

CITY COUNCIL STUDY SESSION

Monday, April 19, 2021

Held Electronically

View on Channel 9 or Channels 180 and 181 (for Charter Communications customers)
or live stream via rvtv.sou.edu select RVTV Prime.

Mayor Akins called the Study Session to order at 5:30 p.m.

Councilors' Graham, Moran, DuQuenne, Hyatt and Jensen were present. Councilor Seffinger was absent.

1. Water Treatment Plant Design Envision Program Update.

Public Works Director Scott Fleury introduced HDR Project Director Pierre Kwan and Project Manager Kevin Caldwell. Fleury presented Council with a PowerPoint (*see attached*).

Items discussed were:

- Water Treatment Plant Overview.
- 2018 Plant Evaluation Report.
- Plant Sizing and Optimization
 - Initial Capacity.
 - Updated Capacity.
 - Recommendations.
- \$2.5 Million in cost reduction.
- Envision Program – Solar and Additional
- Risk and Resilience.
- Water Treatment Plant Update.
- Current Status.
- Next Steps.

Council suggested to bring back life cycle costs. Mayor Akins questioned what to do about algae.

Council thanked Staff and Staff explained this item would be coming back to Council.

The Study Session was Adjourned at 6:58 PM.

Respectfully submitted by:

City Recorder Melissa Huhtala

Attest:

Mayor Akins

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the City Administrator's office at (541) 488-6002 (TTY phone number 1-800-735-2900). Notification 72 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to the meeting (28 CFR 35.102-35.104 ADA Title I).

City of Ashland

Water Treatment Plant Update

APRIL 19, 2021 CITY COUNCIL STUDY SESSION

Water Treatment Plant Update

Overview:

1. Current Plant vs. New Plant
2. Plant Sizing and Optimization
3. Envision Program
4. Risk and Resilience
5. Current Design Status & Next Steps
6. Questions & Discussion



2018 Plant Evaluation Report

Compare 20-year Costs for Existing Plant vs. New Plant Construction

- Review of Major Process & Components
- Can Maintain Existing Plant for 20 – Years
- Cannot mitigate all risks in a cost-effective manner
 - Seismic & Landslide
 - Flood
 - Water Quality
- \$5.57 million for maintenance

ISSUE	POSITIVE OR NEGATIVE CONTRIBUTION	
	Existing Plant	New Plant
Additional Rehabilitation Needs	-	+
Flood Risks	-	+
Seismic Risk	-	+
Operation Costs	+	-
Maintenance Costs	-	+
Treatment Requirements	-	+
Capacity	-	+

Plant Sizing and Optimization

Initial Capacity – Maximum Day Demand

- 7.5 MGD Initial - Expandable to 10 MGD
- 2020 Water Master Plan
 - 2040 Demand without Conservation – 6.6 MGD

Updated Capacity Analysis and Cost Optimization

- Fall 2020 Demand Update (pre/post fire)
 - Consider Conservation & Climate Impacts

Recommendations

- 7.0 MGD Initial Sizing (50 – year)
- Expandable to 9.0 MGD (100 – year)

\$2.5 Million in Cost Reductions

Year	Maximum Day Demand (mgd)			
	MDD	MDD with Conservation	MDD with Climate Change	MDD with Conservation + Climate Change
2020	5.84	5.56	5.84	5.56
2025	6.02	5.47	6.05	5.51
2030	6.18	5.37	6.25	5.44
2040	6.28	5.35	6.43	5.49
2050	6.28	5.24	6.51	5.46
2060	6.36	5.30	6.67	5.61
2070	6.37	5.45	6.93	5.84
2080	6.81	5.68	7.30	6.17
2090	7.10	5.92	7.70	6.51
2100	7.40	6.17	8.11	6.88
2110	7.72	6.43	8.55	7.27
2120	8.05	6.70	9.02	7.68

Envision Program

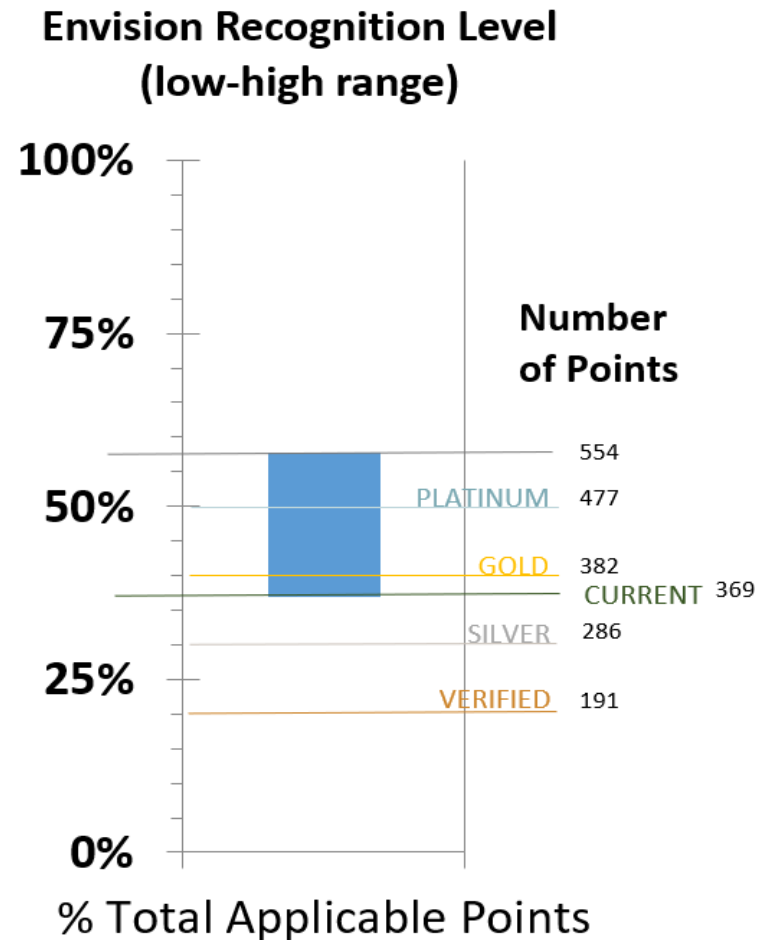
Envision Measures the Sustainability of an Infrastructure Project from Design through Construction and Maintenance.

Currently Silver – 369 Points (60% Design)

- Focus on Electrical Energy Consumption

Gold – 382 Points

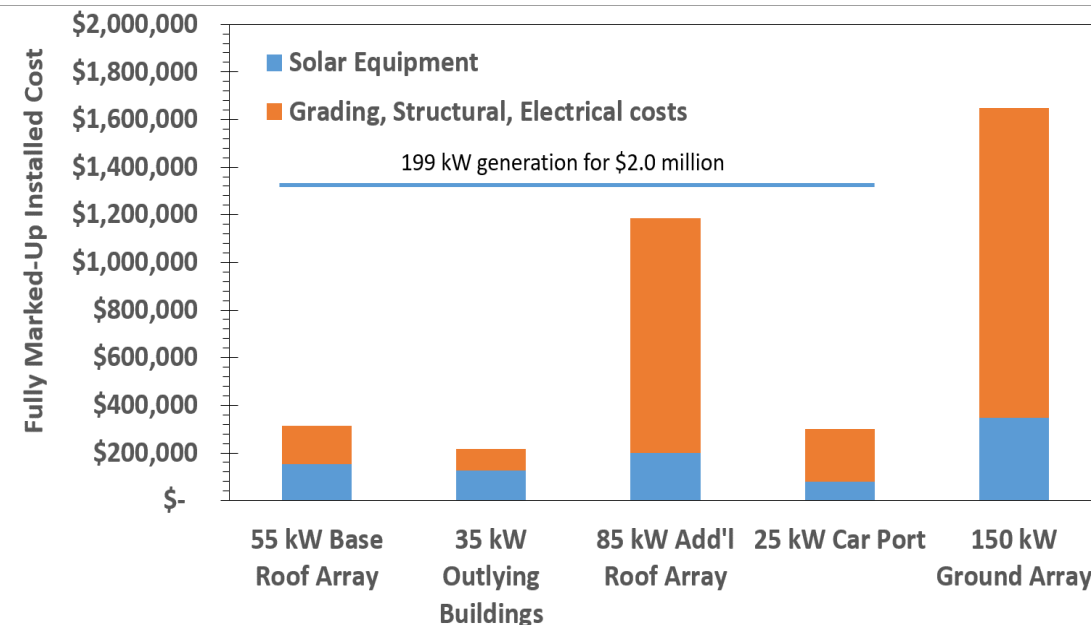
Platinum – 477 Points



Envision Program – Solar

Solar Integration onsite

- **Building Rooftops**
 - Additional cost for sitework, structural and electrical
 - 199 kW Potential - \$2 million all buildings
- **Ground Array**
 - Additional cost for sitework, structural and electrical
 - 150KW Potential - \$1.7 million



WTP Electrical Demand vs. Demand

Water Production	Power Demand (kW)	Daytime Result with 199 kW System
Winter (1.5 MGD)	167	Sell 32 kW to grid
Average day (3.0 MGD)	250	Buy 51 kW from grid
Max capacity (6.5 MGD)	516	Buy 307 kW from grid

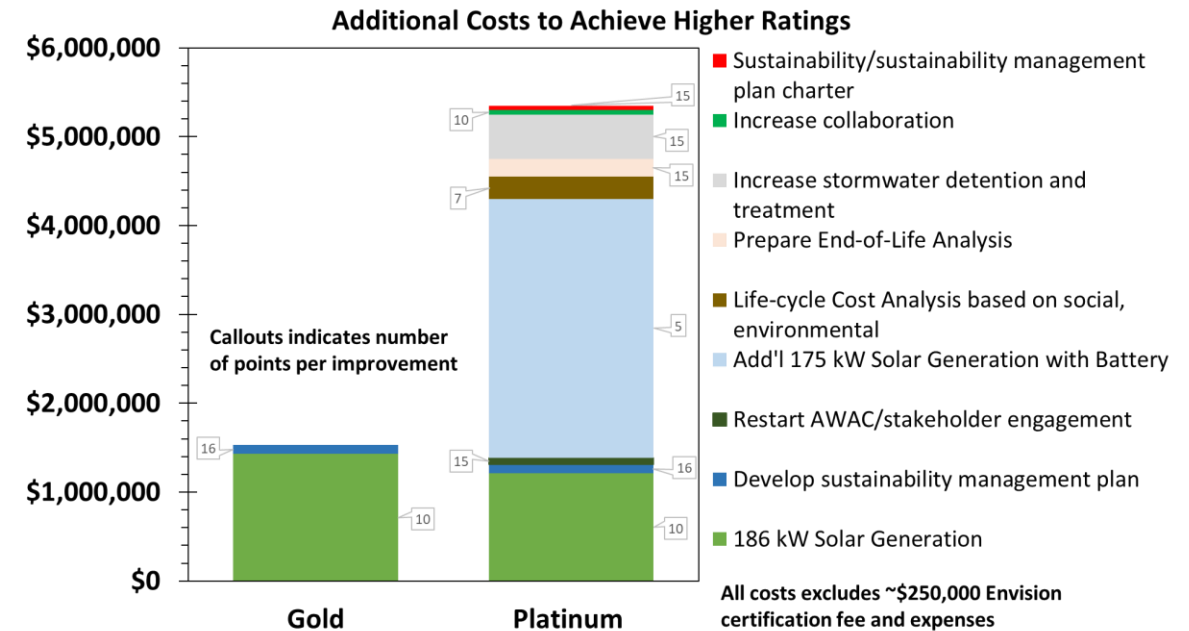
199 kW system would have provided 178 days of net daytime generation in 2019

Envision Program – Additional

Additional Considerations

- Storm Drain Retention and Treatment
- Sustainability Management Plan
- End of Life Analysis
- Ashland Water Advisory **Commission**

Envision Additions	Cost	Points
199 kW rooftop solar on buildings	\$2,000,000	10
Increase storm drain retention and treatment	\$ 150,000	15
Develop sustainability management plan	\$ 50,000	16
Prepare End of Life Analysis	\$ 100,000	15
Restart AWAC as a formal City Commission	\$ -	15
Totals	\$2,300,000	71
Current Silver Status (60% design)		369
Projected Gold Total		440



Risk and Resilience

2013 Oregon Resilience Plan for Water Systems

- Set Level of Service – Recovery Times

Seismic

- Built to Current Code

Landslide

- New Location Minimizes Risk

Flood

- Outside of 100 – Year Flood Plain & Inundation Zone

Fire

- Clear Area
- Suppression Capabilities Onsite

Water Quality

- Algae
- Taste and Odor
- Fire Debris & Sediment



Water Treatment Plant Update

Current Status:

- 60% Design & Cost Estimating Complete
- 60% Value Engineering & Cost Estimate
- Sizing Optimization
 - \$32.8 Million
- Envision Components – Additional Cost
 - \$2.3 Million potential

Next Steps:

- Incorporate Envision Components
- Begin Conditional Use Permitting Process
- Develop 90% Design Document and Costs
- Develop Final Financing Package for Approval



Water Treatment Plant Update

Questions and Discussion