Specifications
Maintenance Water Purification
Bid #FAC92107-12

I. General Requirements

This section covers general requirements for provision of high purity water treating equipment and service at all University locations requiring such, and guarantee of specified quality and quantity. Additionally, the scope includes provision and maintenance of water softening equipment

A. The successful contractor will provide all parts, labor (labor supervision), other supplies and supervision of services required to maintain vendor-provided purified water systems located at Florida State University, hereafter referred to as Owner, with the express purpose of meeting or exceeding contract quality and quantity requirements. The successful bidder, hereafter referred to as Contractor, shall meet all of the requirements of the specifications set forth below.

B. The Contractor will be responsible for any damages caused to university property of facilities related directly to Contractor equipment or services. Repairs, when required, will be made by the contractor within 24 hours after the damage is incurred, subject to the approval of the Owner. At the Contractor's request, Owner will affect necessary repairs and bill the Contractor for all costs.

C. The Contractor must comply with all applicable codes and must obtain required permits at their own expense.

D. The Contractor must at all time keep the worksites free of debris, small parts, water spillage, or any other hazards.

E. All material and workmanship will be of the highest quality.

F. A monthly log sheet of repairs that were made on campus to be turned over to the University for Evaluation each month.

G. In event of a building failure due to a hurricane or any other catastrophic event that interrupts services as adequate amount of water is to be supplied to Life Sciences Building (bldg 9) and Bio-Unit I (bldg 39) by contractor until system is restored to 100% production, as downtime cannot realistically occur in either building. Response must be with the limits of this contract unless a declared state of emergency exists in Leon Count, Florida.

H. In the event of equipment failure in the buildings (a failure of water system equipment). The university requires a qualified service technician to be available within 100 miles of FSU main campus. This distance is measured as the crow flies. Also contractor must call back within 30 minutes to verify with university that they are en-route. When the water system in a building cannot be repaired within 8 hours the contractor shall make provisions at their expense to provide similar quality water until such time as the system can be restored to operation.

II. Contractor Qualification:

A. All equipment, other than service of deionizer and carbon tanks, shall be new or in like new condition.

B. Where required contractor will provide both equipment and services that have proper FDA licensing/certification/validation, because critical animal research sites, which require high purity water, are subject to FDA audit. Specifically, where required any reverse osmosis equipment and associated pre-treatment and post-treatment components provided herein must, in its entirety, be registered as a Class II medical device; the "501(k) certification documentation (granted by the Food and Drug Administration as a matter of public record) shall be submitted with the bid. Furthermore, any service exchange deionization equipment provided must be regenerated in compliance with the Good Manufacturing Practices (GMP) as set forth in Quality System Regulation (QSR) of medical devices (see General Regulation in the Code of Federal Regulation, Title 21, and Part 800 to 895). No batch resin regeneration is permitted under this contract. No resin exchange is permitted under this contract unless the owner agrees in writing to the exchange.

C. Contractor must have a minimum of ten (10) years experience in the installing and servicing medical and academic research systems (references shall be provided with the Bid). Contractor's employees shall have a minimum of five (5) years experience with high purity water systems.

D. Contractor's facilities will be subject to inspection by the owner at any time.

III. Contractor Responsibilities:

A. Work Performance: The current edition or revision of the established standards for the following organizations and individual standards named shall be adhered to by

contractor as if they were fully written in this specification and thereby constitutes a part of these specifications, except where otherwise specified:

1. Occupational Safety and Health Act
2. Municipal, Local, or other coded having jurisdiction
3. FSU Rules & Regulations
4. College of American Pathologists (CAP)
5. National Electric Codes
6. ASTM

All of the rules, regulations, standards, codes, and procedures, cited above are binding on the contractor as minimum requirements. That will not relieve the contractor from furnishing and installing high-grade materials, equipment, and workmanship, which may be specified herein or indicated on any plans, layouts, or specifications that are part of this bid.

Contractor will properly maintain any and all devices and related equipment , i.e. automatic water softeners, storage tanks, RO units, automatic filters, regeneration of Deionizer Water tanks, and point of use filters, pump, controls, valves, ultra violet lights, and associated equipment.

All maintenance and services required to keep these systems in full and perfect operations 24 hours per day 7 days per week, shall be performed by and at the expense of the Contractor.

The Contractor(s) representative will physically check each system for proper operation at least once a week. Softeners may be visited every other week. Each installation will have a permanent repair/maintenance log attached thereto and visible for inspection by the University. Contractor will produce a trend analysis and provided to the Owner. Each instance of repair or maintenance to the systems will be logged and indicate the reason for activity and action taken.

The Contractor(s) representative will make regular site visits, perform necessary maintenance, and conduct on-site water analysis (i.e. hardness, conductivity, chlorine, etc…) as individually specified by the Owner. The samples will be taken, analysis performed and field report written, dated and signed by the contractor technician on the same day. One (1) copy of the field report will remain at the equipment location.

No regeneration of field equipment may be done on site. All such service will be performed on the contractor's premises. In the event of a system malfunction, the contractor will provide a response to FSU within two (2) hours of notification by the University and necessary repairs within 8 hours or make provisions for providing similar quality water as previously required.

If at any time during the period of maintenance agreement, the equipment fails to provide the water quality specified and the contractor is unable to correct the problem within one (1) business day the University reserves the right to correct the problem using a contractor of the University's choosing and to proceed with the contract in the manner consistent with the best interests of the university.

B. Parts Supplied: All repair parts including pilot valves, solenoid coils, timer motors, switches, tubing and connectors, cartridges, test valves, RO membranes, re-pressurization pumps, re-circulation pumps, gauges, solenoid valves, water quality monitors, hoses, gears, springs, plungers, ultra violet light bulbs, resin or other repair parts deemed necessary by the Contractor.

The contractor will submit proof, if requested by the university, that where applicable any parts, materials, equipment, or devices provided under this contract, carry the Underwriters' Laboratory, Inc. Seal of Safety.

IV. Individual Work Sites and Associated Specifications

Work covered under this section will include furnishing all labor, materials, tools, equipment, transportation, scaffolding, supervision, and all operations and tests required to maintain the specified water quality and quantity of each site. Work to be performed by the university maintenance section will be only that necessary to provide system interface with the university facilities.

Bidders must quote a firm fixed price to cover equipment provision and full service for each contract site listed below. Failure to submit an individual price for each system listed will be grounds for rejection of the bid.

In addition to the General Requirements, Contractor will provide appropriate equipment and maintenance for each individual system as specified below:

- **Biology Greenhouse, Bldg #230, 2606 Mission Road**

  Contractor provides service to a medalist water conditioner. SYC includes all parts and labor to keep unit operating. Salt delivered on a monthly basis roughly 180# to remove calcium and magnesium at 32.000 grain capacity

- **Biology Unit I, Bldg #39: Mechanical Room Ground Floor**

  This is ASTM type 1 water specification:

  - Resistivity :> 18.2 Mohm-cm @ 25 degree C
  - Silicates :< 1 ppb
  - Heavy Metals :< 0.1 ppb
  - TOC :< 3 ppb
  - Bacteria :< 1 CFU / ml
  - Flow : 1.5 liters per minute (LPM)

  Contractor service will consist of taking care of a 1000 gpd RO unit, fleck water conditioner, 12" carbon filter and DI tanks. 9 x 44 mixed beds service includes parts and labor, changing pre filters 5 micron and .02 submicron post filters, UV lamp, checking TDS and product flows on RO, resistivity on DI tanks changing tanks to provide ASTM type 1 water as necessary, keep salt full, change carbon, check gauges, meters, pumps, flow controls, float switches, tanks, etc. Water is recirculated from DI tanks into storage tanks.

- **Biomedical Research Facility (BRF), Bldg #9: Basement Mechanical Room**

This is ASTM type 1 water specification:

- Resistivity :> 18.2 Mohm-cm @ 25 degree C
- Silicates :< 1 ppb
- Heavy Metals :< 0.1 ppb
- TOC :< 3 ppb
- Bacteria :< 1 CFU / ml
- Flow : 1.5 liters per minute (LPM)

Contractor service will consist of taking care of a 1000 gpd RO unit, fleck water conditioner, 12" carbon filter and DI tanks. 9 x 44 mixed beds service includes parts and labor, changing pre filters 5 micron and .02 submicron post filters, UV lamp, checking TDS and product flows on RO, resistivity on DI tanks changing tanks to provide ASTM type 1 water as necessary, keep salt full, change carbon, check gauges, meters, pumps, flow controls, float switches, tanks, etc. Water is recirculated from DI tanks into storage tanks.

- **Biomedical Research Facility, Bldg #9: Room 127**

  Contractor provides service to 2 8500 twin units to provide soft water to autoclaves. Service includes all parts and labor to keep unit operating. Salt is delivered on a monthly basis roughly 360# to keep unit operating at 64.000 grain capacity each.

- **Biomedical Research Facility, Bldg #9: Domestic Hot Water System**

  Contractor will provide and service one (1) Automatic Duplex Water Softener, or equal overall capacity of 300,000 grain removal with a maximum flow rate of 150 GPM to insure soft water to the facility at all times.

- **Biomedical Research Facility, Bldg # 9: Room 109**

Contractor will provide and service (1) Duplex Automatic Water Softener, or equal overall capacity of 60,000-grain hardness removal with a maximum flow rate of 15 GPM to insure soft water to an autoclave at all times.

- **Carraway, Bldg #113**

  Contract will provide and service one (1) Simplex Automatic Water Softener or equal (60,000 grain removal capacity and maximum flow rate up to 20 GPM) to supply continuous soft water to the water distiller and 2 lab faucets located in the basement.

- **College of Human Economics, Bldg # 135**

  Contractor will provide and service equipment as required to meet or exceed CAP Type II Reagent Grade water quality (as measured by 1 me ohm indicator light located after the final filter). This system will provide up to 5 GPM flow to points-of-use throughout the building.

- **Dick Howser Stadium, Bldg #115**

  Contractor provides service to a twin hiho 3 210,000 grain water conditioner. Service includes all parts, labor to keep unit operating. Salt delivered on a monthly basis, to provide continuous 24hr day soft water. 210,000 grain removal at 70qpm.

- **Dittmer Lab, Bldg #38**

  Contractor will provide and service equipment required to meet or exceed CAP Type II Reagent Grade water quality (as measured by 1 me ohm indicator light located after the final filter). This system will provide up to 10 GPM flow to laboratories and polisher systems throughout the building.

- **Hoffman Teaching Lab- Chemistry Classroom, Bldg #35**

Contractor will provide and service equipment required meeting or exceeding CAP Type I Reagent Grade water quality (as measured with in-line resistivity monitor at exit of 0.2 micron filter). This system will provide water to the existing storage tanks in room 513. Responsibility for the water quality by contractor will end at this point of discharge.

- **Institute of Molecular Biophysics (IMB), Bldg #146**

This is ASTM type 1 water specification:

- Resistivity :> 18.2 Mohm-cm @ 25 degree C
- Silicates :< 1 ppb
- Heavy Metals :< 0.1 ppb
- TOC :< 3 ppb
- Bacteria :< 1 CFU / ml
- Flow : 1.5 liters per minute (LPM)

Contractor will provide and service equipment to a 1000 gpd RO system, pretreatment consisting of carbon, softener, D.I. system, 9 X 44 mixed bed to meet or exceed ASTM type 1 water. Service includes parts and labor, changing prefilters, 5 micron and .02 submicron post filters, UV lamp, checking TDS and product flows on RO, resistivity on Di, changing tanks to provide ASTM type 1 water as necessary, keep salt in water softener, change carbon, check gauges, meters, pumps, flow controls, float switches, tanks etc. Recirculating piping loop is throughout building and circulates back to DI.

- **Life Sciences, Bldg # 4007**

Contractor provides service to a 250 GPD E series 1 reverse osmosis unit. Service includes all parts and labor, changing prefilter, checking TDS, checking fittings for leaks, and makes sure all gauges, meters and flow controls are working properly to maintain 2

TOTAL Dissolved solid of under @20PPM. Contractor also includes delivering 240-300 lbs salt to life science water conditioner.

- **Material Research, Bldg #854**

  Contractor provides and services all equipment to meet or exceed CAP Type II regent grade water (measured by Megaohm indicator light). System provider 5 qpm to end user. System consistes of 1 ax44 mixed bed DI tanks. All tanks changed accordingly.

- **Medical School, Bldg #4002: Ground Floor, Room #G183**

  Marlo equipment maintains resin or replace as needed. Check & repair filter cartridges as needed in order to treat well water.

- **Medical School, Bldg #4002: Roof Top**

  Contractor will provide and service equipment required meeting or exceeding CAP Type I, 18 megaohn water for Med School. Replenish salt when necessary. Replace filters, repair equipment, replace RO membrane, regenerate resin tanks as necessary, replace UV bulbs Y clean glass as necessary, replace UV bulbs & clean glass as necessary, and replace charcoal as necessary to ensure proper operation.

- **New Chemistry, Bldg #4008**

  Contractor provides and services all said equipment: 1 Marlo R.O. Unit, 8 mixed bed DI tanks, Auto Carbon Twin Water Conditioner, Repressure Pumps, and UV Lamp. Service includes all parts, filters, salt, UV bulbs, exchanging DI tanks, and labor. Water to meet or exceed CAP Type II regent water

- **Nuclear Research, Bldg #42**

Contractor will provide and service equipment as required to meet or exceed CAP Type II Reagent Grade water quality (as measured by 1 me ohm indicator light located after the final filter). This system will provide up to 5 GPM flow to points-of-use throughout the building.

- **Nuclear Research, Bldg #42: Ground Floor**

  Contractor will provide and service one (1) Simplex Automatic Water Softener or equal (30,000-grain removal capacity) to supply continuous soft water to the cooling system located in the Nuclear Research Building.

- **Psychology, Bldg #4004**

  Contractor provides and services all equipment to meet or exceed CAP type II Regent water. Measured by Megaohm Meter equipment consists of carbon and water conditioner for pretreatment of a Marlo Reverse Osmosis unit. Contractor's 9x44 DI unibed tanks. All service includes parts and labor and tank exchanges per month to meet type II Regent DI Water Specs.

- **Oceanography, Bldg # 36: Attic**

  Contract will provide and service equipment required to meet or exceed CAP Type II Regent Grade water quality (as measured by 1 Mohm indicator light located after the final filter). This system will provide up to 5 GPM flow to a local faucet and also to storage tanks in the building.

- **Oceanography, Bldg #36: 5th Floor, Room 521**

  Contract shall provide and service one (1) Simplex Automatic Water Softener or equal (30,000-grain removal capacity with maximum flow rate of 20 GPM) and one (1) 5-micron post-filter to supply soft water to the autoclave.

- **Fine Arts, Bldg #7: Room 127**

Contract shall provide and service one (1) Simplex Automatic Water Softener or equal (32,000-grain removal capacity with maximum flow rate of 8 GPM). Mineral tank is 9 x 44 1 cube resins; brine tank is 11x 11 holding 160 lbs of salt.

Duration of Contract

Initial contract will be for 2 years with the option to extend annually for 3 additional years at University's discretion.

Equipment list by Building

Oceanography-Roof
Culligan E-Series RO unit- old/Needs replacing.
2 Mixed bed Tanks+Meter
DI Carbon
½" Flotec recirculating pump
UV "Arcan"
150Gal. storage tank

Sandels
Estate water softner
12" DI Carbon
4-Mixed bed tanks and Meter
1.5h.p. pump
250 gallon storage tank
Culligan RO unit-New

Fine Arts
New softner- Medalist+small 2 bag brine tank

Mission rd. Greenhouse
Medalist Softner

Material Research
DI Carbon
1 Strong base set
1 mixed Bed Tank and Meter

Howser Stadium
Culligan Hi Flo 3E twin 210 Softner-New

Life Sciences
Marlow Back Washing Carbon
Marlow Softner
Marlow RO unit
UV Light
4 Mixed Bed Tanks and Meter
500gal. Storage Tank

Twin 1.5h.p. circulation Motors
Twin Marlow 300 Water Softner-New

Medical School-Roof
MarlowBack Washing Carbon
Marlow Twin Tank Softner
Culligan A-Series RO Unit
UV light
1000gal. storage Tank
2 Groundfos pumps Model#GRN5
8 mixed bed Tanks And Meter
Shelco filter-MS30 cartridge

2nd flr
Estate Softner

1st flr
Estate softner

Psychology 5th flr
Marlow Back Washing Carbon
Marlow Twin Tank Softner
Marlow RO
Sterilite UV
Groundfos Twin Tanks and Meter- Good Cond.

BioMed Basement
Fleck Twin Softner-old, still working.
Twin 14" DI Carbon Tanks both need rebed.
Culligan E-Series RO unit- New.
2 circulation pumps-1/2hp Stayright
2hp Stainless steel-old/ Needs replacing.
2- 500gal. storage tanks.
9 Mixed bed tanks and Meter.
2- 300 grain Softners. 1 working, 1 not working. Both are old.
Culligan UV light.

Inside bld.
2- Culligan 8500 Twin Softners- Not working.

Chemistry
HE Softner
Marlow Back Washing Carbon
Marlow Twin Softner
2 Groundfos pumps Model#CRN5
Marlow RO
8 Mixed Bed Tanks and Meter.
UV light
Shelco Micro Gard Polishing Filter

Hoffman
1-DI Carbon
MK89 Softner-old/works.
2 Mixed bed Tanks and Meter.
1hp Transfer pump.
3-400 gal. Stainless Steel storage Tanks.
Culligan E-Series RO unit.

Biology Unit 1
Fleck Twin Softner-New
14" DI Carbon
A Series RO Unit-Culligan
9-Mixed bed Tanks and Meter.
2-500gal. Storage Tanks, Stainless.
2 Baldor 1" pressure pumps
1ea. ½" circulation pump.

Dittmer8th flr
Di Carbon
Twin Fleck Softner-old/ mis matched tanks.
Culligan RO-Unit. –New
4Mixed bed Tanks and Meter.
½" Recirculation pump.
3- 250gal storage tanks.

IMB
Culligan HI Flo 2 Carbon

Culligan HI Flo 2 Softner
US Filter Filmtec RO
Twin Groundfos Pumps, CRN-New.
2ea. 225 gal storage Tanks.
US Filter UV Light.
9 Mixed bed Tanks and Meter.
5 Micron Shelco. Filter.

Nuclear Research
1 DI Carbon
Twin Fleck Softner
2 Mixed bed Tanks and lights.
3/4hp Recirculation pump.
Culligan RO unit. New.
200gal storage Tank.

Carraway
1”Fleck Twin Softner, meter old.
