

### **PROJECT WELL REPORT ON THE 24 NEW DUGWELLS CONSTRUCTED IN 2007: GAIGHATA**

**Project Well**, PW, (California, USA, 2001) with the help of local NGO, **Aqua Welfare Society** (near Kolkata, West Bengal) has developed a self-supporting community-based mitigation program to provide arsenic-safe water to the villagers of the districts of North 24 Parganas of West Bengal, India. PW has provided 48 dugwells in eight villages in the the Deganga and Habra 1 Block where the population drinking arsenic contaminated water  $>50\mu\text{g/L}$  are 87,334 and 66,685 respectively. In 2007, 24 more dugwells have been constructed mostly in the Block called Gaighata of N 24 Parganas where the number of people drinking water containing arsenic  $>50\mu\text{g/L}$  is 106,552.

To provide arsenic safe drinking water to the rural areas inexpensive, easily adaptable method is used by excavating a special type of concrete shallow dugwells that differ in design from the traditional dugwells. The program to implement dugwells has been formulated scientifically keeping two major contaminants in view: arsenic and pathogenic bacteria. Such dugwells are constructed at carefully selected sites. The diameter of a dugwell is 3.3 feet (one meter) and the depth is kept less than 30 feet.

Considering real value from data tracking, on an average, from each dugwell 30 people can be provided with arsenic-safe-chlorinated-water throughout their entire life (at some places the number of consumers exceeds 50 persons) **at the expense of less than US\$30 (INR1200) per person**. And through village meetings and health meetings they also acquire knowledge on health effects of drinking arsenic contaminated water and develop proper personal hygiene & sanitation practices producing a healthy environment.

To make this scheme sustainable the user community of each well is trained in well maintenance, including disinfecting and periodic sampling of water for monitoring of arsenic and bacterial concentrations. The method involves only indigenous raw material and labor. There is no requirement of importing any equipment. To remove the slight chlorine odor and organic odor cheap earthen filters that are manufactured locally are distributed among the users enhancing the pottery trade in the villages.

In 2007, the Blue Planet Run/Peer Water Exchange has funded 20 dugwells and four more were funded by Mosaïque and Eco-band Valoris of Quebec, Canada (3) and Kallol Club of New Jersey (1). The pictures of all the dugwells constructed in the month of May and June of 2007 are displayed below.



Dugwell ID	PW68/JLS1
Land donated by	Manik Mondol
Village	Narikala
Panchayat	Jaleswar / Gaighata
District	N 24 Parganas
Location :Latitude	22.94178 E
Location :Longitude	88.72678 N
Constructed	June 2007
Arsenic level	4 PPB
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	7
Beneficiary members	22
Remarks	As of November 2007
Sponsored by	Blue Planet Run (1)



Dugwell ID	PW66/RMN2
Land donated by	Porimol Mondol/Pipley milk Co-op
Village	Pipley
Panchayat	Ramnagar/ Gaighata
District	N 24 Parganas
Location :Latitude	22.94418 N
Location :Longitude	88.88788 E
Constructed	June 2007
Arsenic level	6 PPB
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Clear water, no odor, normal
Beneficiary families	6
Beneficiary members	42
Remarks	As of November 2007
Sponsored by	Blue Planet Run (2)



Dugwell ID	PW52/RMN3
Land donated by	Madan Mohan Mondol
Village	Pipley
Panchayat	Ramnagar/ Gaighata
District	N 24 Parganas
Location :Latitude	22.9463 N
Location :Longitude	88.88097 E
Constructed	June 2007
Arsenic level	14 PPB
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Water was still not clear
Beneficiary families	Not being used yet.
Beneficiary members	
Remarks	As of November 2007
Sponsored by	Blue Planet Run (3)



Dugwell ID	PW51/SML2
Land donated by	Bishnupada Das
Village	Das Para
Panchayat/Block	Simulpur/ Gaighata
District	N 24 Parganas
Location :Latitude	22.9328 N
Location :Longitude	88.83318 E
Constructed	June 2007
Arsenic level	Pending
Date of Report	
Bacteria:TC/FC	1640 / 200
Date of Report	11/17/07
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	10
Beneficiary members	36
Remarks	Re-test for Bacteria in 2 mnths
Sponsored by	Blue Planet Run (4)



PW54/SU2



PW57/SU5



PW60/SU8

Dugwell ID	PW54/SU2
Land donated by	Satana Das
Village	Purba Bishnupur
Panchayat	Sutia/ Gaighata
District	N 24 Parganas
Location :Latitude	22.9036 N
Location :Longitude	88.78818 E
Constructed	June 2007
Arsenic level	4 PPB
Date of Report	
Bacteria:TC/FC	375 / 0
Date of Report	11/17/07
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	4
Beneficiary members	17
Remarks	As of novmber 2007
Sponsored by	Blue Planet Run (5)

Dugwell ID	PW57/SU5
Land donated by	Samir Kumar Mondol
Village	Baldarghat
Panchayat	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.90087 N
Location :Longitude	88.80294 E
Constructed	June 2007
Arsenic level	17
Date of Report	
Bacteria:TC/FC	1620 / 50
Date of Report	
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	Not being used yet.
Beneficiary members	
Remarks	Re-test for bacteria after 2 mnths if req.
Sponsored by	Blue Planet Run (6)

Dugwell ID	PW60/SU8
Land donated by	Topon Das
Village	Gajna
Panchayat / Block	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.90549 E
Location :Longitude	88.79761 N
Constructed	June 2007
Arsenic level	Pending
Date of Report	
Bacteria:TC/FC	230 / 22
Date of Report	11/17/07
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	1
Beneficiary members	4
Remarks	Re-test for bacteria after 2 mnths if req.
Sponsored by	Blue Planet Run (7)



Dugwell ID	PW61/SU9
Land donated by	Dilip Das
Village	Gajna
Panchayat / Block	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.90077 E
Location :Longitude	88.80336 N
Constructed	June 2007
Arsenic level	2 PPB
Date of Report	
Bacteria:TC/FC	510 / 0
Date of Report	11/17/07
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	3
Beneficiary members	12
Remarks	As of Novmber 2007
Sponsored by	Blue Planet Run (8)



Dugwell ID	PW62/SU10
Land donated by	Manoj Sarkar
Village	Teghoria
Panchayat/Block	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.90077 E
Location :Longitude	88.80336 N
Constructed	June 2007
Arsenic level	10 PPB
Date of Report	
Bacteria:TC/FC	415 / 0
Date of Report	11/17/07
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	Not being used yet.
Beneficiary members	
Remarks	Need Health Meetings
Sponsored by	Blue Planet Run (9)



Dugwell ID	PW63/SU11
Land donated by	Partho Majumdar
Village	Faredkati
Panchayat/Block	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.91144 E
Location :Longitude	88.79035 N
Constructed	June 2007
Arsenic level	16 PPB
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Slightly turbid
Beneficiary families	Not being used yet.
Beneficiary members	
Remarks	Introduce mawtka filter and heath meetings
Sponsored by	Blue Planet Run (10)

PW64/SU12



Dugwell ID	PW64/SU12
Land donated by	Gajna Milk Cooperative
Village	Gajna
Panchayat/Block	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.90644 E
Location :Longitude	88.80965 N
Constructed	June 2007
Arsenic level	20 PPB
Date of Report	
Bacteria:TC/FC	810 / 186
Date of Report	
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	Not being used yet
Beneficiary members	
Remarks	Re-test for bacteria after 2 mnths if req.
Sponsored by	Blue Planet Run (11)

PW67/DRM1



Dugwell ID	PW67/DRM1
Land donated by	Joydeb Mukherjee
Village	Bamonpara
Panchayat/Block	Dharampur / Gaighata
District	N 24 Parganas
Location :Latitude	22.90283 E
Location :Longitude	88.69646 N
Constructed	June 2007
Arsenic level	Pending
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	Not being used yet
Beneficiary members	
Remarks	Need Health Meetings
Sponsored by	Blue Planet Run (12)

PW69/JLS2



Dugwell ID	PW69/JLS2
Land donated by	Sujit Das
Village	Narikala
Panchayat/Block	Jaleswar / Gaighata
District	N 24 Parganas
Location :Latitude	22.93710 E
Location :Longitude	88.72120 N
Constructed	June 2007
Arsenic level	14 PPB
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Reddish color due to iron and taste is normal
Beneficiary families	Not being used yet
Beneficiary members	
Remarks	Under R&D observation, introduce mawka filter
Sponsored by	Mosaique & Eco-Band Valoris, Sagney, Canada (1)



Dugwell ID	PW70/JLS3
Land donated by	Adher Dey
Village	Narikala
Panchayat/Block	Jaleswar / Gaighata
District	N 24 Parganas
Location :Latitude	22.93958 E
Location :Longitude	88.72306 N
Constructed	June 2007
Arsenic level	Pending
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	2
Beneficiary members	7
Remarks	As of Novmber 2007
Sponsored by	Mosaique & Eco-Band Valoris, Sagney, Canada (2)



Dugwell ID	PW71/JLS4
Land donated by	Sanjib Dutta
Village	Narikala
Panchayat/Block	Jaleswar / Gaighata
District	N 24 Parganas
Location :Latitude	22.93814 E
Location :Longitude	88.72214 N
Constructed	June 2007
Arsenic level	Pending
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Reddish color due to iron and taste is normal
Beneficiary families	Not being used yet
Beneficiary members	
Remarks	Under R&D observation, introduce mawtka filter.
Sponsored by	Mosaique & Eco-Band Valoris, Sagney, Canada (3)



Dugwell ID	PW72/PPT1
Land donated by	Swapon Ghosh
Village	Ghoshpara
Panchayat/Block	Pachpota / Gaighata
District	N 24 Parganas
Location :Latitude	22.91445 E
Location :Longitude	88.84618 N
Constructed	June 2007
Arsenic level	24 PPB
Date of Report	
Bacteria:TC/FC	260 / 22
Date of Report	17 November 2007
Physical qty of water	Clear, no odor, normal taste
Beneficiary families	13
Beneficiary members	51
Remarks	Re-test for bacteria after 2 mnths if req.
Sponsored by	Kallol Club of New Jersey



Dugwell ID	PW65/RMN1
Land donated by	Kartik Dey
Village	Pipley Dakshin Para
Panchayat/Block	Ramnagar/ Gaighata
District	N 24 Parganas
Location :Latitude	22.93873 N
Location :Longitude	88.88818 E
Constructed	June 2007
Arsenic level	Pending
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	High turbidity: R&D observation
Beneficiary families	Not being used yet
Beneficiary members	
Remarks	Under R&D observation and mawtka filter and health mtg
Sponsored by	Blue Planet Run (13)



Dugwell ID	PW49/KDK9
Land donated by	Ajit Baroi
Village	North Kamdebkati
Panchayat/Block	Deganga / N 24 Parganas
District	N 24 Parganas
Location :Latitude	22.81758 E
Location :Longitude	88.73366N
Constructed	June 2007
Arsenic level	Pending
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Slightly turbid
Beneficiary families	1
Beneficiary members	4
Remarks	Need health mtg and mawtka filter
Sponsored by	Blue Planet Run (14)

PW50/SML1



Dugwell ID	PW50/SML1
Land donated by	Raghunath Paramanick
Village	Korapara
Panchayat/Block	Simulpur / Gaighata
District	N 24 Parganas
Location :Latitude	22.92951 E
Location :Longitude	88.82650 N
Constructed	June 2007
Arsenic level	8 PPB
Date of Report	
Bacteria:TC/FC	250 / 0
Date of Report	
Physical qty of water	Clear water, no odor, salty taste
Beneficiary families	6
Beneficiary members	32
Remarks	As of Novmber 2007
Sponsored by	Blue Planet Run (15)



Dugwell ID	PW53/SU1
Land donated by	Anuradha Ball
Village	Nagbari
Panchayat/Block	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.91803 E
Location :Longitude	88.80999 N
Constructed	June 2007
Arsenic level	24 PPB
Date of Report	
Bacteria:TC/FC	1855 / 34
Date of Report	
Physical qty of water	Clear water, slight chlorine odor, taste normal
Beneficiary families	2
Beneficiary members	17
Remarks	Re-test for bacteria after 2 mnths if req.
Sponsored by	Blue Planet Run (16)



Dugwell ID	PW55/SU3
Land donated by	Haran Das
Village	Purba Bishnupur
Panchayat/Block	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.90877 E
Location :Longitude	88.79141 N
Constructed	June 2007
Arsenic level	3 PPB
Date of Report	
Bacteria:TC/FC	990 / 13
Date of Report	11/17/07
Physical qty of water	Clear water, slight chlorine odor, taste normal
Beneficiary families	13
Beneficiary members	44
Remarks	Re-test for bacteria after 2 mnths if req.
Sponsored by	Blue Planet Run (17)



Dugwell ID	PW56/SU4
Land donated by	Anondo Mondol
Village	Thkurtala
Panchayat/Block	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.90985 E
Location :Longitude	88.78936 N
Constructed	June 2007
Arsenic level	6 PPB
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Under observation
Beneficiary families	Not being used yet
Beneficiary members	
Remarks	Pump head needs to be replaced
Sponsored by	Blue Planet Run (18)



Dugwell ID	PW58/SU6
Land donated by	Shyamal Das
Village	Foridkati
Panchayat/Block	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.90872 E
Location :Longitude	88.78815 N
Constructed	June 2007
Arsenic level	4 PPB
Date of Report	
Bacteria:TC/FC	0 / 0
Date of Report	11/17/07
Physical qty of water	Clear water, no odor, normal taste
Beneficiary families	1
Beneficiary members	3
Remarks	Need health meeting.
Sponsored by	Blue Planet Run (19)



Dugwell ID	PW59/SU7
Land donated by	Sankar Mondol
Village	Charaktala
Panchayat/Block	Sutia / Gaighata
District	N 24 Parganas
Location :Latitude	22.90507 E
Location :Longitude	88.78609 N
Constructed	June 2007
Arsenic level	Pending
Date of Report	
Bacteria:TC/FC	Pending sample collection on Dec 13
Date of Report	
Physical qty of water	Flooded severely.
Beneficiary families	Not being used yet
Beneficiary members	
Remarks	Needs to replace valve and washer
Sponsored by	Blue Planet Run (20)



**Water sample of dugwell # PW66/RNM2**

**Date of photo taken: 7 November 2007**



In 2007 Gaighata was affected by heavy rainfall that delayed the operation of most of the dugwells. It also delayed in water analysis. Until the bacterial tests are completed villagers are advised not to drink water without boiling. They are advised to use for cooking. But some villagers do not wish to wait for the bacteria tests if the taste of water is good. On the other hand inspite of water being potable with FC count 'zero' as in PW58 and PW62 the villagers are not using the water to drink nor to cook. Educating the people through health meetings ('shastho shawbha') is the next step in this years dugwell program.

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For more information and published articles visit <<http://www.projectwellusa.org>>.