



2026 Approved Materials List for Water Production System

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Materials Testing and Inclusion Procedures

Manufacturers who would like materials considered for the approved materials list shall:

1. Comply with all the design criteria set forth for the approved materials.
2. Supply, at the manufacturer’s expense, the materials to be tested. (Quantity to be determined by the City of Goodyear Water Services Department)
3. Any project using brass or bronze service material that comes in contact with potable water must meet AWWA C-800, NSF 61-8 and Federal Law.
4. Preference will be given to materials manufactured and assembled in the United States.

Once the materials have been received, the Water Production Division will visually inspect materials for defects and compliance with all City standards. The Water Production Division will install or oversee the installation of all materials in the Production-Treatment system or other test sites as determined to be in the best interest of the city. Materials will be tested and evaluated for a minimum of one year, commencing on the date of installation. Evaluations will include but are not limited to:

1. Ease of installation
2. Availability of parts
3. Operational issues
4. Quality of manufactured materials
5. Number of moving parts
6. Reliability of service

If the materials supplied, at any time in the testing period fail, the testing will be concluded immediately. If the materials successfully complete the testing period, Water Production will recommend the product to be included in the City of Goodyear Approved Materials List.

The Approved Materials List will be updated annually at the first of each year. New Manufacturers and Models that have been approved by the city for inclusion on the list will be added at that time.

A maximum number of manufacturers will be approved for each category. Once a category has been satisfied, manufacturers successfully completing the test requirements will be added to a Pending Approved Materials list. Pending materials will be listed sequentially according to successful completion of testing. Materials presently on the Approved Materials List may be omitted from the list due to:

1. Change in service/availability.
2. Change in product design.
3. Bankruptcy
4. Consistent product failure
5. Any other reason as deemed appropriate by the Water Services staff.

If an approved material is taken off the list for any of the above reasons, the first pending material will be added to the list.

Water Production and Treatment Facilities Materials

Fire Hydrants (4 Manufacturers)

Requirements:

- Meet AWWA Standard C502 and C550
- UL 246 approved
- Dry barrel hydrant
- Method of lubrication shall be food grade oil or grease
- Operating nut shall be 1-1/2 inches pentagon (standard)
- Direction of opening shall be counterclockwise (left)
- Hose and pumper threads (male) shall be brass and field replaceable
- Threads shall be "National Standard"
- 2 hose nozzles (2-1/2 inches) and 1 pumper nozzle (4-1/2 inches)
- Inlet connection shall be mechanical joint
- Shall include "traffic flange"
- Size of hydrant valve opening shall be 5-1/4 inches
- All public hydrants shall be painted yellow
- All private hydrants shall be painted red

Manufacturer	Model
Clow	Medalion
Kennedy	Guardian K-81D

Mueller	Super Centurion
Waterous	Pacer

Fire Hydrant Grade Adjustments (1 Manufacturers)

Requirements:

- Extensions shall not be used to reach finish grade for **new** fire hydrant installations.
- Where the finish grade around an **existing** fire hydrant is changed, an extension kit, installed per the manufacturer's specifications may be used.
- Only one extension may be used per hydrant. The extension kit **must** be manufactured by the original fire hydrant manufacturer: no after-market parts are allowed.

Manufacturer	Model
Assured Flow Sales	Grade Loc

Fire Hydrant Locks (2 Manufacturers)

Requirements:

- Must prevent unauthorized operation of hydrants
- Readily attaches to all hydrant makes and models
- Must be strong enough to withstand vandalism and weather extremes
- Hydrant must be operated without removal of lock utilizing magnetic type wrench only

Manufacturer	Model
Hydra-Shield	Custodian
USA Blue Book	Hydrant Lok

Fire Hydrant Grease (2 Manufacturers)

Manufacturer	Model
Mystik	FG-2 Food Machinery Grease
Clarion	Food Machinery Grease, No. 2

Gate Valves (6 Manufacturers)

Requirements:

- Meet AWWA Standards C515 and C550
- NSF 61 approved
- UL 262 approved
- Valves body shall be ductile iron and meet or exceed reduced wall standards
- Valve wedge shall be fully encapsulated with nitrile rubber
- Valves shall be epoxy-coated inside and out
- Stem O-rings shall be replaceable with the valve fully open at rated working pressure
- Direction of open shall be counterclockwise (left)
- All fasteners shall be stainless steel

Note: The above requirements also apply to OS&Y and NOS&Y valves utilized in water production pumping stations.

Manufacturer	Model
American Flow Control	AFC 2500-1
Clow	Style 2638 or 2639
M&H	Style 7000
Kennedy	Style 7000
Mueller	Series 2361 or 2362
US Pipe	Model USP1

Insertion Valves (1 Manufacturers)

Manufacturer	Model
Mueller	Permaseal Insertion Valve

Butterfly Valves (4 Manufacturers)

Requirements:

- Butterfly valves are required on distribution mains larger than 16 inches.
- Butterfly valves are required on all above ground lines 8" and larger that are installed at well sites and pump stations.
- All above ground valves require hand wheels or actuators
- Meet applicable AWWA Standards C504 Standard and C550
- NSF 61 approved
- UL approved
- The valve disc shall be fully encapsulated in nitrile rubber
- Valves shall be epoxy coated inside and out
- All fasteners shall be stainless steel
- Direction of open shall be counterclockwise (left)

- Disk rotation to be 90 degrees with open/close indicator on gear box
- Valves shall have a positioning indicator and shall be motorized actuator compatible

Manufacturer	Model
Clow	Series 4500 or 1450
Mueller	Lineseal III
Kennedy	Series 4500 or 1450
M&H	Series 4500 or 1450

Valve Actuators (4 Manufacturers)

Requirements:

Manufacturer	Model
Rotork	IQT Series
Auma	SQ/SQR
Bermad	0A8MG-025-96023 (Ro systems only)
Bermad	0A3-5-92012F (Ro systems only)
BRAY	Per design requirements

Pressure Reducing, Sustaining and Altitude Valves (2 Manufacturers)

Requirements:

- Ductile iron body
- Diaphragm type, class 150
- Epoxy coated inside and out
- Tested at a minimum pressure of 175 psi
- 150 lb. flanged ends

Manufacturer	Model
CLA-VAL	No. 92-01, 50-01, and 650-01(See Water Services Department for required optional features)
AMES	LF910GD/LF610GD, LF912GD/LF612GD, and LF920GD/LF620GD

Air/Vacuum Release Valves (1 Manufacturers)

Requirements:

Manufacturer	Model
ARI	Distribution Mains (6"-12") ARI D46 https://www.aquestia.com/products/a-r-i-d-46-ww/ Large Transmission Mains (16"+) ARI D-060 https://www.aquestia.com/products/a-r-i-d-060-ww/ One Way Valve ARI S-050 https://www.aquestia.com/products/a-r-i-s-050-ww/ Low-Pressure One-Way Valve ARI S-050L https://www.aquestia.com/products/a-r-i-s-050-ww/

Water Meters (1 Manufacturers)

Requirements:

- Appropriate make, model, and manufacturer is to be determined by the Water Services Department.

All meters are supplied by Water Services, except for magnetic meters.

Water Meters		
Size/Type	Manufacturer	Type
Domestic		
3/4" - 2" Domestic	Neptune	T-10
3"-12" Commercial and Industrial(C&I)	Neptune	Mach 10
Fireline System & Combination Fire/Domestic	Neptune	Mach 10
Temporary Construction Fire Hydrant - Flushing and Disinfection		
3" Fire Hydrant Meter	Neptune	Trident
4"-6" F&D	Neptune	Mach 10
Irrigation		
1" Irrigation	Neptune	T-10
1.5"-6" Irrigation	Neptune	Mach 10
Detector		
5/8" – 3/4"	Neptune	T-10

Magnetic Meters	
Endress & Hauser	No Preference
Siemens	No Preference

Radio Read Meter Reading Devices (1 Manufacturers)

Manufacturer	Model
Neptune	ProCoder & E-Coder R900i R900 Gateway

Water Service Saddles (3 Manufacturers)

Requirements:

- Meet applicable AWWA C800 and NSF 61 Standards
- Double strap brass saddle
- Thread shall be female iron pipe

Manufacturer	Model
Ford	Style 202B
AY McDonald	3826
Mueller/Jones	BR2B/J-979

Corporation Stops (3 Manufacturers)

Requirements:

- Meet applicable AWWA C800 and NSF 61 Standards
- Inlet threads shall be iron pipe
- Shall utilize a ball valve
- For service line installations, the outlet shall utilize a compression style pack joint with a set screw
- For downstream end of blow off installations, the outlet shall utilize male iron pipe threads

Manufacturer	Model
Ford	FBRW1100-TA
AY McDonald	4104B-22
Mueller	P25028-10/E-1935

Water Service Lines

Requirements:

- Minimum size service line is 1"
- Services 2" and smaller require type "K" soft seamless annealed copper or Blue Municipex Tubing or Blue Municipex Tubing PexA w/ Steel Inserts - tracer wire required with approved AWWA C800 compression joint valves and fittings, suitable for buried applications, using stainless steel
- Under 3" services must be 1" or 2" only – no 1.5" services will be allowed
- Services 3" and larger require ductile iron pipe

Meter Valves/Curb Stops (3 Manufacturers)

Requirements:

- Meet applicable AWWA C800 and NSF 61 Standards
- Angle stop ball valve with 90-degree Tee Head rotation
- Padlock wings
- The inlet shall utilize a compression style pack joint with set screw
- 1" curb stops shall have a swivel meter coupling to allow for meter installation
- 2" curb stops shall be flanged, have elongated bolt holes allowing for either 2" and 1 1/2" meters, and allow for drop in rubber gaskets

Manufacturer	Model
Ford	BFA43-777W, BA43-444W
AY McDonald	4602B-22
Mueller/Jones	P-24258, P-24276 / E-1963, E- 1975

Water Mains (2 Manufacturers)

Requirements:

- All mains shall be ductile iron pipe or C909 PVC
- Meet ANSI/AWWA Standard C151/A21.51-02
- Minimum class 150

Manufacturer	Model
McWayne Ductile	N/A
American Cast Iron Pipe Co.	N/A

US Pipe	N/A
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Tapping Sleeves (2 Manufacturers)

Requirements:

- Meet AWWA C223-02
- No Size-on-size applications

Manufacturer	Model
Powerseal	3490AS
Smith Blair	663

Full Circle Repair Clamps (3 Manufacturers)

Requirements:

- Meet AWWA Standard C207

Manufacturer	Model
Romac	SS1, SL1
Ford (Single Band)	F1
Smith-Blair	221, 226, 229, 238

Flex Couplings (3 Manufacturers)

Requirements:

Manufacturer	Model
Romac	XR-501 Extended Range
Ford	FC2W Transition Coupling
Total Piping Solutions	HyMax 2 Series

Restrained Flange Coupling Adapters (3 Manufacturers)

Requirements:

Manufacturer	Model
Smith-Blair	911
Romac	FC400/FCA 501/RFCA Alpha
Ford	FFCA

Restrained Joints Mechanical Style (6 Manufacturers)

Requirements:

Manufacturer	Model
EBBA Iron	1100 Series
Romac	Roma Grip
Ford	UFR 1400
Star Pipe Products	Stargrip Series 3000
Tyler Union	Tuf Grip
SIP Industries	EZ GRIP

Restrained Joints Gasket Style (4 Manufacturers)

Requirements:

Manufacturer	Model
U.S. Pipe	Field Lock Gasket
American Cast Iron Pipe Co.	Flex Ring Joint
American Pipe	Fast Grip Gasket
McWane	Sure Stop 350 Gasket

Water Boxes

Requirements:

3/4" - 2" Meter Boxes

- Pre-cast concrete meter boxes
- Armorcast – Rotocast Polymer Concrete boxes
- Polymer Concrete Lid with recessed meter antenna location for walkway areas only
- Stamped Steel lid with a 1-7/8" pre-drilled hole for all other locations
- #2 meter box shall be used for 3/4" and 1" water meters
- #4 meter box shall be used for 1-1/2" and 2" water meters and Air Relief Valves (ARV)

Valve Boxes

- 8" blue PVC C-900 Riser Material
- Seamless pipe
- In applications that require a seam sealed bell joint is required
- Installed per M.A.G. Detail 391-1 Type A with cast iron frame and cover with concrete collar

Air Release Valves

- Pre-cast concrete meter boxes
- Stamped Steel lid with no hole
- #4 meter box

Water Meter Vaults 3" and above

- A pre-cast concrete vault with aluminum lids per City of Goodyear G-3313-1, 2, and 3

Electronic Locators (1 Manufacturer)

Requirements:

- Passive (non-programmable 1408-XR) locators are to be used on straight lengths of pipe only.
- Non-Passive (programmable 1408-XR/ID) locators are to be used and programmed at any change in direction
- Self-leveling
- Operate at frequency 145.7 KHz
- Operate at bury depth of at least 4 feet

Manufacturer	Model
3M	1403-XR (passive)
3M	1423-XR/ID (ID ball marker)

Debris Caps (1 Manufacturer)

Requirements:

- Hollow member has a cylindrical outer surface
- Flexible skirt that provides an outward seal
- Rated to 50 pounds at a loading rate of 1 inch / minute
- Molded per General Electric ABS #HIM 4500
- Retaining prong for locating coil
- 3M locating device
- Blue handle

Manufacturer	Model
SW Services Inc.	DC825 (blue handle) w/3M EMF 1413-XR Locating Coil

Backflow and Cross-Connection Devices

Requirements:

- Refer to the City of Goodyear's website for the current Engineering Design Standards for guidelines on backflow prevention and cross-connection devices and assemblies.

Water Quality Sampling Station (1 Manufacturer)

Requirements:

- Koraleen XLT Sampling Station
- Flush mounted lock
- Sample valve stainless steel, ball valve 1/2" x 3/8" 800 psi
- Flush mounted gem cam lock with tubular key
- All units keyed alike
- The sampling station shall be 4 feet tall and 6 inches in diameter

Manufacturer	Model
Koraleen Enterprises	0001-3

Automatic Flushing Device (1 Manufacturers)

Requirements:

- All fittings must be brass
- Built-in sampling port
- Lockable and all units are keyed alike

Manufacturer	Model
Kupferle	9800-WC Eclipse

Well Site and Pump Station Equipment

Chlorination Equipment (2 Manufacturers)

Requirements:

Manufacturer	Model
Blue & White	M3 Peristaltic Metering Pump for 0-60psi MD1 or MD3 Diaphragm pump for 60-150psi CFPS-2 Duplex Skid System
Watson & Marlow	QDos meter pum5
Fiberglass Building	WFS 1012

Well and Booster Pumps (4 Manufacturers)

Requirements:

- Pump equipment shall be water lubricated or submersible
- Pump impellers shall be stainless steel material

Manufacturer	Model
Goulds	Water lubricated and submersible
National/American Turbine	Water lubricated and submersible
Pentair/Fairbanks Morse/Berkeley	Water lubricated and submersible
Grundfos	Water lubricated and submersible
HydroFlo	Water lubricated and submersible

Chemical Feed Lines (2 Manufacturers)

Requirements:

Manufacturer	Model
N/A	FEP Tubing 3/8" OD x 5/16" ID
N/A	FEP Tubing 5/8" OD x 1/2" ID

Well and Booster Motors (5 Manufacturers)

Requirements:

- Booster motors shall be hollow shaft
- Booster motors shall be equipped with anti-reverse ratchet locking system

Manufacturer	Model
US Motors	High Efficiency
GE Motors	High Efficiency
Franklin	Submersible
Hitachi	Submersible

Sun Star	Submersible
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Well Casing (1 Manufacturers)

Requirements:

- Blank casing shall be High Strength Low Alloy (HSLA)
- Well Screen shall be louvered stainless-Steel grade 316

Manufacturer	Model
Roscoe Moss	Spiral seam or type depending on design

Variable Frequency Drives (VFD) (5 Manufacturers)

Requirements:

Manufacturer	Model
Allen Bradley	Latest Model Per model depends on process
Altivar	
Yaskawa	
ABB Drive	
Danfoss	

Pump Shaft / Seals (3 Manufacturers)

Requirements:

- Motor shall be a hollow shaft with one piece shaft, (IE. No couple between the stuffing box plate and the motor)
- Shaft shall have a keyway, for Boosters use 1-1/2 or 2-inch diameter made of stainless steel

Manufacturer	Model
Chesterton Seals	155-10 Pat. Full mechanical seal
John crane Seals	5611 series full seal
Champion Seals	401 cartridge seal

Well Air Compressors (2 Manufacturers)

Requirements:

- Use these models unless application by design requires larger model.

Manufacturer	Model
Ingersol Rand	2475X5 Food grade oil lubricated
Champion	BE-2B-2-3 Food grade oil lubricated

Instrumentation

Process Logic Controller (PLC) (1 Manufacturer)

Requirements:

Manufacturer	Model
Allen-Bradley	5380/5480-L3 Compact Logix 5580/5590 Control Logix Micro 800 (CCW) Version 34

Human Machine Interface (HMI) (1 Manufacturer)

Requirements:

Manufacturer	Model
Allen-Bradley	Panel View Plus 7 Performance, 10.4-inch touchscreen Panel View 5000 2713P-T12WD1, 12 - inch V11 or higher

I.O Cards (1 Manufacturer)

Requirements:

Manufacturer	Model
Allen-Bradley	Analog Cards 14-bit resolution or better 5069-iF8 must be Series B DI, DO, sink or source as needed

Program (1 Manufacturer)

Requirements:

Manufacturer	Model
Allen-Bradley	Studio 5000 v34

Radios (1 Manufacturer)

Requirements:

Manufacturer	Model
GE MDS	Inet II 900

Software (1 Manufacturer)

Requirements:

Manufacturer	Model
Rockwell	SCADA-FT View, Studio Enterprise SE, F FT View Server SE 250, FT View Client V16

Turbidity Meter (1 Manufacturer)

Requirements:

Manufacturer	Model
HACH	5300

Nitrate Analyzer (1 Manufacturers)

Requirements:

Manufacturer	Model
HACH	FSPUVN Nitrate Display Se100

Chlorine Analyzer (2 Manufacturers)

Requirements:

Manufacturer	Model
HACH	SC-200
Prominent	pH sensor type PHED 112 SE PN 741036

pH Meter (2 Manufacturers)

Requirements:

Manufacturer	Model
HACH	Total/Free – CL-10
Prominent	FEP Tubing 5/8" OD x 1/2" ID

Conductivity Meter (1 Manufacturers)

Requirements:

Manufacturer	Model
HACH	SC-200

Tank Level Indicator (3 Manufacturers)

Requirements:

Manufacturer	Model
Siemens	LT500
Endress Hauser	RIA452
Vega	VegaMet 862

Pressure Transmitters (2 Manufacturers)

Requirements:

Manufacturer	Model
Endress Hauser	Cerabars 0-24 with block and bleed valve
Vega	VegaBar 82

Well Level Transducer (3 Manufacturers)

Manufacturer	Model
Endress Hauser	Water Pilot FMX 21, Cable length as needed
Endress Hauser	Micropilot FMR20, Cable length as needed
Vega	VegaWell 52, Cable length as needed
Vega	Vega Puls C21, Cable length as needed
Siemens	Sitrans LH100, Cable length as needed
Siemens	Sitrans LR120, Cable length as needed

