

**From:** "jeffrey E." <jeevacation@gmail.com>

**To:** Richard Kahn <[REDACTED]>

**Subject:** Re: GSJ RO pipe

**Date:** Fri, 24 Aug 2018 00:19:35 +0000

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Behavioral systems using lights, bubbles, or sound to enhance fish avoidance or attract them to a fish diversion system have generally been ineffective and are used infrequently.

## Subsurface Intakes

Subsurface intakes may consist of horizontal or vertical boreholes, each with a well, infiltration galleries, or seabed filtration systems. In each of these designs, the seawater is separated from the point of intake by a geologic unit. A subsurface intake can be used where geological conditions beneath a surface water are relatively impermeable or

sufficient thickness and depth to support water extraction. In addition to providing some natural filtration, this arrangement has the advantage of separating most of the marine organisms from the water intake. In some cases, subsurface intakes may be evaluated and regulated as groundwater sources. The use of subsurface intakes offers a distinct environmental advantage because the ecological impact associated with impingement and entrainment of marine life is virtually eliminated. However, subsurface designs should consider their potential negative impact on nearby fresh groundwater aquifers.

Vertical Beach Wells  
– Vertical beach wells are shallow in

take wells that make use of beach sand or other geologic structure as a filter medium. Beach wells can be an economical alternative to open sea intakes for desalination plants with capacities less than 20,000 cubic meters per day (million gallons per day, mgd). They have the advantage of delivering “pre-filtered” water that may greatly reduce additional pretreatment requirements.

A vertical beach well consists a non-metallic casing, well screen, and vertical turbine pump. Site suitability is determined by drilling test wells and conducting a detailed hydrogeologic investigation to determine the formation transmission

issivity and substrate characteristics. It is preferred to locate beach wells as close to the coastline as possible, and the maximum yield from individual wells range from 0.1 to 4000 m<sup>3</sup>/d (0.1 to 1.0 m<sup>3</sup>/gd). (Fi

On Thu, Aug 23, 2018 at 8:02 PM, Richard Kahn <[REDACTED]> wrote:

i am not sure what you mean by trench inputs..  
please advise  
thank you

Richard Kahn  
HBRK Associates Inc.

[REDACTED]

On Aug 23, 2018, at 7:43 PM, jeffrey E. <[jeevacation@gmail.com](mailto:jeevacation@gmail.com)> wrote:

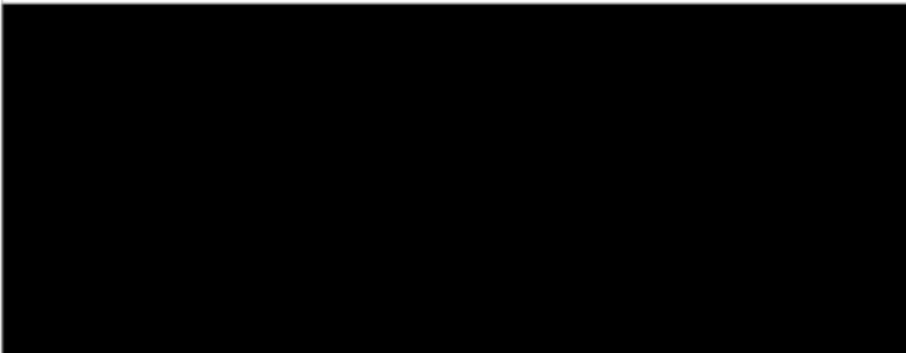
Did you look at the trench inputs

On Thu, Aug 23, 2018 at 7:39 PM Richard Kahn <[REDACTED]> wrote:

i spoke with Dave from Reefco today and he explained to me that Danny ran the RO pipe 30 feet out into the ocean and then ran the line up to the beach  
dave made connection from the beach to the pump at the old tennis court  
danny then went from the pump up to the main house

post hurricanes brice ran new pump and new casings out to the ocean

Richard Kahn  
HBRK Associates Inc.



On Aug 22, 2018, at 8:34 PM, jeffrey E. <[jeevacation@gmail.com](mailto:jeevacation@gmail.com)> wrote:

no that is something else. it is r o collection pipe buried on the beach , or at least that s what i was told

On Wed, Aug 22, 2018 at 8:31 PM, Richard Kahn <[REDACTED]> wrote:  
Anna found well proposal from February 2016.

Richard Kahn  
HBRK Associates Inc.



Begin forwarded message:

**From:** Ann Rodriquez <[REDACTED]>  
**Date:** August 22, 2018 at 6:09:54 PM EDT  
**To:** Rich Kahn <[REDACTED]>, Daphne Wallace <[REDACTED]>  
**Subject:** GSJ: Well Drilling

Ann R.

Begin forwarded message:

**From:** Danny Vicars <[REDACTED]>  
**Date:** February 6, 2016 at 5:51:15 PM EST  
**To:** Ann Rodriquez <[REDACTED]>  
**Subject:** Fw: Well Drilling

**Reply-To:** Danny Vicars <[REDACTED]>

On Friday, February 5, 2016 3:56 PM, David Muhammad <[REDACTED]> wrote:

Dear Mr. Vicars

Attached find the following documents with respect to drilling a well at your property:

1. Letter of Introduction
2. Contract
3. Estimate
4. Application for Ground Water Appropriation
5. Application for Permit to Drill Well

Please review the material and return to me the original signed documents (2 thru 5 above) along with the supplemental documents outlined in the cover letter.

Thank you and should you have any questions feel free to contact me at [REDACTED]

Sincerely,

*David Muhammad*  
*St. Croix Virgin Island*

[REDACTED]

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