropene, Toluene, Trans-1,3-Dichloropropene, 1,1,2-Trichloroethane, 1,3-Dichloropropane, Chlorobenzene, 1,1,1,2-Tetrachloroethane, Ethyl Benzene, m,p-Xylene, Styrene, o-Xylene, 1,1,2,2-Tetrachloroethane, Isopropyl Benzene, 1,2,3-Trichloropropane, Bromo Benzene, n-Propyl Benzene, 2-Chlorotoluene, 4-Chlorotoluene, 1,3,5-Trimethyl Benzene, Tert-Butyl Benzene, 1,2,4-Trimethyl Benzene, Sec-Butyl Benzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, p-Isopropyltoluene, 1,2-Dichlorobenzene, n-Butyl Benzene, 1,2,4-Trichlorobenzene, Naphthalene, Hexachlorobutadiene, 1,2,3-Trichlorobenzene, 1,2 Dibromo-3-chloropropane, cis-1,2-

Dichloroethene, Dibromoethane, Methyl Ethyl Ketone, Tetrachloroethene, Total Xylenes, and Methyl tert-Butyl Ether (MTBE).

The following Haloacetic Acids were not detected: Dichloroacetic Acid, Monobromoacetic Acid, Monochloroacetic Acid, Trichloroacetic Acid.

WE ARE PLEASED TO REPORT THAT VAIL'S GROVE DRINKING WATER CONTINUES TO MEET ALL FEDERAL AND STATE REQUIREMENTS. Last year your tap water met all State drinking water health standards. We are proud to report that in 2010, our system did not violate a maximum contaminant level (MCL).

Water Conservation

Because of the recent necessity for water conservation, the Board of Directors has approved a rule applicable when the state or either county has imposed a water emergency, water watch, or any other drought condition calling for water conservation. This rule mandates that Vail's Grove residents:

- Will not wash cars**
- Will not water their landscape with hoses or sprinklers**
- Will not wash down driveways or roadways**

Failure to comply with the above will result in an Improper Use Fee by the Board for each occurrence.

We all recognize the need to conserve water during times of drought. It is just as important to use water wisely when the supply is plentiful. Some common sense measures to conserve water include:

- Shut faucets off tightly. A small drip can waste 25 gallons per day.
- Check all toilets for leakage. A bad toilet leak can waste as much as 200 gallons a day.
- Don't run the faucet to get a cold drink. Place a container of water in the refrigerator.
- Don't run the faucet while shaving or brushing your teeth.
- Take shorter showers and half-full baths. Install low flow showerheads and faucets.
- Run washing machine and dishwasher only when full. Don't wash dishes under a running faucet.
- Don't cut the lawn too short, longer grass saves water.
- Mulch around trees and plants to help retain moisture.

Health Considerations

There are some people who may be more vulnerable to disease causing microorganisms or pathogens in drinking water than the general population. Immune-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about their drinking water from their health care providers. EPA/CDC

guidelines on the proper means to lessen the risk of infection by *Cryptosporidium* *Giardia* and other microbial pathogens are available from the Safe Drinking Water Hotline (800) 426-4791.

About Lead

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead in your home may be higher than at other homes in the community as a result of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Don't use hot water for drinking purposes. Additional information is available from Safe Drinking Water Hotline (800) 426-4791.

Definitions:

Maximum Contaminant Level Goal (MCLG): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL): The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as possible.

Treatment Technique (TT): A required process intended to reduce the level of a contaminant in drinking water.

Action Level (AL): The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements, which a water system must follow.

Variations and Exemptions: State permission not to meet an MCL or treatment technique under certain conditions. In 2001 Vail's Grove operated under a waiver from sampling synthetic organic compounds (SOC's). In 2002, SOC's were tested. SOC testing was done again in the year 2005. In 2008, Vail's Grove operated under a waiver from sampling synthetic organic compounds (SOC's).

Milligrams per liter (mg/l): Corresponds to one part of liquid in one million parts of liquid (parts per million - ppm).

Micrograms per liter (ug/l): Corresponds to one part of liquid in one billion parts of liquid (parts per billion - ppb).

Nanograms per liter (ng/l): Corresponds to one part of liquid in one trillion parts of liquid (parts per trillion - ppt).

Picocuries per liter (pCi/L): Picocuries per liter is a measure of the radioactivity in water.

90th Percentile Value: The values reported for lead and copper represent the 90th percentile. A percentile is a value on a scale of 100 that indicates the percent of a distribution that is equal to or below it. The 90th percentile is equal to or greater than 90% of the lead and copper values detected at your water system.

NDL: No determined limit.

n/d: Not detected in routine laboratory analysis.

N/A: Not applicable.

LT or <: Less than **GT or >:** Greater than

BDL: Below detectable limits.

cc: Commissioner, New York State Department of Health
Attn: Director, Bureau of Public Water Supply Protection
Flanigan Square, 547 River Street, Room 400
Troy, New York 12180-2216

Ms. Anne Bittner
Putnam County Health Department
One Geneva Road
Brewster, New York 10509

Northeast Laboratories of Danbury
129 Mill Street
Berlin, CT 06037-9990

Table 1 - Detected Contaminants (Reported for 2010)

Contaminant	Date	Unit	MDL	MCLG or Standard	Detected Level	Range	Information	Violation
Inorganic Chemicals								
	Antimony	5/28/10	mg/l	0.003	0.003 mg/l	< 0.003 mg/l	Discharge from petroleum refineries; fire retardants; ceramics; electronics, solder. Some people who drink water containing Antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.	No
	Arsenic	6/1/10	mg/l	0.003	0.010	< 0.003 mg/l	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics and production wastes. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer. EPA has promulgated a drinking water arsenic standard of 10 parts per billion that will not take effect until 2006. EPA continues to research the health effect of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.	No
Barium	5/27/10	mg/l	0.002	2.0 mg/l	0.073 mg/l	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits. Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.	No	
Nitrate	5/27/10	mg/l	0.01	10.0	1.9 mg/l	Runoff from fertilizer, leaching from septic tanks, sewage erosion of natural deposits. Infants below the age of 6 months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue-baby syndrome.	No	
Nitrite	5/27/10			1.0	< 0.01 mg/l			
Calcium	5/27/10	mg/l	0.010	none	56.6 mg/l	Discharge from run-off & septic systems. High calcium intake could result in skeletal problems and kidney or gallstones.		

Table 1

	UNIT	MDL	MCL		
Beryllium	5/27/10 mg/l	0.001	0.004 mg/l	<0.001 mg/l	Discharge from metal refineries and coil-burning factories; discharge from electrical, aerospace, and defense industries. Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
Cadmium	5/27/10 mg/l	0.001	0.005 mg/l	<0.001 mg/l	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries, runoff from waste batteries and paints. Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
Chromium	5/27/10 mg/l	0.001	0.1 mg/l	<0.001 mg/l	Discharge from steel and pulp mills; erosion of natural deposits. Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
Cyanide	5/28/10 mg/l	0.01	0.2 mg/l	<0.01 mg/l	Discharge from steel/metal factories; discharge from plastic and fertilizer factories. Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
Fluoride	5/27/10 mg/l	0.10	2.2 mg/l	<0.10 mg/l	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories. Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Children may get mottled teeth.
Sodium	6/2/10 mg/l	1.0	20.0 mg/l	19.3 mg/l	The 20 mg/l is a notification level rather than an MCL. Naturally occurring; road salt, water softeners, animal waste. Water containing more than 20 mg/l of sodium should not be used for drinking by people on severely restricted sodium diets. Water containing more than 270 mg/l of sodium should not be used for drinking by people on moderately restricted sodium diets.

Note #1 (Table 1)
 Odor, pH, solids, color, turbidity, alkalinity and hardness were all tested and were within acceptable parameters.

No

No

No

No

No

No

Table 1

Contaminant	Date	Unit	MDL	MCLG or Standard	Detected Level	Range	Information	Violation
Mercury	5/28/10	mg/l	0.0002	.002 mg/l	< 0.0002 mg/l		Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; runoff from crop land. Some people who drink water containing mercury well in excess of the MCL over many years could experience kidney damage.	No
Nickel	5/27/10	mg/l	0.002	0.1 mg/l	< 0.002 mg/l		Discharge from petroleum and metal refineries, erosion of natural deposits, discharge from mines. Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.	No
Selenium	5/3/10	mg/l	0.002	0.05 mg/l	< 0.002 mg/l			No
Silver	5/27/10	mg/l	0.002	0.1 mg/l	< 0.002		Naturally occurring. Discharge from photographic and radiographic processing, manufacturing of electronic products, jewelry making, plating and soldering. Some people who drink water containing silver in excess of the MCL over many years could experience argyria or argyrosis, a permanent blue-gray discoloration of the skin, eyes, and mucous membranes.	No
Sulfate	5/27/10	mg/l	3.0	250.0 mg/l	25.0 mg/l		Naturally occurring. High concentrations of sulfate in drinking water have three effects: (1) water containing appreciable amounts of sulfate tends to form hard scales in boilers and heat exchangers; (2) sulfates cause taste effects, and (3) sulfates can cause laxative effects with excessive intake. The laxative effect of sulfates is usually noted in transient users of a water supply because people who are accustomed to high sulfate levels in drinking water have no adverse response. Diarrhea can be induced at sulfate levels greater than 500 mg/l but typically near 750 mg/l.	No
Zinc	5/27/10	mg/l	0.002	5.0 mg/l	0.014 mg/l			

Table 1

Contaminant	Date	Unit	MDF	MCLG or Standard	Detected Level	Range	Information	Violation
Chloride	5/27/11	mg/l	3.0	250.0 mg/l	64.0 mg/l		Naturally occurring or indicative of road salt contamination. No health effects. The MCL for chloride is the level above which the taste of water may become objectionable. In addition, to the adverse taste effects, high chloride concentration levels in the water contribute to the deterioration of domestic plumbing and water heaters. Elevated chloride concentrations may also be associated with the presence of sodium in drinking water.	No
Thallium	5/27/10	mg/l	0.001	0.002 mg/l	< 0.001 mg/l		Leaching from ore processing sites; discharge from electronics, glass and drug factories. Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines or liver.	No
Lead	5/27/10	mg/l	0.001	0.015 mg/l	0.001 mg/l		Corrosions of household plumbing systems, erosion of natural deposits. Infants and children who drink water containing lead in excess of the action level could experience delays in the physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.	No
See Note 2								
Copper	5/27/10	mg/l	0.001	1.0 mg/l	0.036 mg/l		Corrosion of household plumbing systems, erosion of natural deposits, leaching from wood preservatives. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.	No

Table 2 - Table 1 -Results for lead & copper are reported at the 90th percentile.

Table 1

Contaminant	Date	Unit	MDL	MCLG or Standard	Detected Level	Range	Information	Violation
Iron	5/27/1	mg/l	0.002	0.3 mg/l *	0.009 mg/l		Naturally occurring. Iron has no health effects. At 1,000 ug/l a substantial number of people will note the bitter astringent taste of iron. Also, at this concentration, it imparts a brownish color to laundered clothing and stains plumbing fixtures with a characteristic rust color. Staining can result at levels of 50 ug/l, lower than those detectable to taste buds. Therefore, the MCL of 300 ug/l represents a reasonable compromise as adverse aesthetic effects are minimized at this level. Many multivitamins may contain 3000 or 4000 ug/l of iron per capsule.	No
Manganese	5/27/1	mg/l	0.002	0.3 mg/l *	<0.002 mg/l		Naturally occurring, indicative of landfill contamination. The Food and Nutrition Board of the National Research Council determined an estimated safe and adequate daily dietary intake of manganese to be 2000-5000 ug/l for adults. However, many people's diets lead them to consume even higher amounts of manganese, especially those who consume high amounts of vegetables or are vegetarian. The infant population is of greatest concern. It would be better if the drinking water were not used to make infant formula since it already contains iron and manganese. Excess manganese produces a brownish color in laundered goods and impairs the taste of tea, coffee, and other beverages. Concentrations may cause a dark brown or black stain on porcelain plumbing fixtures. As with iron, manganese may form a coating on distribution pipes. These may slough off, causing brown blotches on laundered clothing or black particles in the water.	No

*Combined MCL limits for iron plus manganese equals 0.5 mg/l. Higher levels may be approved by the State.

Table 1 cld - Detected Contaminants 2008

Contaminant	Date	Unit	MCL, TT or AL	MCLG or Standard	Detected Level	+/- Sigm an	Information	Viol-ation
Radiological Contaminants in Groundwater								
Gross Beta	Notes 1,2,3	pCi/L		50 pCi/L	4.7 pCi/L	1.5	Gross Beta: Carry over from 2004. The source is decay of natural deposits and man-made emissions. Certain materials are radioactive known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.	No
Gross Alpha	Note 2	pCi/L		15 pCi/L	3.69 pCi/L	1.32	The source is erosion of natural deposits. The same health effects and dangers applicable to Beta radiation also applies to Alpha radiation.	No
Uranium	Note 2	pCi/L		20 pCi/L	3.54	0.87		No
Radium 226/228	Note 2	pCi/L		20 pCi/L	0.43 pCi/L	0.83		No

(Note 1): Samples were taken on 3/15,5/13,8/24 and 11/8, 2004. Results are reported as averages.
 (Note 2): Millirems per year (MREM/yr)-measure of radiation absorbed by the body. Samples were taken 3/06,5/01,7/08 and 11/06, 2008.
 (Note 3): If beta particles are detected at or below 50 pCi/L, the detected level is reported in pCi/L in order to provide consumers with a standard. The State considers 50/pCi/L to be the level of concern for beta particles.

Table 2
POC's Detected in 2010

Purgeable Organic Compounds	Date	Unit	MDL	MCL/G or Standard	Detected Level	Range	Information	Violation
Chloroform	5/27	ug/l		50 ug/l	0.67 ug/l		The source is a by-product of drinking water chlorination needed to kill harmful organisms. TTHMs are formed when source water contains large amounts of organic matter. Some people who drink water containing TTHMs in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.	No
Bromoform	5/27	ug/l		50 ug/l	0.77 ug/l		Same as above	No
Bromo Dichloromethane	5/27	ug/l		50 ug/l	1.6 ug/l		Same as above.	No
Dibromochloro-methane	5/27	ug/l		50 ug/l	2.0 ug/l		Same as above.	No
Total Trihalo-methane	5/27	ug/l		50 ug/l	5.04 ug/l		See (Note 1)	No

NOTES

(Note) The MCL for Total Trihalomethanes (TTHM) is 100.0 ug/l.

QA/QC Surrogates: ** Small percentages of these POC's were also detected on 5/27/10. No MCL exists for these POC compounds.

** 1,2 - Dichlorobenzene, Bromofluorobenzene, Dibromofluoromethane, Toluene-d8

Violation

Table 3

Bromochloroacetic Acid	MDL	Detected	
2/23/09 ug/l	1.0 ug/l	1.7 ug/l	
Dibromo Acetic Acid	1.0 ug/l	1.7 ug/l	
TOTAL HAA5's	ug/l	3.4 ug/l	<p>HAA5's in our drinking water are a byproduct of the chlorination which is necessary to prevent coliform contamination.</p> <p>The MCL for HAA5 is the sum of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, bromoacetic acid, and dibromoacetic acid. The HAA5 MCL is 0.060 mg/L. Two of the HAA5 have individual MCLs but there is no collective MCL for this group (40 CFR 141.53). The individual MCLs are zero for dichloroacetic acid and 0.3 mg/L for trichloroacetic acid.</p>