

Paul R. lePage, Governor Tel. (207) 287-5672 Mary C. Mayhew, Commissioner

Subsurface Wastewater Unit

Department of Health and Human Services
Maine Center for Disease Control and Prevention
286 Water Street
11 State House Station
Augusta, Maine 04333-0011
Tel. (207) 287-8016
Fax (207) 287-9058; TTY (800) 606-0215
t
Fax (207) 287-4172

October 18, 2011

NJUN Systems, LLC Attn.: Glen Huston 2985 W. Roxboro Road Atlanta, GA 30324

Subject: Product Registration, NJUN System

Dear Mr. Huston:

The Division of Environmental Health has completed a review of a registration application for your company's product. This information was submitted pursuant to Section 6.HH of the Subsurface Wastewater Disposal Rules for registration for use in Maine.

The NJUN System consists of a multiple chamber sequencing batch reactor. According to the information you provided, the NJUN System treats domestic wastewater to below detectable limits for total suspended solids and five day biochemical oxygen demand. Based upon our conversation, it is my understanding that NJUN Systems, LLC's emphasis for the system is for large or multiple user systems. On the basis of the information submitted, the Division has determined that the NJUN System is acceptable for use in the State of Maine, provided that it is installed, operated, and maintained in conformance with the manufacturer's directions.

In the event that the product fails to perform as claimed by the applicant, use of the product in Maine, including all installations approved pursuant to Chapter 18 of the Rules, shall cease. Use of the product shall not resume until the applicant and the Division have reached a mutually acceptable agreement for resolving the failure to perform as claimed.

Because installation and owner maintenance has a significant effect on the working order of onsite sewage disposal systems, including their components, the Division makes no representation or guarantee as to the efficiency and/or operation of NJUN System. Further, registration of this product for use in the State of Maine does not represent Division preference or recommendation for this product over similar or competing products.

If you have any questions please feel free to contact me at (207) 287-5695.

Sincerely,

James A. Jacobsen, Project Manager, Webmaster

Division of Environmental Health

Drinking Water Program Subsurface Wastewater Unit

286 Water Street, Augusta, ME 04333

James A. Jacobsen

e-mail: james.jacobsen@maine.gov

/jaj

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RECEIVED
NOV 0 8 2011

November 2, 2011

Mr. James A. Jacobsen, Project Manager Division of Environmental Health 286 Water Street, 3<sup>rd</sup> Floor Augusta, Maine 04333-0011

Dear Mr. Jacobsen:

It was with great pleasure meeting you this past summer and I want to thank you for the time we spent together and your efforts to review and approve NJUN SYSTEMS. As we move forward I am confident you will discover our high tech waste water system can play an integral part in improving Maine's environmental issues. We are extremely pleased that we now have the opportunity to contribute to meaningful environmental improvements to the State of Maine. I am especially pleased since it is my home state and I would love to have another good reason to come back home.

I am eager to get systems installed which will allow us to demonstrate how we can relieve the problems associated with the existing overboard discharge systems and/or holding tanks. Just by the mere fact that the normal space currently needed above existing bed-rock levels can be reduced and that a huge percentage of the existing leach/drain field requirements can be greatly reduced, immediate benefits are to be realized from utilization of NJUN SYSTEMS. You reviewed the test made on these systems and saw how they demonstrated unparalleled test results. Another essential contribution offered by our systems beyond their exceptional waste water treatment is preventing the wasting of water which is fast becoming essential on both coastal and inland territories throughout the world.

It was brought to my attention that since salt levels have been increasing along the coastline private wells are having to be drilled at smaller depths, now causing fresh water concerns,. Since our system can reduce fresh water demands we should be able to alleviate most of those concerns.

We do not stop there. We can address the multitude of problems facing towns and cities on a bigger scale and welcome that opportunity.

Jim, thanks again for your efforts made on my behalf and your professionalism in getting NJUN SYSTEMS introduced to the State of Maine. Should you have any additional questions or need any of my personal efforts contributed towards a great cause please do not hesitate to contact me.

Sincerely yours,

Glen Huston, CPA

Representative for the Northeast U.S.

Njun Systems, LLC



### WHY NJUN SYSTEMS?

IN A NUTSHELL

### **ENVIRONMENTALLY FRIENDLY AND ENHANCING**

As compared to systems in existence today, NJUN SYSTEMS greatly improves the treatment of waste water which in turn addresses the overdue reversal of contaminated soils, water and surrounding environments. This could very well lead to improvements to the quality of water in individual wells, brooks, streams, ponds, lakes, rivers and the oceans. It is very likely that the contamination dangers now imposed by hurricanes, tornadoes, floods, and tsunamis would eventually become substantially reduced. With all of this said, one might expect fewer hazards to human health caused by contamination as an exceptional added benefit.

### WASTING OF WATER BECOMES LESS OF A PROBLEM

Since the water leaving the NJUN SYSTEMS is considered very clean in many aspects, it can be reintroduced to a residence for certain applications plus the watering of its gardens and grounds. This places less demand on outside water supplies which is quite beneficial when considering the scarcity of water in much of the world today. All of this could lead to less contamination of the soils and the cleansing of already contaminated soils.

### SUBSTANTIAL BENEFITS TO GOVERNMENTAL ESTABLISHMENTS

When the NJUN SYSTEMS arrangement is structured as a utility company servicing territories on a state, city, town, or county level then the municipalities involved get relieved of tremendous costs. A twofold benefit results. As the NJUN SYSTEM(S) improve(s) the environment, municipalities are freed of nearly all of their financial burdens associated with installing, operating, upgrading and maintaining their existing or proposed future waste water facilities. The demand of providing water to residential units could very well be reduced. In summary, existing systems would get replaced with more efficient systems to service the area and at practically no costs to the municipalities. For the financially troubled municipalities, there could not be a better time for this to happen.

### **ECONOMIC GROWTH**

Because of the manufacturing requirements of NJUN SYSTEMS and the related installation and maintenance crews needed to install and service the units there is the potential of job creation for a great number of people.

### **ADVANTAGES FOR THE END USERS**

Since NJUN SYSTEMS require substantially less demand for drain fields, property owners get to use more of their land for other purposes. As well, some properties that do not qualify for residential usage under current system requirements may possibly become usable when serviced by NJUN SYSTEMS. End users could be relieved of costly system replacements plus maintenance and tank cleaning in the case of septic tanks. They will have a system having little chance of contaminating the drinking water coming from their wells which is not always the case now. Water usage costs could possibly be reduced. Potential tax credits may exist that could be taken advantage of since the NJUN SYSTEMS are an environmentally friendly investment. Resale of homes may become more attractive should NJUNS SYSTEMS be in place.

Help the planet, help governmental units, help the economy, help property owners with their costs, and help with the world health crisis. Truly, a <u>win win situation</u> ready to happen.

For more detailed information visit the web at www.njunsystems.com

or contact Glen Huston, representative for the Northeast United States and possible offshore expansion, at (404)237-1233 office, (404)805-5694 cell or email grh18@yahoo.com.



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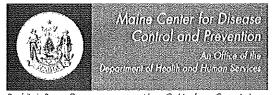
Drinking Water Program Subsurface Wastewater Unit

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### APPLICATION FOR REGISTRATION OF EXPERIMENTAL SYSTEM/INNOVATIVE TECHNOLOGY OR ONSITE SEWAGE DISPOSAL SYSTEM PRODUCT

Please complete the following Sections. Please print or type.

Applicant	CEIVED
Company Name: NJUN SYSTEMS, LLC SEP	2 2 2 2011
Contact Person: GLEN HUSTON	2 2 2011
Address: 3985 W. Kox Bo Ro Kd.	special contraction of the strong of the str
Town/City: ATCANTA State/Province: 6A Zip Code: 30324	
Country: USA	04
Telephone: 404-237-1233 e-mail: 9xh 18@ yah, 404-805-5694 CELL	00.COM
Product	
Product Name: NIVN SYSTEM	
Model:	
Product Classification (choose one)	
Primary or Secondary Treatment Unit	
[] Septic Tank [] Extended Aerobic Treatment Unit [] Recirculating Aerobic Unit	
[] Aerobic Fixed Film Unit M Other (specify) SEQUENCING BATCH	REACTOR (SB
Effluent Filter	
[] Septic Tank Outlet Filter [] Post-Tank Filter [] Other (specify)	
Disposal Device	
[] Gravel-less Disposal Pipe [] Gravel-less Disposal Bed [] Chamber, Plastic	
[] Chamber, Other [] Other (specify)	
Miscellaneous	

### Claim

Describe the product's features (attach additional sheets if necessary).  SEE COMPANY BROCHURE PROVIDED AND	
AdditioNAL INFORMATION AT WWW. NIUN SYSTEMS	_ _Co/
SEF COMPANY BROCHURE PROVIDED AND ASSITIONAL INFORMATION AT WWW. NJUN SYSTEMS ESPECIALLY THE VIDEO AT THE WEBSITE	_ _
	<b>-</b>
Describe the product's performance (attach additional sheets if necessary).  SEE COMPANY BROCHURE PROVIDED AND	
SEE COMPANY BROCHURE PROVIDED AND  AddITIONAL INFORMATION AT WWW. NJUN SYSTEMS. CO ESPECIALLY THE VIDEO AT THE WERSITE	- <u>7</u> _M -
	_
Has the product received National Sanitation Foundation or Canadian Standards Authority approval?  [] No VI Yes (If "yes", enclose a copy of the certification.)  RECEIVED PRIOR YEAR IPROVA	4
[] No VI Yes (If "yes", enclose a copy of the certification.) RECEIVED PRIOR YEAR APROVA  WET INCREDIBLE IMPROVEMENTS AND ENCHANCED PERFORMA  IMPORTANT NOTE! HAVE OCCUPED SI	WC.
Don't forget to enclose relevant product literature, engineering specifications, studies, and third party certifications with this application.	
, GLEN HUSTON, am the [] applicant Nagent for the applicant of the subject product.	
state that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department to deny registration for use of the product in Maine.	
[] Signature of Applicant  Date  Signature of Agent for Applicant	

### WHY NJUN SYSTEMS?

### IN A NUTSHELL

### **EVIRONMENTALLY FRIENDLY AND ENHANCING**

As compared to systems in existence today, NJUN SYSTEMS greatly improves the treatment of waste water which in turn addresses the overdue reversal of contaminated soils, water and surrounding environments. This could very well lead to improvements to the quality of water in individual wells, brooks, streams, ponds, lakes, rivers and the oceans. With that, the contamination dangers imposed by hurricanes, tornadoes, floods, and tsunamis would eventually become substantially reduced. With all of this said, fewer hazards to human health caused by contamination will most likely become another side benefit.

### WASTING OF WATER BECOMES LESS OF A PROBLEM

Since the water leaving the NJUN SYSTEMS is considered very clean it can be reused for certain applications within a home plus the watering of gardens and grounds. This places less demand on outside water supplies. This watering activity alone could very well lead to an additional cleaning process of soils.

### SUBSTANTIAL BENEFITS TO GOVERNMENTAL ESTABLISHMENTS

When the NJUN SYSTEMS arrangement is structured as a utility company servicing territories on a state, city, town, or county level then the municipalities involved get relieved of tremendous costs. At the same time NJUN SYSTEMS clean the environment this arrangement could also alleviate nearly all of their financial burdens associated with installing, operating, upgrading and maintaining their existing or proposed future waste water facilities. The demand of providing water to residential units could very well be reduced. In summary, existing systems would get replaced with more efficient systems to service the area with practically no costs to the municipalities.

### **ECONOMIC GROWTH**

Because of the manufacturing requirements of NJUN SYSTEMS and the related installation and maintenance crews needed to install and service the units there is the potential of job creation for a great number of people.

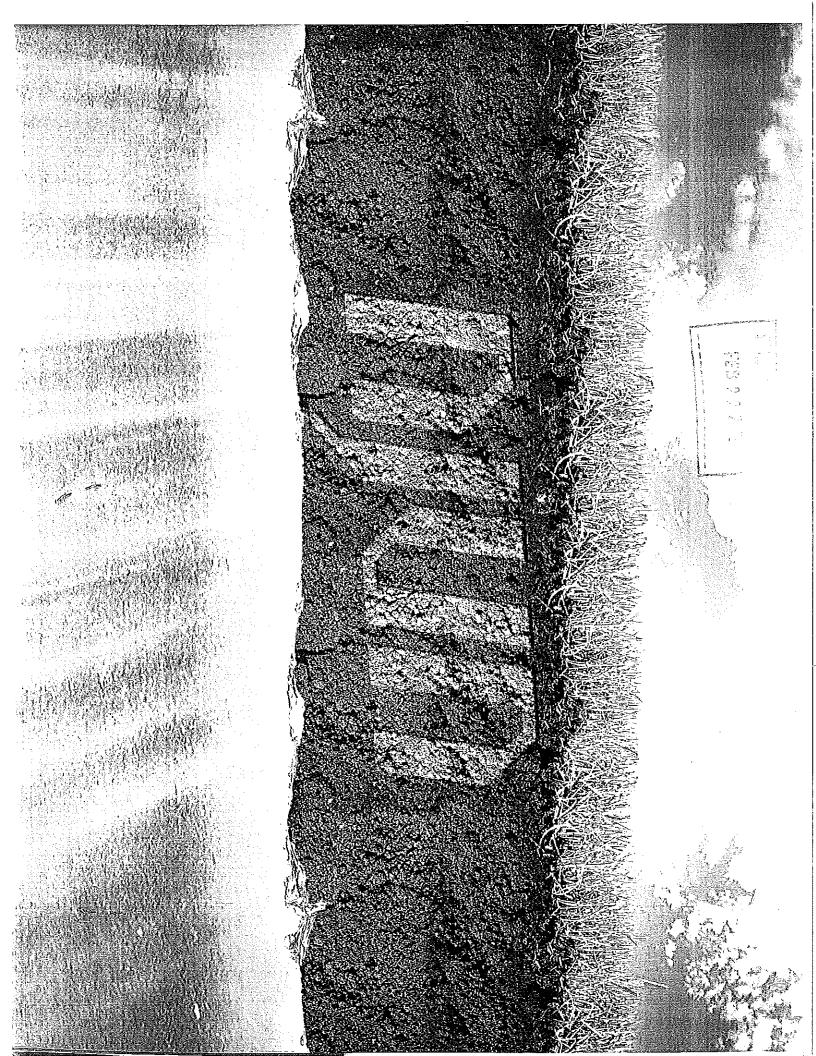
### **ADVANTAGES FOR THE END USERS**

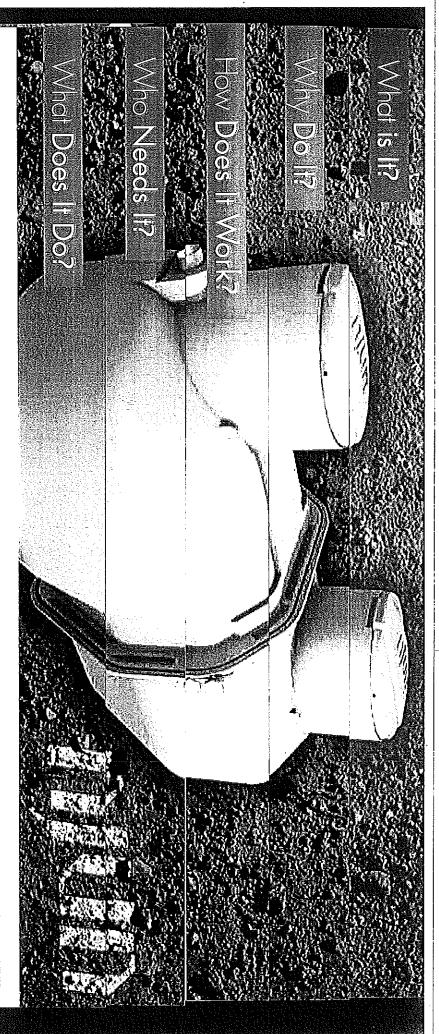
Since NJUN SYSTEMS require substantially less demand for drain fields, property owners get to use more of their land for other purposes. As well, some properties that do not qualify for residential usage under current system requirements may possibly become usable when serviced by NJUN SYSTEMS. End users could be relieved of costly system replacements plus maintenance and tank cleaning in the case of septic tanks. They will have a system having little chance of contaminating the drinking water in their wells which is not always the case now. Water usage costs could possibly be reduced. Potential tax credits may exist that could be taken advantage of since the NJUN SYSTEMS are an environmentally friendly investment. Resale of homes may become more attractive should NJUNS SYSTEMS be in place.

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## Nutrient Removal

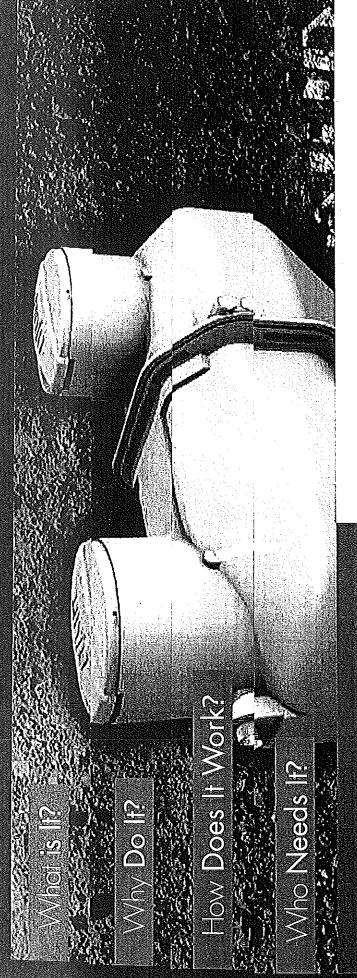
Final effluent water quality samples as reported by Analytical Environmental Services

### Water Reuse

- Replumb for toilet flushing and clothes washing (Up to 40% reduction of water consumption.)
- 2. Land/Garden Irrigation
- UV or chlorination could allow total reuse in the future.

Tested For:	Result:	Reported Limit:
Nitrogen, Ammonia	Below Reporting Limit	.20 milligrams per liter
Total Phosphorus	.161 mg/l	.050~1.0 milligrams per liter
Total Suspended Solids	Below Reporting Limit	5.0 milligrams per liter
Chlorine	Below Reporting Limit	.200 milligrams per liter
Biochemical Oxygen Demand	Below reporting limit	5.0 milligrams per liter
Chemical Oxygen Demand	Below Reporting Limit	10.0 milligrams per liter
Fecal Coliform before filtering through an optional UV lamp	200 Colonies per 100 ml	Typically in the tens of millions.
Fecal Coliform after filtering through an optional UV lamp	Below Reporting Limit	Typically in the tens of millions





Because each unit is a complete wastewater treatment plant, NJUN is ready for deployment not only in rural and suburban but also in urban areas – anywhere wastewater installations and upgrades are necessary.

# Municipality / County

- Overburdened and outdated centralized infrastructure Limited funding for infrastructure expansion Noncompliance of EPA regulations Water reuse

### Commercial

- No waiting for sewerReuse/reduced water consumption

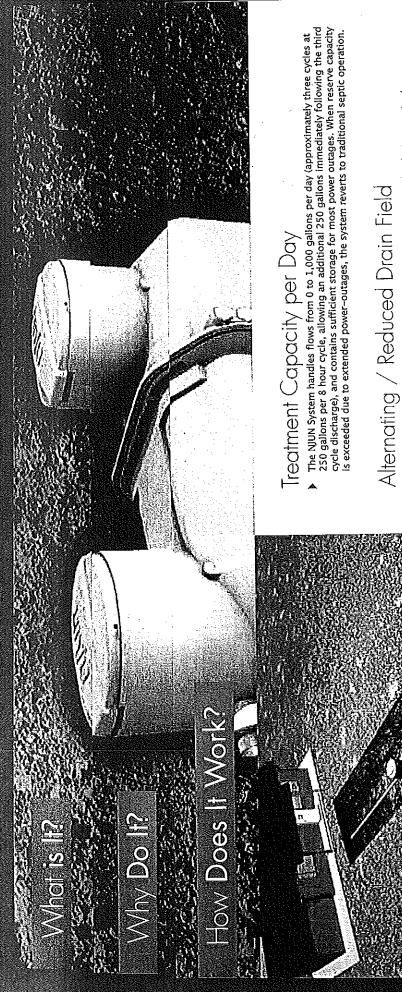
# Residential/Private Homeowner

- Failed System
  Water Reuse

### Developer

- Greater Density Poor Soil No waiting for sewer infrastructure



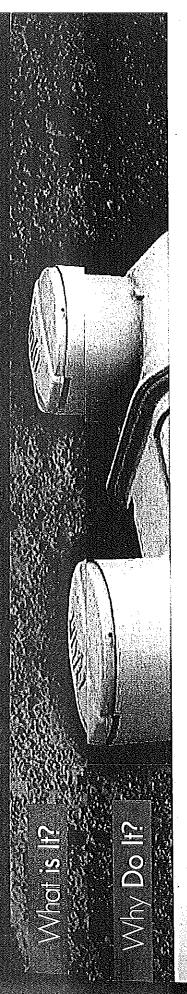


- . Utilizing alternating drain fields to eliminate oversaturation and reducing required drain field size
- Automatic, pre-programmed sequence of discharges to separate areas, accommodating soil conditions.
- . Reducing traditional drain fields by length and depth as a result of the quality of discharged effluent (nutrient removal, low TSS and BOD)

### Monitoring

- Day-to-day activities are electronically monitored, operated, and managed by a private entity
  with no homeowner involvement (i.e., utilities such as power, sewer, and gas).
- Manages drain field areas
- Transfers data for new profiles / logarithms
- Providing site- and macro-level annual performance reports to regulatory agencies
- Alerts for problems and/or preventative maintenance





### Septic Systems

- Where wastewater treatment plants are unavailable, traditional septic systems are used.
- Little more than holding tanks for waste solids, contaminated effluent from these systems discharge into drain fields, using the earth as a natural filter.
- Fiftuent can contaminate community aquifers, wells, streams, and lakes.

# Centralized Wastewater Shortfalls

- Centralized municipal wastewater systems are "collective" systems designed to treat the wastewater from an entire municipality, county, city, or other community. Typically as development expands, municipalities install treatment plants. These plants treat wastewater and send the resulting effluent downstream and out of the community. This method of treating and removing water without replacing it potentially depletes community aquifers, streams, and other municipal water sources.
- Municipal wastewater treatment systems, including wastewater transportation systems,
  demand huge capital and labor resources, and sometimes fail to properly treat waste.
   Building, maintaining, and regularly replacing these resources places huge demands on community coffers.
- When a municipal wastewater facility is over capacity, operators often have no alternative but to release raw sewage from treatment plants and into waterways and water sources. The problem is compounded by the fact that flows are not always steady, and that wastewater treatment facilities must often react to deviations from the norm, rather than anticipate and control them.

# Alternative Wastewater Unit Shortfalls

- Even though the flow of wastewater, the timing of the flow, and the composition of the flow all
  change daily, the current on-site alternative treatment systems use the same process every
  day to treat wastewater.
- A variable process is needed because the amount of wastewater generated, the times when
  wastewater is generated and the composition of wastewater generated at a particular,
  residence or business changes daily.
- ► The on-site alternative wastewater treatment systems that utilize the continuous-flow method to treat wastewater fail to maintain the correct biological balance needed to properly treat wastewater.
- Further, many of the on-site alternative wastewater treatment systems require the property
  owners to perform daily or periodic adjustments to the systems.

### Water Scarcity

- For ages, too many people have held the false assumption that fresh, drinkable water is infinitely available. An awareness of this fallacy is finally coming to light.
- Though water covers our world, more than 97 percent is salty. Two percent is fresh water locked in snow and ice, leaving less than one percent for us.
- Water is a finite resource without a substitute. Only a tiny fraction of all water on Earth is
  fresh and available. And of that, only a small percentage of fresh water is easily accessible
  by humans.

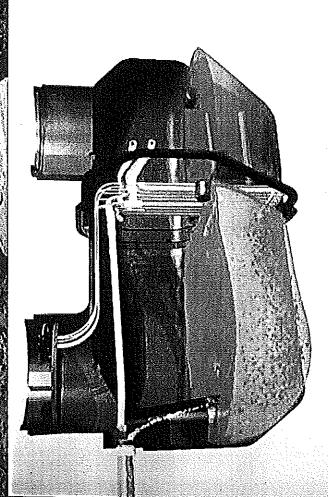
### Water Pollution

- While traditional methods of treating wastewater have been very effective, their impact on the environment has been a growing concern.
- Eutrophication is a natural, slow-aging process for a water body, but human activity greatly speeds up the process.
- Nitrate is a primary contaminant in drinking water and can cause a human heath condition called Methemoglobinemia (blue babies).
- Some waterborne pathogenic diseases that may coincide with fecal coliform contamination include ear infections, dysentery, typhoid fever, viral and bacterial gastroenteritis, and hepatitis A.
- Untreated organic matter that contains fecal coliform can be harmful to the environment.
   Aerobic decomposition of this material can reduce dissolved oxygen levels if discharged into rivers or waterways. This may reduce the oxygen level enough to kill fish and other aquatic life.

## The NJUN Solution

- ▶ The Distributed Sewer® approaches the wastewater problem in a different manner. NJUN has designed, patented, and built a variable, personalized wastewater treatment system that discharges clear effluent with no harmful effects to the environment.
- The effluent is so clean the NJUN System has the potential of being used for water recycling.
- Safely reintroduced into holding ponds and surface drains (point surface discharge).
- Stored and treated for reuse on-site.
- Distributed in a significantly reduced sized drain field.
- Directed to alternating (dally, weekly, etc.) drain fields on the same property.
- Nutrient (Phosphate, Nitrate, Fecal) Removal





## The NJUN System

▼ The NJUN System is a decentralized, variable flow, variable process, air driven wastewater treatment system that produces clear, odorless effluent with no discernible effect on the surrounding environment. The NJUN System eliminates the need for cumbersome water transportation infrastructure, adapts to dynamic demands in real time, and isolates untreated sewage to eliminate overflow and other possible methods of contamination. Using a robust system of patented technologies, the NJUN System monitors and learns daily, weekly, and monthly usage trends, and safely adjusts to unexpected situations.

The system is controlled by Internet-enabled technology that performs duties automatically. It can also be adjusted from a central location and automatically notifies officials of performance and maintenance issues.

The inherent corrosive aspects of wastewater cause significant and regular damage to traditional valves, pumps and hardware. However, the NJUN System utilizes a patented air transfer system eliminating all contact of wastewater with mechanical components susceptible to corrosion. Since chemical insertions and physical filters are avoided, there are fewer pieces to break and replace.

### What It is Not:

- ▶ Just another ATU or "Bubble Bucket"
- Septic System
- ▶ Media Filtration Unit
- Chlorination Unit
- Fixed Flow/Fixed Process Systems

