

# TPU Equity Initiative and Equal Opportunity Report

Office of Equity and Human Rights & Human Resources Department

Public Utility Board Study Session August 28, 2019

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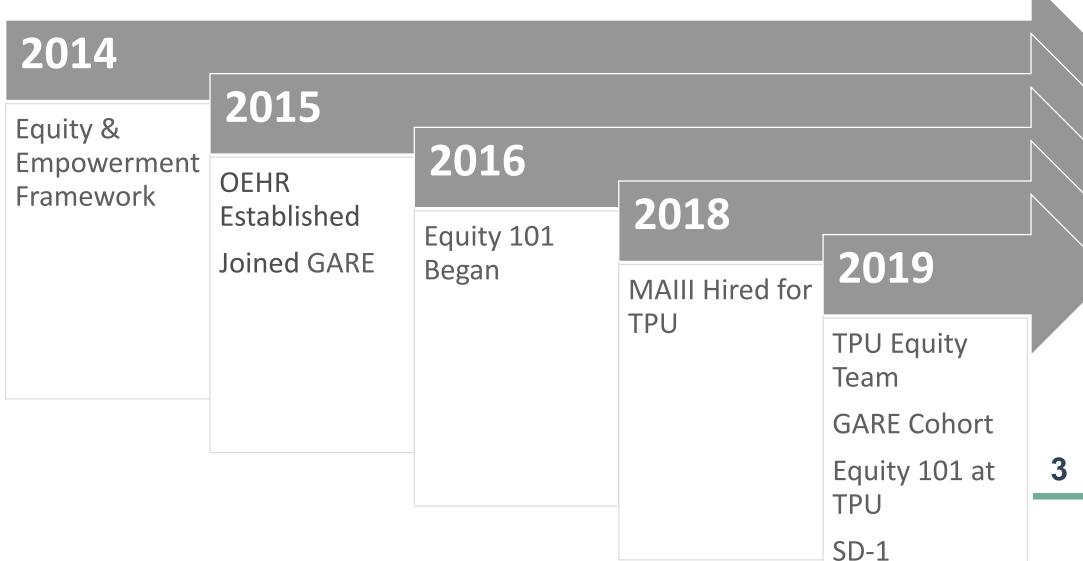


# •••OVERVIEW

- City of Tacoma Equity Initiative Background
- Equity and Empowerment Framework
- Equity at TPU
- Workforce Equity and Equal Opportunity



# City of Tacoma Equity Initiative





# Equity & Empowerment Framework

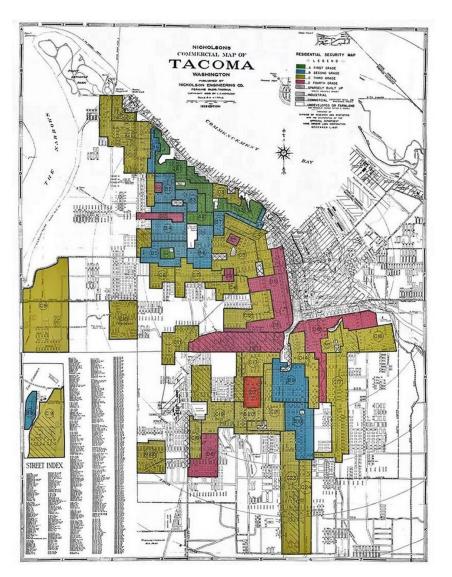
Our **VISION** is for Tacoma to be an inclusive and equitable place to live, work, and play.

EQUITY is when everyone has access to the opportunities necessary to satisfy their essential needs, advance their well-being, and achieve their full potential.

# EQUALITY VERSUS EQUITY



# Equity & Empowerment Framework



# **GOALS**

- 1. The City's **workforce** reflects the community it serves
- 2. Purposeful **community** outreach and engagement
- 3. Equitable **service** delivery
- 4. Support human rights
- 5. Commitment to equity in **policy** decision-making



# Gov't Alliance on Race and Equity





### **Normalize**

- A shared analysis and definitions
- Urgency / prioritize

# Visualize

### **Operationalize**

- Racial equity tools
- Data to develop strategies and drive results

### **Organize**

- Internal infrastructure
- Partnerships

# **GARE Racial Equity Tools and Resources**

- Results Based Accountability Framework
- Policy/Program/Service Toolkit
- Organizational Assessment
- Action Plan Template
- Core Teams
- Annual Conference
- Year-Long Training Cohort
- Communications Toolkit



# TPU's Commitment

# **EQUITY & INCLUSION STRATEGIC DIRECTIVE**

TPU is committed to achieving equity and inclusion in its workforce, service delivery, policy decision making, and community/stakeholder engagement.

# LEADERSHIP PROMISE

We will treat employees fairly and equitably.

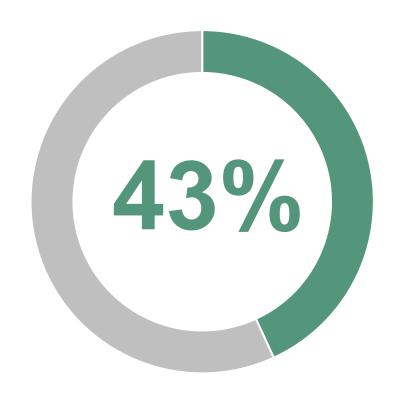


# OEHR at TPU

2019-2020	2021-2022 Proposed
• 3 FTE	• 5 FTE
• Equity 101	• Equity 101
<ul> <li>Staff TPU Equity Committee</li> </ul>	<ul> <li>Staff TPU Equity Committee</li> </ul>
<ul> <li>Conduct Case Studies/Examples</li> </ul>	<ul> <li>More Case Studies/Examples</li> </ul>
<ul> <li>Conduct Organizational Assessment</li> </ul>	<ul> <li>Implement Action Plan</li> </ul>
<ul> <li>Develop Action Plan</li> </ul>	<ul> <li>Reevaluate and Adjust (ongoing)</li> </ul>
<ul> <li>Equity in Cultural Initiatives</li> </ul>	<ul> <li>Equity Index for TPU Service Areas</li> </ul>



# Equity 101 at TPU



2019 Goal: 372 employees

# **Equity 101**

- 4-Hour Class
- History of Institutional Racism
- Equality vs. Equity
- Brainstorm Recommendations



# TPU Equity Committee

...an employee-driven committee that exists to advance TPU's internal and external equity efforts in collaboration with the Office of Equity and Human Rights.

### **Executive Sponsor**

• Steve Hatcher, Customer Services Manager

### **Customer Services**

Ricardo Ferrell, Customer Services
 Training Supervisor

### **Public Affairs and Communications**

John Gaines, Public Affairs Manager

### **Human Resources**

Cheryl Bidleman, Deputy Director

### **Power**

- Ahlmahz Negash, Power Analyst
- Alice Massara, Strategy, Innovation & Engagement

### Water

- Celine Mina, Water Quality Engineer
- Johnathan Castro, Water Utility Worker

### Rail

- Eric Fay, Finance and Technology
- Marc Robertson, Safety and Compliance

# **At-Large**

Tosha Siebert, Relay Shop Field Supervisor

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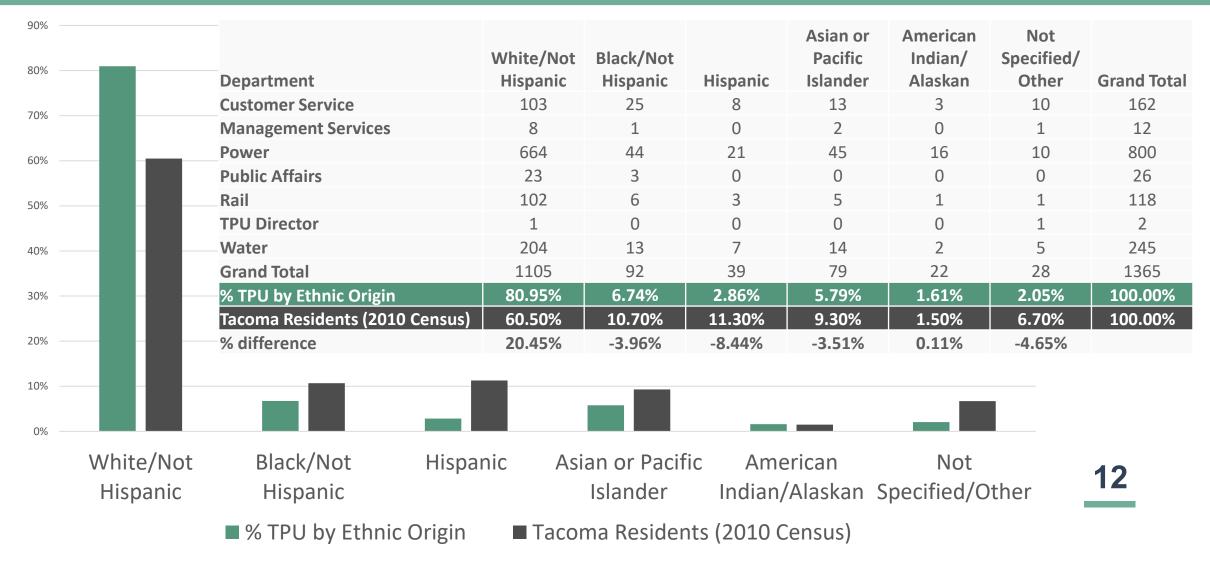


# **Workforce Equity**

# "The City's workforce reflects the community it serves."

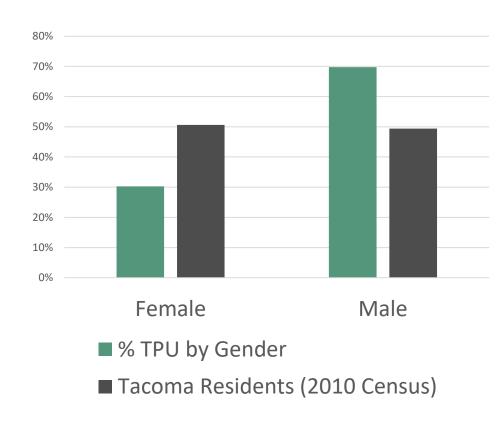


# TPU EEO Data Q2 2019 – Race & Ethnicity





# TPU EEO Data Q2 2019 - Gender



Department	Female	Male	<b>Grand Total</b>
Customer Service	109	53	162
Management Services	9	3	12
Power	211	589	800
Public Affairs	18	8	26
Rail	9	109	118
TPU Director	2	0	2
Water	55	190	245
<b>Grand Total</b>	413	952	1365
% TPU by Gender	30.26%	69.74%	100.00%
Tacoma Residents (2010 Census)	50.60%	49.40%	100.00%
% difference	-20.34%	20.34%	



# Human Resources Strategic Initiatives

- Fostering a diverse, equitable and inclusive culture.
- Improving processes, programs and organizational structures.
- Hiring and retaining talent.
- Investing in our employees.



# **Human Resources Activities**

Complete	In Progress	In Development
• Diver-City Event	<ul> <li>Workforce Equity Study</li> <li>Bias awareness in hiring</li> <li>Equal Opportunity Program Expansion</li> </ul>	<ul> <li>Strategic Talent Connections Committee</li> <li>Performance Measures</li> <li>Data Analytics</li> </ul>



# Equal Employment Opportunity Program

- Fostering a diverse, equitable and inclusive culture by organizing and directing activities that promote inclusive and equitable environments.
- Developing a comprehensive, active and sustainable Equal Employment Opportunity Program that proactively encourages accountability, and supports inclusion, equity and diversity throughout recruitment, hiring and employment with the City of Tacoma.



# Guiding Policies and Frameworks

- HB 1696 Pay Equity Legislation
- I-200 Allows us to consider protected classes in hiring
- City of Tacoma PMP-130 Anti-Discrimination Policy
- Title VII of Civil Rights Act of 1964



# Thank You!

# Questions?

### EEO Quarterly Report - 2nd Quarter 2019 Annual Salary Summary

Gender	\$150,001-greater	\$100,001-150,000	\$75,001-100,000	\$50,001-75,000	< \$50,000	Grand Total
Female	31	244	329	400	68	1072
Male	150	944	735	567	45	2441
Grand Total	181	1188	1064	967	113	3513

Race/Ethnic Origin	\$150,001-greater	\$100,001-150,000	\$75,001-100,000	\$50,001-75,000	< \$50,000	Grand Total
American Indian/Alaskan	1	18	14	23		56
Asian or Pacific Islander	11	91	85	86	7	280
Black/Not Hispanic	14	64	62	86	15	241
Hispanic	6	25	48	46	4	129
White/Not Hispanic	149	976	843	710	71	2749
Not Specified/Other		14	12	16	16	58
Grand Total	181	1188	1064	967	113	3513

EEO Category	\$150,001-greater	\$100,001-150,000	\$75,001-100,000	\$50,001-75,000	< \$50,000	Grand Total
1 Officials & Administrators	93	46	4			143
2 Professionals	75	500	272	110	2	959
3 Technician		114	194	120	2	430
4 Protective Service Workers	13	347	162	36		558
5 Paraprofessionals			26	11	2	39
6 Administrative Support		2	65	287	65	419
7 Skilled Craft Workers		178	292	109	1	580
8 Service Maintenance		1	49	294	41	385
Grand Total	181	1188	1064	967	113	3513

Department	\$150,001-greater	\$100,001-150,000	\$75,001-100,000	\$50,001-75,000	< \$50,000	Grand Total
City Attorney's Office	16	11	13	10	4	54
City Manager	4	12	23	11	1	51
Community & Economic Development	1	6	7	8		22
Customer Service	4	8	24	89	37	162
Environmental Services	15	40	161	246	16	478
Finance	2	16	45	35	1	99
Fire	25	250	104	36	1	416
Hearings Examiner	1		1	1		3
Human Resources	1	8	17	12	4	42
Information Technology	3	75	21	22		121
Management Services	1	3	4	4		12
Municipal Court		2	3	20	4	29
Neighborhood & Community Services	1	2	13	13		29
Planning & Development Services	2	21	38	22	3	86
Police	21	254	81	35		391
Power	57	360	207	153	23	800
Public Affaiars & Communication	3	11	8	3	1	26
Public Works	5	42	91	118	4	260
Rail	3	20	87	8		118
Retirement	1	1	3	4		9
Safety		3	2	1		6
Tacoma Venues & Events	2	4	13	19	14	52
TPU Director	1	1				2
Water	12	38	98	97		245
Grand Total	181	1188	1064	967	113	3513

### EEO Quarterly Report - 2nd Quarter 2019 Annual Salary by Gender - Combined View

Race/Ethnic Origin	Gender	\$150,001-greater	\$100,001-150,000	\$75,001-100,000	\$50,001-75,000	< \$50,000	Grand Total
American Indian/Alaskan	Female		3	2	12		17
	Male	1	15	12	11		39
Asian or Pacific Islander	Female	3	23	32	40	7	105
	Male	8	68	53	46		175
Black/Not Hispanic	Female	1	21	27	38	8	95
	Male	13	43	35	48	7	146
Hispanic	Female	1	3	16	16	2	38
	Male	5	22	32	30	2	91
White/Not Hispanic	Female	26	190	247	292	38	793
	Male	123	786	596	418	33	1956
Not Specified/Other	Female		4	5	2	13	24
	Male		10	7	14	3	34
Grand Total		181	1188	1064	967	113	3513

Department	Gender	\$150,001-greater	\$100,001-150,000	\$75,001-100,000	\$50,001-75,000	< \$50,000	Grand Total
City Attorney's Office	Female	7	6	10	8	4	35
	Male	9	5	3	2		19
City Manager	Female	2	10	13	4		29
	Male	2	2	10	7	1	22
Community & Economic Development	Female		5	6	6		17
	Male	1	1	1	2		5
Customer Service	Female		6	21	56	26	109
	Male	4	2	3	33	11	53
Environmental Services	Female	2	15	41	54	6	118
	Male	13	25	120	192	10	360
Finance	Female	1	12	32	24	1	70
	Male	1	4	13	11		29
Fire	Female	1	21	20	20	1	63
	Male	24	229	84	16		353
Hearings Examiner	Female			1	1		2
<u> </u>	Male	1					1
Human Resources	Female	_	7	15	11	4	37
	Male	1	1	2	1	•	5
Information Technology	Female	1	25	7	12		45
orauon realinology	Male	2	50	14	10		76
Management Services	Female	-	3	2	4		9
Wilding Circles	Male	1		2	7		3
Municipal Court	Female	-	1	2	19	4	26
ividincipal codi t	Male		1	1	1	4	3
Neighborhood & Community Services	Female	1	2	8	7		18
Neighborhood & Community Services	Male	1	2	5	6		11
Planning & Development Services	Female	1	6	12	14	3	36
Flamming & Development Services	Male	1	15	26	8	3	50
Police	Female	2	38	18	24		82
Police		19	216	63	11		309
Power	Male Female	9	58	62	71	11	211
Power	Male	48	302	145	82	12	589
Public Affairs & Communication	Female	1	6	8	2	12	18
Public Arrairs & Communication		2		٥		1	8
Public Works	Male Female	2	5 7	15	1 24	2	48
Public Works		5	35	76	94	2	212
D-#	Male	3	2	76	94		9
Rail	Female	2					
D-Minama and	Male	3	18	80	8		109
Retirement	Female		1	3	4		8 1
C-f-4.	Male	1	-		4		
Safety	Female		1	1	1		3
	Male		2	1			3
Tacoma Venues & Events	Female	1	1	6	9	5	22
	Male	1	3	7	10	9	30
TPU Director	Female Male	1	1				2
Water	Female	1	10	19	25	_	55
	Male	11	28	79	72		190
Grand Total		181	1188	1064	967	113	3513

### EEO Quarterly Report - 2nd Quarter 2019 Job Group by Gender and Race/Ethnic Origin - Combined View

		American	Asian or Pacific			White/Not		
Job Group	Gender	Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	Hispanic	Not Specified	Grand Total
1 Managers - Executive	Female			2		10		12
	Male		4	6	1	53		64
2 Management - General	Female	1	6	6	2	43		58
	Male	1	6	9	5	83	3	107
3 Professionals - General	Female	3	21	15	5	122	2	168
	Male	2	19	7	5	103	4	140
4 Professionals - Senior/Supervisory	Female	1	19	10	4	126	4	164
	Male	1	13	5	6	118	4	147
5 Professional - Technicial	Female	1	4		1	25		31
	Male	1	2	1	1	42	4	51
6 Professional - Senior/Supervisory Technical	Female		2	2		39	1	44
	Male		10	6	1	95	2	114
7 Professionals - Attorney	Female		1			1		2
	Male		1		1	4		6
8 Firefighter	Female		2	5	3	19		29
	Male	2	12	17	10	112		153
9 Fire - Specialty	Female		1			6		7
	Male		2	1		41		44
10 Fire - Supervisory	Female	1	1			2		4
	Male	4	4	5	1	72		86
11 Fire - Management	Female					3		3
	Male	1	1	1	1	24		28
12 Police - Patrol Officer	Female		3	3	4	21		31
	Male	2	17	9	15	152	5	200
13 Police - Sergeant	Female					3		3
	Male		5			34		39
14 Police - Detective	Female		1	1		13		15
	Male		3	2		35		40
15 Police - Management	Female					2		2
	Male		1	3		12		16
16 Support Staff - General	Female	8	22	21	12	144	14	221
	Male	1	4	7	3	47	3	65
17 Support Staff - Senior/Supervisory	Female		11	16	2	87	2	118
	Male	1	3	1	2	9		16
18 Technicians - Entry	Female		5	8	2	54	1	70
-	Male	2	12	10	6	125		155
19 Technicians - Senior/Supervisory	Female		2	1	1	21		25
	Male	1	5	3	7	49		65
20 Service Maintenance - General	Female	1	2	3		19		25
	Male	4	19	20	8	175	3	229
21 Service Maintenance - Supervisory	Female				2	4		6
	Male	2	1	2	1	45		51
22 Skilled Crafts - Entry/Apprentice	Female					7		7
	Male	1	5	6	4	74	2	92
23 Skilled Crafts - General	Female	1	2			17		20
	Male	10	20	21	10	324	4	389
24 Skilled Crafts - Senior/Supervisory	Female			2		5		7
	Male	3	6	4	3	128		144
Grand Total		56	280	241	129	2749	58	3513

# EEO Quarterly Report - 2nd Quarter 2019 Department by Gender and Race/Ethnic Origin - Combined View

		American	Asian or Pacific	Black/Not		White/Not	Not	
Department	Gender	Indian/Alaskan	Islander	Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
City Attorney's Office	Female	, , , , , , , , , , , , , , , , , , , ,	2	1	2	29	1	35
,	Male		3	2	2	12		19
City Manager	Female		4	10		13	2	29
, ,	Male		2	7		12	1	22
Community Economic Development	Female		1	2		14		17
,	Male			1	2	2		5
Customer Service	Female		11	17	5	68	8	109
	Male	3	2	8	3	35	2	53
Environmental Services	Female	2	7	5	4	98	2	118
	Male	6	24	19	11	300		360
Finance	Female	2	13	3	4	48		70
	Male		10	1	2	15	1	29
Fire	Female	1	4	5	4	49		63
	Male	8	21	29	12	281	2	353
Hearings Examiner	Female		1			1		2
-	Male					1		1
Human Resources	Female	1	4	3	5	23	1	37
	Male		1			4		5
Information Technology	Female		9		1	33	2	45
<b>.</b>	Male		9	5	2	57	3	76
Management Services	Female		2	1		5	1	9
	Male					3		3
Municipal Court	Female		3	5		17	1	26
•	Male					3		3
Neighborhood & Community Services	Female		3	5		10		18
,	Male		1	1	3	6		11
Planning & Development Services	Female	1	3	2	2	27	1	36
	Male		6	1	1	42		50
Police	Female	3	10	7	5	55	2	82
	Male	2	29	14	16	243	5	309
Power	Female	5	12	16	4	172	2	211
	Male	11	33	28	17	492	8	589
Public Affairs & Communication	Female			2		16		18
	Male			1		7		8
Public Works	Female		6	6	1	35		48
	Male	7	18	13	11	159	4	212
Rail	Female			1		8		9
	Male	1	5	5	3	94	1	109
Retirement	Female		3			5		8
	Male					1		1
Safety	Female		1			2		3
	Male		1			2		3
Tacoma Venues & Events	Female	1	1	1		19		22
	Male		1	1		26	2	30
TPU Director	Female					1	1	2
	Male							0
Water	Female	1	5	3	1	45		55
	Male	1	9	10	6	159	5	190
Grand Total		56	280	241	129	2749	58	3513

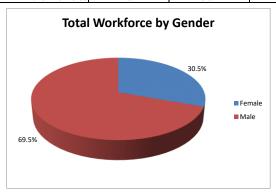
# EEO Quarterly Report - 2nd Quarter 2019 Department by Gender and Race/Ethnic Origin - Separate View

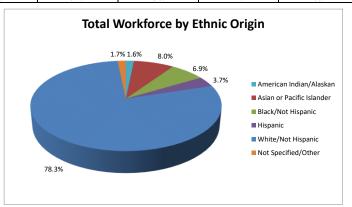
	Amer Indian/	Asian/Pacific	Black/Not		White/Not	Not Specified/	
Department - Race/Ethnic Origin	Alaskan	Islander	Hispanic	Hispanic	Hispanic	Other	<b>Grand Total</b>
City Attorney		5	3	4	41	1	54
City Manager		6	17		25	3	51
Community Economic Development		1	3	2	16		22
Customer Service	3	13	25	8	103	10	162
Environmental Services	8	31	24	15	398	2	478
Finance	2	23	4	6	63	1	99
Fire	9	25	34	16	330	2	416
Hearings Examiner		1			2		3
Human Resources	1	5	3	5	27	1	42
Information Technology		18	5	3	90	5	121
Management Services		2	1		8	1	12
Municipal Court		3	5		20	1	29
Neighborhood & Community Services		4	6	3	16		29
Planning & Development Services	1	9	3	3	69	1	86
Police	5	39	21	21	298	7	391
Power	16	45	44	21	664	10	800
Public Affairs & Communication			3		23		26
Public Works	7	24	19	12	194	4	260
Rail	1	5	6	3	102	1	118
Retirement		3			6		9
Safety		2			4		6
Tacoma Venues & Events	1	2	2		45	2	52
TPU Director					1	1	2
Water	2	14	13	7	204	5	245
Grand Total	56	280	241	129	2749	58	3513
% of Workforce	1.6%	8.0%	6.9%	3.7%	78.3%	1.7%	100.0%
Tacoma Residents (2010 Census)	1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
% Difference	0.1%	-1.3%	-3.8%	-7.6%	17.8%	-5.0%	0.0%

Department - Gender	Female	Male	Grand Total
City Attorney	35	19	54
City Manager	29	22	51
Community Economic Development	17	5	22
Customer Service	109	53	162
Environmental Services	118	360	478
Finance	70	29	99
Fire	63	353	416
Hearings Examiner	2	1	3
Human Resources	37	5	42
Information Technology	45	76	121
Management Services	9	3	12
Municipal Court	26	3	29
Neighborhood & Community Services	18	11	29
Planning & Development Services	36	50	86
Police	82	309	391
Power	211	589	800
Public Affairs & Communication	18	8	26
Public Works	48	212	260
Rail	9	109	118
Retirement	8	1	9
Safety	3	3	6
Tacoma Venues & Events	22	30	52
TPU Director	2		2
Water	55	190	245
Grand Total	1072	2441	3513
% of Workforce	30.5%	69.5%	100.0%
Tacoma Residents (2010 Census)	50.6%	49.4%	100.0%

### **Total Workforce**

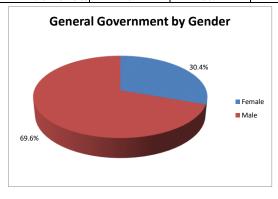
	American	Asian or Pacific					
	Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	<b>Grand Total</b>
Female	17	105	95	38	793	24	1072
Male	39	175	146	91	1956	34	2441
Grand Total	56	280	241	129	2749	58	3513
% of Workforce	1.6%	8.0%	6.9%	3.7%	78.3%	1.7%	100%

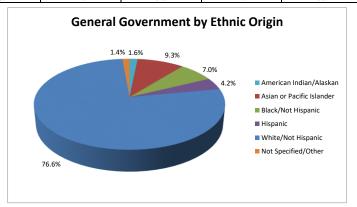




### **General Government**

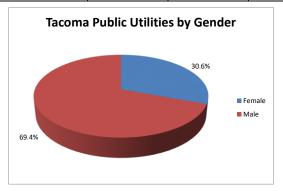
	American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
Female	11	72	55	28	473	12	651
Male	23	126	94	62	1165	18	1488
Grand Total	34	198	149	90	1638	30	2139
% of Workforce	1.6%	9.3%	7.0%	4.2%	76.6%	1.4%	100%

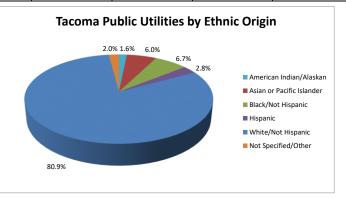




### **Tacoma Public Utilities**

	American	Asian or Pacific					
	Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
Female	6	33	40	10	320	12	421
Male	16	49	52	29	791	16	953
Grand Total	22	82	92	39	1111	28	1374
% of Workforce	1.6%	6.0%	6.7%	2.8%	80.9%	2.0%	100%





# EEO Quarterly Report - 2nd Quarter 2019 Tacoma Residents and Workforce Comparison Graph

### **Total Workforce**

	American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
Female	17	105	95	38	793	24	1072
Male	39	175	146	91	1956	34	2441
Grand Total	56	280	241	129	2749	58	3513
% of Workforce	1.6%	8.0%	6.9%	3.7%	78.3%	1.7%	100.0%

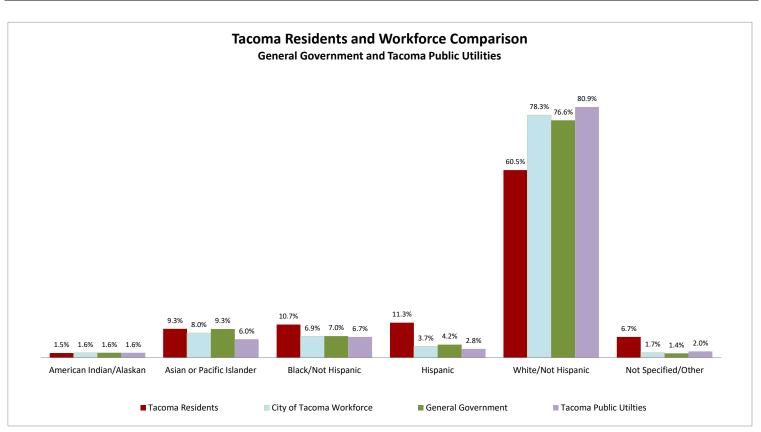
### **General Government**

	American	Asian or Pacific					
	Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
Female	11	72	55	28	473	12	651
Male	23	126	94	62	1165	18	1488
Grand Total	34	198	149	90	1638	30	2139
% of Workforce	1.6%	9.3%	7.0%	4.2%	76.6%	1.4%	100.0%

### **Tacoma Public Utilities**

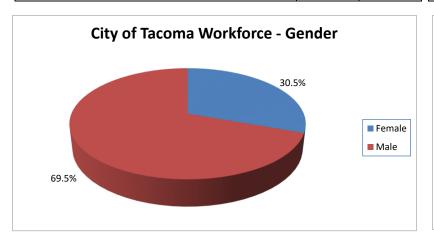
	American	Asian or Pacific					
	Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
Female	6	33	40	10	320	12	421
Male	16	49	52	29	791	16	953
Grand Total	22	82	92	39	1111	28	1374
% of Workforce	1.6%	6.0%	6.7%	2.8%	80.9%	2.0%	100.0%

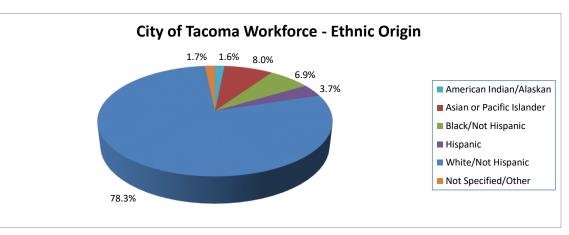
Tacoma Residents - 2010	1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%

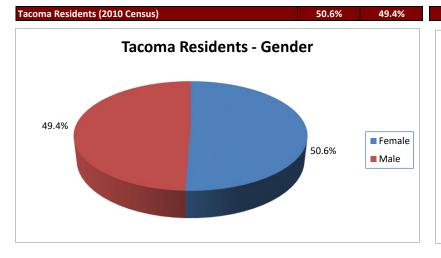


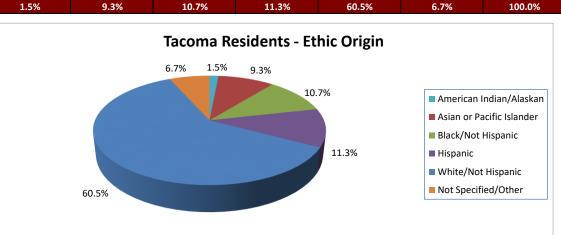
	Female	Male
Total City of Tacoma Workforce	1072	2441
Workforce %	30.5%	69.5%
Tacoma Residents (2010 Census)	50.6%	49.4%
% Difference	-20.1%	20.1%

American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
56	280	241	129	2749	58	3513
1.6%	8.0%	6.9%	3.7%	78.3%	1.7%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
0.1%	-1.3%	-3.8%	-7.6%	17.8%	-5.0%	0.0%



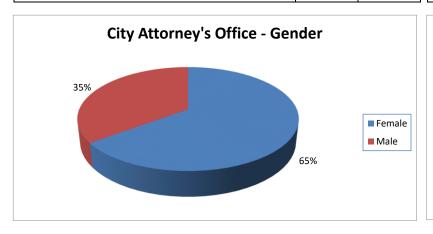


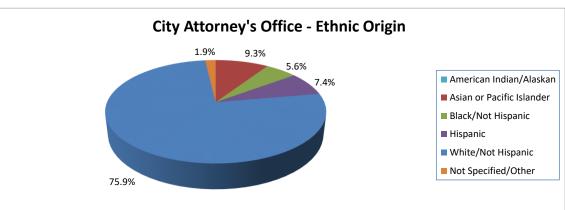




		Female	Male
City Attorney's Office		35	19
	Workforce %	64.8%	35.2%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	14.2%	-14.2%

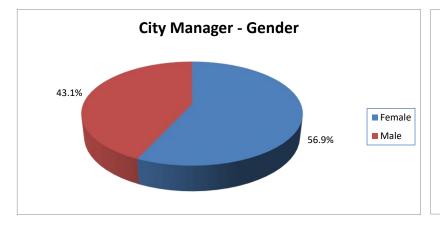
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
	5	3	4	41	1	54
0.0%	9.3%	5.6%	7.4%	75.9%	1.9%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	0.0%	-5.1%	-3.9%	15.4%	-4.8%	0.0%

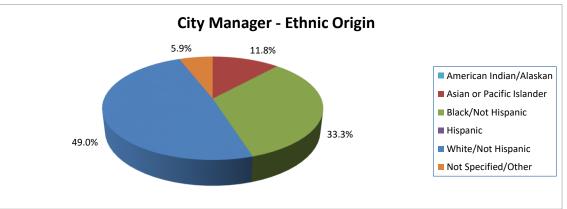




		Female	Male
City Manager		29	22
	Workforce %	56.9%	43.1%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	6.3%	-6.3%

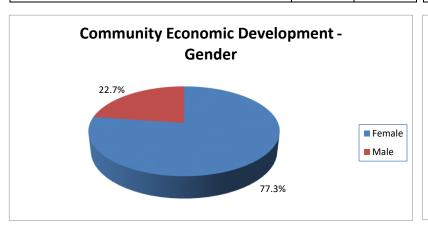
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
	6	17		25	3	51
0.0%	11.8%	33.3%	0.0%	49.0%	5.9%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	2.5%	22.6%	-11.3%	-11.5%	-0.8%	0.0%

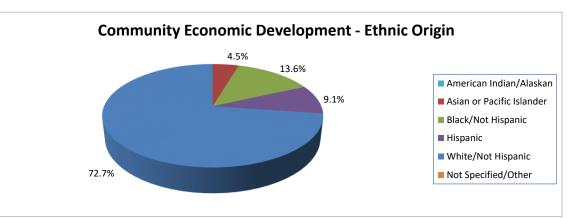




		Female	Male
Community & Economic Development		17	5
	Workforce %	77.3%	22.7%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	26.7%	-26.7%

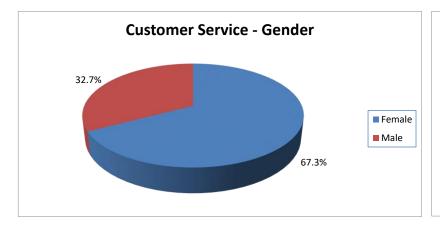
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
	1	3	2	16		22
0.0%	4.5%	13.6%	9.1%	72.7%	0.0%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	-4.8%	2.9%	-2.2%	12.2%	-6.7%	0.0%

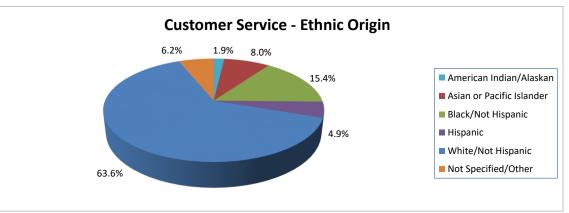




		Female	Male
Customer Service		109	53
	Workforce %	67.3%	32.7%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	16.7%	-16.7%

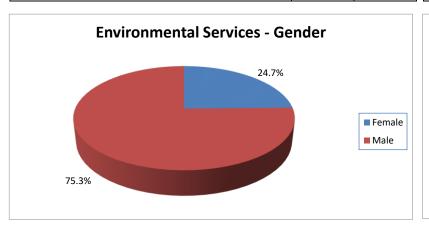
American	Asian or Pacific			White/Not	Not	
Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
3	13	25	8	103	10	162
1.9%	8.0%	15.4%	4.9%	63.6%	6.2%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
0.4%	-1.3%	4.7%	-6.4%	3.1%	-0.5%	0.0%

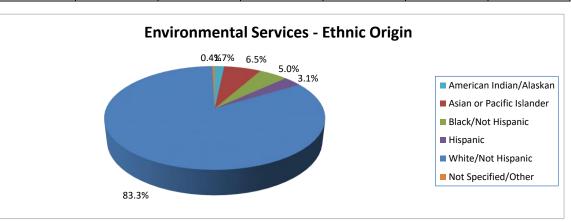




	Female	Male
Environmental Services	118	360
Workforce %	24.7%	75.3%
Tacoma Residents (2010 Census)	50.6%	49.4%
% Difference	-25.9%	25.9%

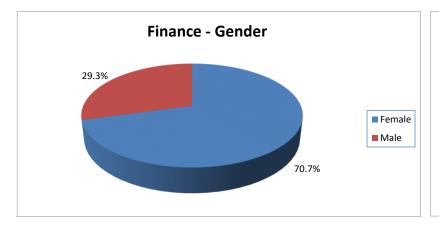
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
8	31	24	15	398	2	478
1.7%	6.5%	5.0%	3.1%	83.3%	0.4%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
0.2%	-2.8%	-5.7%	-8.2%	22.8%	-6.3%	0.0%

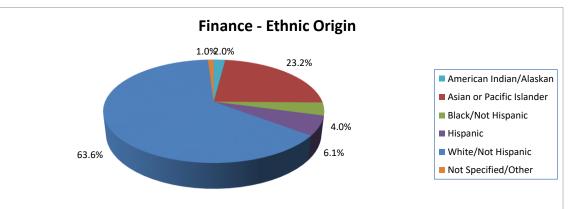




		Female	Male
Finance		70	29
	Workforce %	70.7%	29.3%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	20.1%	-20.1%

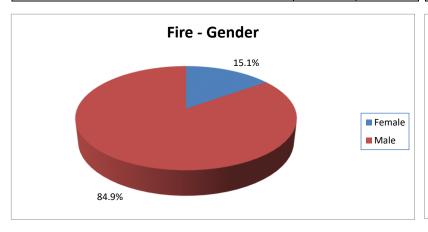
American	Asian or Pacific			White/Not	Not	
Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
2	23	4	6	63	1	99
2.0%	23.2%	4.0%	6.1%	63.6%	1.0%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
0.5%	13.9%	-6.7%	-5.2%	3.1%	-5.7%	0.0%

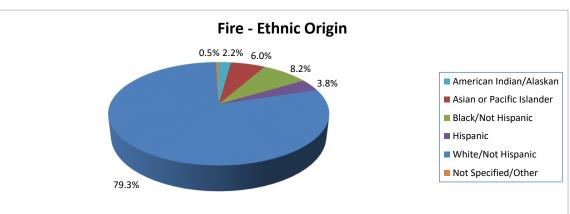




		Female	Male
Fire		63	353
	Workforce %	15.1%	84.9%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	-35.5%	35.5%

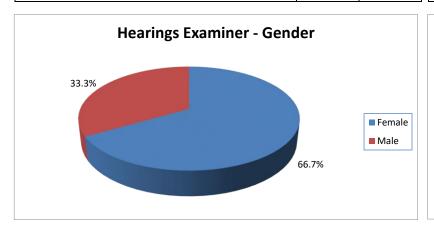
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
9	25	34	16	330	2	416
2.2%	6.0%	8.2%	3.8%	79.3%	0.5%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
0.7%	-3.3%	-2.5%	-7.5%	18.8%	-6.2%	0.0%

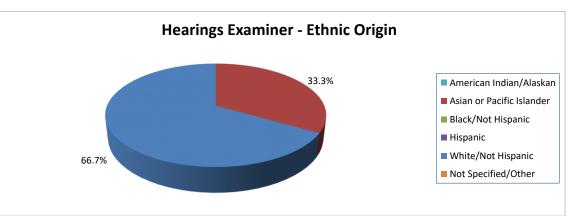




		Female	Male
Hearings Examiner		2	1
	Workforce %	66.7%	33.3%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	16.1%	-16.1%

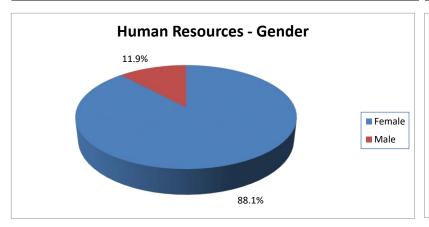
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
	1			2		3
0.0%	33.3%	0.0%	0.0%	66.7%	0.0%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	24.0%	-10.7%	-11.3%	6.2%	-6.7%	0.0%

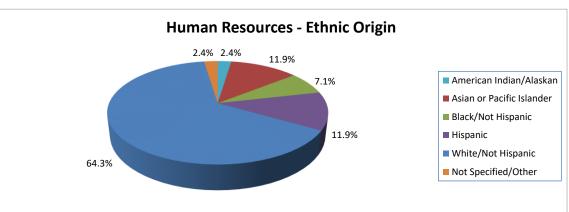




	Female	Male
Human Resources	37	5
Workford	e % 88.1%	11.9%
Tacoma Residents (2010 Census)	50.6%	49.4%
% Differ	rence 37.5%	-37.5%

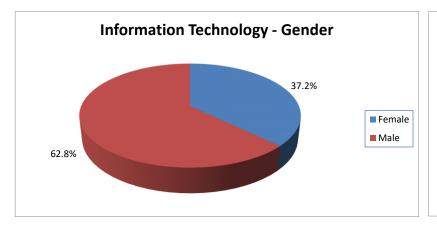
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
1	5	3	5	27	1	42
2.4%	11.9%	7.1%	11.9%	64.3%	2.4%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
0.9%	2.6%	-3.6%	0.6%	3.8%	-4.3%	0.0%

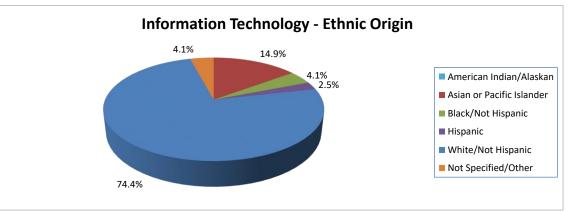




		Female	Male
Information Technology		45	76
	Workforce %	37.2%	62.8%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	-13.4%	13.4%

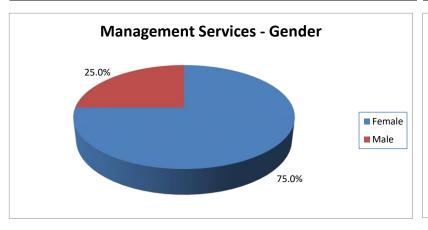
American	Asian or Pacific			White/Not	Not	
Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
	18	5	3	90	5	121
0.0%	14.9%	4.1%	2.5%	74.4%	4.1%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	5.6%	-6.6%	-8.8%	13.9%	-2.6%	0.0%

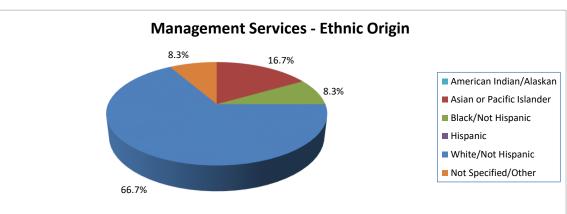




	Female	Male
Management Services	9	3
Workforce %	75.0%	25.0%
Tacoma Residents (2010 Census)	50.6%	49.4%
% Difference	24.4%	-24.4%

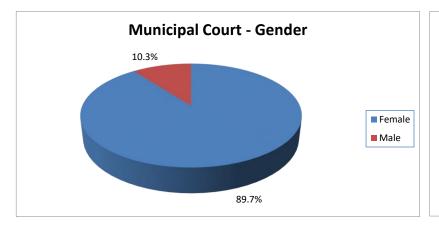
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
	2	1		8	1	12
0.0%	16.7%	8.3%	0.0%	66.7%	8.3%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	7.4%	-2.4%	-11.3%	6.2%	1.6%	0.0%

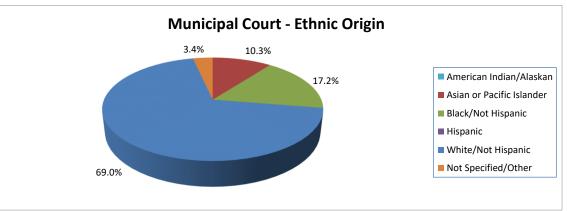




	Female	Male
Municipal Court	26	3
Workforce %	89.7%	10.3%
Tacoma Residents (2010 Census)	50.6%	49.4%
% Difference	39.1%	-39.1%

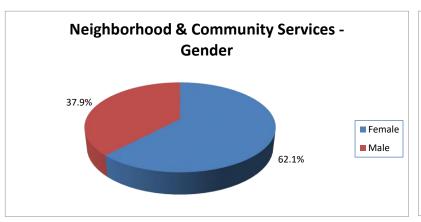
American	Asian or Pacific			White/Not	Not	
Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
	3	5		20	1	29
0.0%	10.3%	17.2%	0.0%	69.0%	3.4%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	1.0%	6.5%	-11.3%	8.5%	-3.3%	0.0%

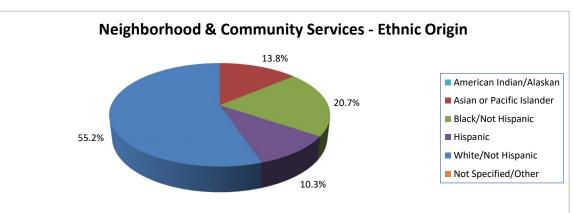




		Female	Male
Neighborhood & Community Services		18	11
	Workforce %	62.1%	37.9%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	11.5%	-11.5%

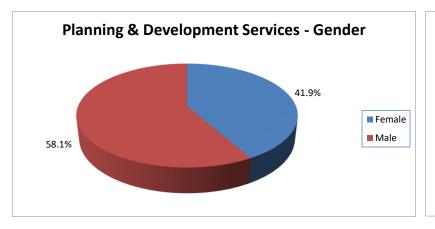
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
	4	6	3	16		29
0.0%	13.8%	20.7%	10.3%	55.2%	0.0%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	4.5%	10.0%	-1.0%	-5.3%	-6.7%	0.0%

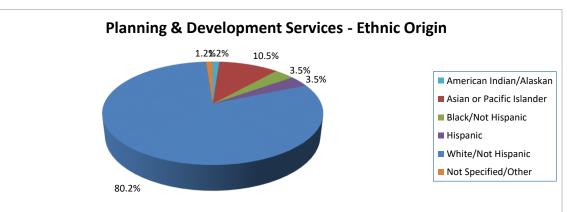




		Female	Male
Planning & Development Services		36	50
	Workforce %	41.9%	58.1%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	-8.7%	8.7%

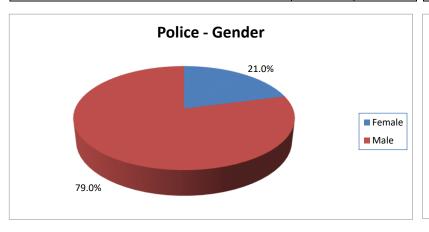
American	Asian or Pacific			White/Not	Not	
Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
1	9	3	3	69	1	86
1.2%	10.5%	3.5%	3.5%	80.2%	1.2%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-0.3%	1.2%	-7.2%	-7.8%	19.7%	-5.5%	0.0%

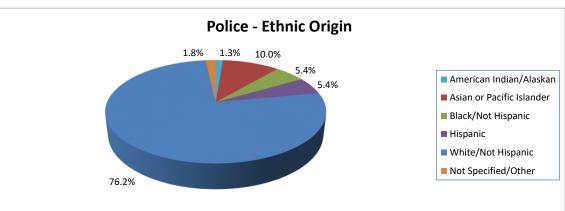




		Female	Male
Police		82	309
	Workforce %	21.0%	79.0%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	-29.6%	29.6%

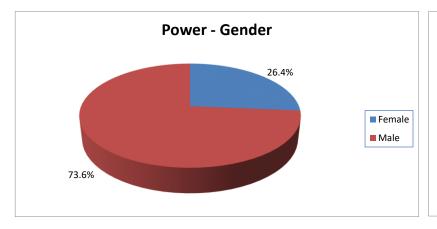
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
5	39	21	21	298	7	391
1.3%	10.0%	5.4%	5.4%	76.2%	1.8%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-0.2%	0.7%	-5.3%	-5.9%	15.7%	-4.9%	0.0%

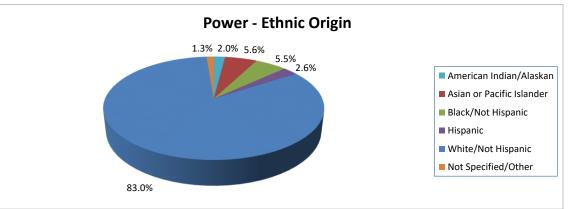




	Female	Male
Power	211	589
Workforce %	26.4%	73.6%
Tacoma Residents (2010 Census)	50.6%	49.4%
% Difference	-24.2%	24.2%

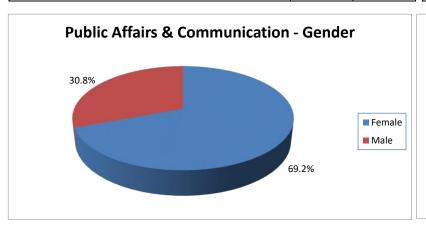
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
16	45	44	21	664	10	800
2.0%	5.6%	5.5%	2.6%	83.0%	1.3%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
0.5%	-3.7%	-5.2%	-8.7%	22.5%	-5.5%	0.0%

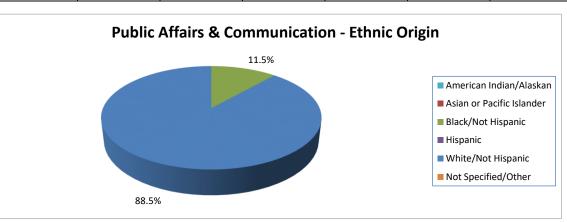




		Female	Male
Public Affairs & Communication		18	8
	Workforce %	69.2%	30.8%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	18.6%	-18.6%

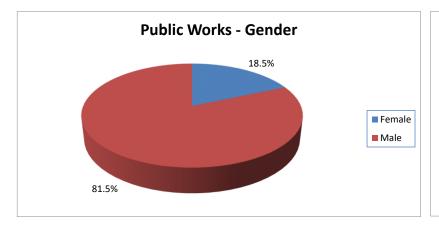
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
		3		23		26
0.0%	0.0%	11.5%	0.0%	88.5%	0.0%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	-9.3%	0.8%	-11.3%	28.0%	-6.7%	0.0%

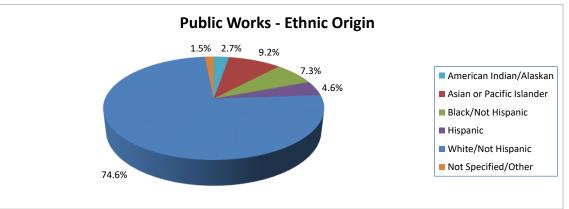




		Female	Male
Public Works		48	212
	Workforce %	18.5%	81.5%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	-32.1%	32.1%

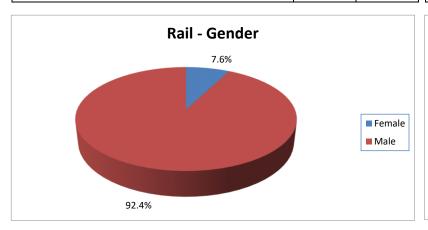
American	Asian or Pacific			White/Not	Not	
Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
7	24	19	12	194	4	260
2.7%	9.2%	7.3%	4.6%	74.6%	1.5%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
1.2%	-0.1%	-3.4%	-6.7%	14.1%	-5.2%	0.0%

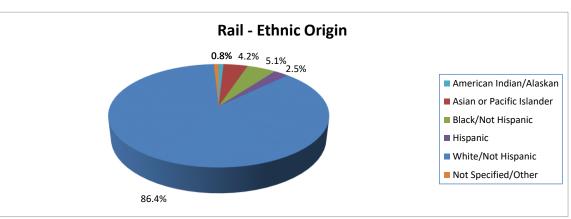




		Female	Male
Rail		9	109
	Workforce %	7.6%	92.4%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	-43.0%	43.0%

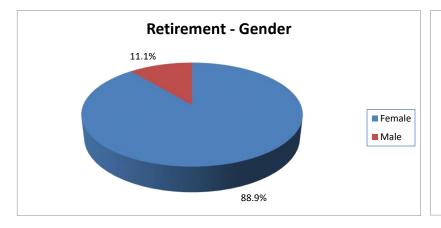
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
1	5	6	3	102	1	118
0.8%	4.2%	5.1%	2.5%	86.4%	0.8%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-0.7%	-5.1%	-5.6%	-8.8%	25.9%	-5.9%	0.0%

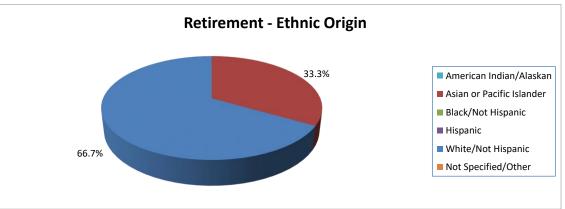




	Female	Male
Retirement	8	1
Workforce %	88.9%	11.1%
Tacoma Residents (2010 Census)	50.6%	49.4%
% Difference	38.3%	-38.3%

American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
	3			6		9
0.0%	33.3%	0.0%	0.0%	66.7%	0.0%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	24.0%	-10.7%	-11.3%	6.2%	-6.7%	0.0%

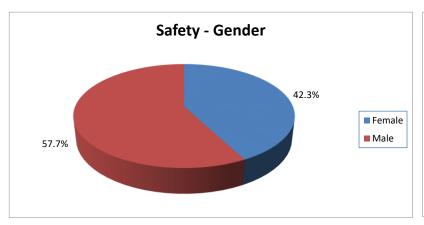


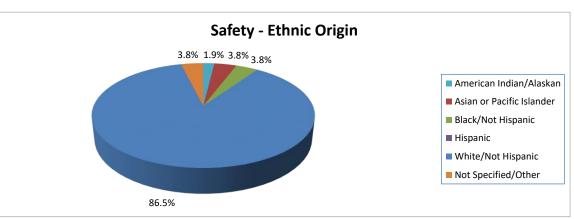


#### EEO Quarterly Report - 2nd Quarter 2019 Pie Charts by Department

	Female	Male
Safety	3	3
Workforce %	50.0%	50.0%
Tacoma Residents (2010 Census)	50.6%	49.4%
% Difference	-0.6%	0.6%

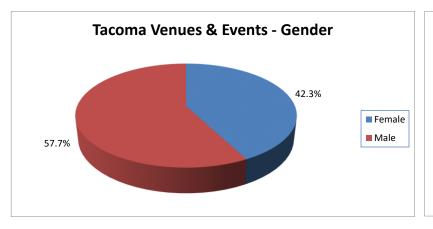
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
	2			4		6
0.0%	33.3%	0.0%	0.0%	66.7%	0.0%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	24.0%	-10.7%	-11.3%	6.2%	-6.7%	0.0%

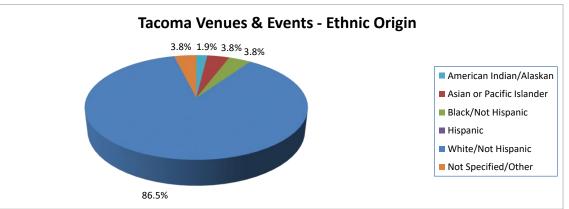




		Female	Male
Tacoma Venues & Events		22	30
	Workforce %	42.3%	57.7%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	-8.3%	8.3%

American	Asian or Pacific			White/Not	Not	
Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
1	2	2		45	2	52
1.9%	3.8%	3.8%	0.0%	86.5%	3.8%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
0.4%	-5.5%	-6.9%	-11.3%	26.0%	-2.9%	0.0%

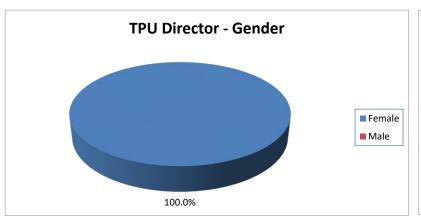


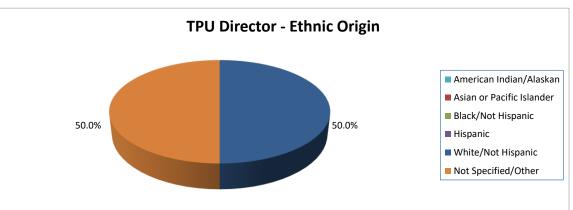


#### EEO Quarterly Report - 2nd Quarter 2019 Pie Charts by Department

		Female	Male
TPU Director		2	
	Workforce %	100.0%	0.0%
Tacoma Residents (2010 Census)		50.6%	49.4%
	% Difference	49.4%	-49.4%

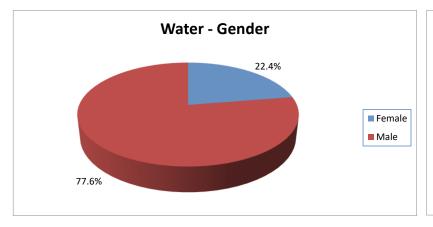
American Indian/Alaskan	Asian or Pacific Islander	Black/Not Hispanic	Hispanic	White/Not Hispanic	Not Specified/Other	Grand Total
				1	1	2
0.0%	0.0%	0.0%	0.0%	50.0%	50.0%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-1.5%	-9.3%	-10.7%	-11.3%	-10.5%	43.3%	0.0%

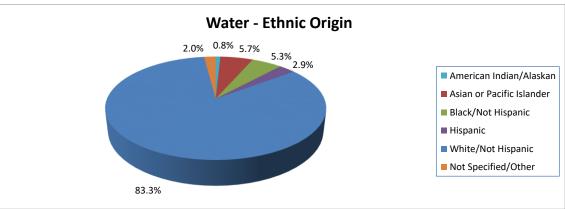




	Female	Male
Water	55	190
Workforce %	22.4%	77.6%
Tacoma Residents (2010 Census)	50.6%	49.4%
% Difference	-28.2%	28.2%

American	Asian or Pacific			White/Not	Not	
Indian/Alaskan	Islander	Black/Not Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
2	14	13	7	204	5	245
0.8%	5.7%	5.3%	2.9%	83.3%	2.0%	100.0%
1.5%	9.3%	10.7%	11.3%	60.5%	6.7%	100.0%
-0.7%	-3.6%	-5.4%	-8.4%	22.8%	-4.7%	0.0%





#### EEO Quarterly Report - 2nd Quarter 2019 Department Hires and Rehires - Separate View

	American	Asian or Pacific	Black/Not		White/Not	Not	
Department - Race/Ethnic Origin	Indian/Alaskan	Islander	Hispanic origin	Hispanic	Hispanic origin	Specified/Other	<b>Grand Total</b>
City Attorney						1	1
City Manager			1			2	3
Community & Economic Development			1				1
Customer Service		2			1	9	12
Environmental Services		1	1		3	2	7
Finance					1		1
Fire						1	1
Human Resources		1			2		3
Information Technology					2	4	6
Management Services						1	1
Municipal Court						1	1
Planning & Development Services			1			1	2
Police				1	9	6	16
Power					3	3	6
Public Affairs & Communication			1		1		2
Public Works		1			3	3	7
Rail			1	•		1	2
Tacoma Venues & Events					_	2	2
Water				•	2	2	4
Grand Total	0	5	6	1	27	39	78

Department - Gender	Female	Male	Grand Total
City Attorney	1		1
City Manager	1	2	3
Community Economic Development	1		1
Customer Service	10	2	12
Environmental Services	6	1	7
Finance		1	1
Fire		1	1
Human Resources	3		3
Information Technology	1	5	6
Management Services	1		1
Municipal Court	1		1
Planning & Development Services	2		2
Police	5	11	16
Power	1	5	6
Public Affairs & Communication	1	1	2
Public Works	1	6	7
Rail		2	2
Tacoma Venues & Events		2	2
Water	1	3	4
Grand Total	36	42	78

		American	Asian or Pacific	Black/Not		White/Not	Not	
Hire Status - Combined View	Gender	Indian/Alaskan	Islander	Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
Appointive	Female			2		1	3	6
	Male			1		5	9	15
From Eligible List	Female		4	2	1	6	15	28
	Male		1	1		11	10	23
Project	Female					2		2
	Male					2	2	4
Grand Total		0	5	6	1	27	39	78

#### EEO Quarterly Report - 2nd Quarter 2019 Department Separations - Separate View

	American	Asian or Pacific	Black/Not		White/Not	Not	
Department - Race/Ethnic Origin	Indian/Alaskan	Islander	Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
Community Economic Development		1					1
Customer Service					3		3
Environmental Services		2			4		6
Finance				1	1		2
Fire			1		6		7
Human Resources					1		1
Information Technology		2			4		6
Municipal Court					1		1
Neighborhood & Community Services			1				1
Police		1		1	5		7
Power		1			7	1	9
Public Affairs & Communication					1		1
Public Works		1			4		5
Rail			1		2		3
Tacoma Venues & Events					1		1
Water					3		3
Grand Total	0	8	3	2	43	1	57

Department - Gender	Female	Male	<b>Grand Total</b>
Community Economic Development		1	1
Customer Service	2	1	3
Environmental Services	2	4	6
Finance		2	2
Fire		7	7
Human Resources		1	1
Information Technology	1	5	6
Municipal Court	1		1
Neighborhood & Community Services		1	1
Police	4	3	7
Power	1	8	9
Public Affairs & Communication	1		1
Public Works	2	3	5
Rail		3	3
Tacoma Venues & Events		1	1
Water	1	2	3
Grand Total	15	42	57

		American	Asian or Pacific	Black/Not		White/Not	Not	
Reason for Action - Combined	Gender	Indian/Alaskan	Islander	Hispanic	Hispanic	Hispanic	Specified/Other	<b>Grand Total</b>
Dismissal *	Female							0
	Male			1				1
End of Project Appt *	Female					1		1
	Male							0
Other Position	Female							0
	Male			1		5		6
Probation Failure *	Female		1					1
	Male		1	1				2
Relocation/Moving Away	Female					2		2
	Male				1	3		4
Resignation No Reason Given	Female		2			1		3
	Male		2		1	3	1	7
Resignation - Service	Female		1			7		8
	Male		1			20		21
Death	Female							0
	Male					1		1
Grand Total		0	8	3	2	43	1	57

## Our Energy Future Series

#### **Integrated Resource Planning 101**

Rachel Clark Resource Planning Manager



What are IRPs and why do we do them?

Tacoma's IRP

What's next?

# What are IRPs and why do we do them?

**Section 1** 

## The future belongs to those who prepare for it today

Malcolm X

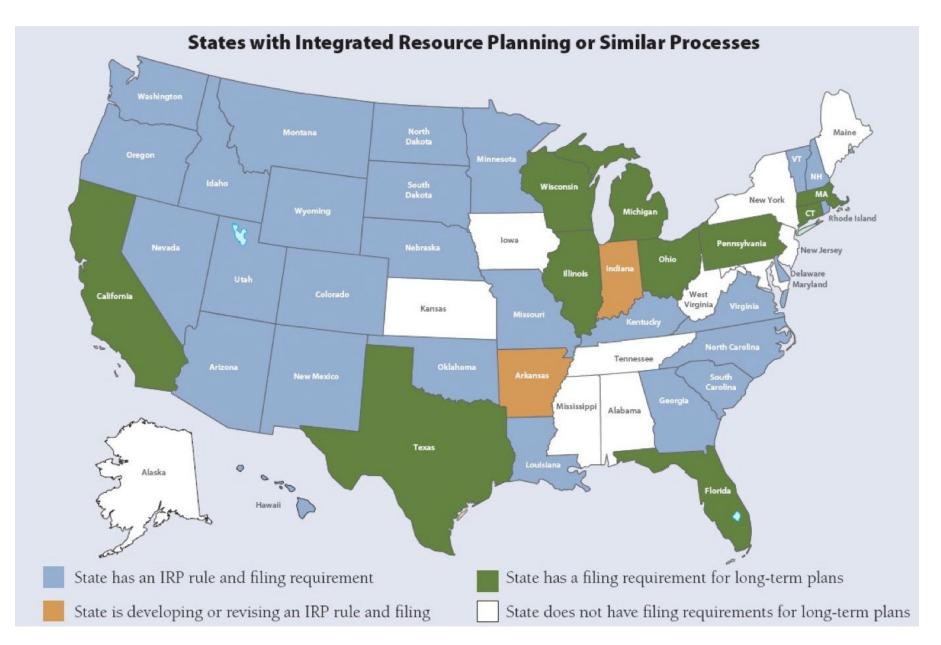
### What is an Integrated Resource Plan (IRP)?

#### An integrated resource plan:

- ✓ Is a roadmap for providing reliable and lowcost power in an uncertain future
- ✓ Helps us make sure sufficient resource are available when needed and not before
- ✓ Ensures we meet environmental regulatory requirements cost-effectively
- ✓ Is required by Washington State law (19.280 RCW)
- √ Is a plan for meeting clean energy mandates

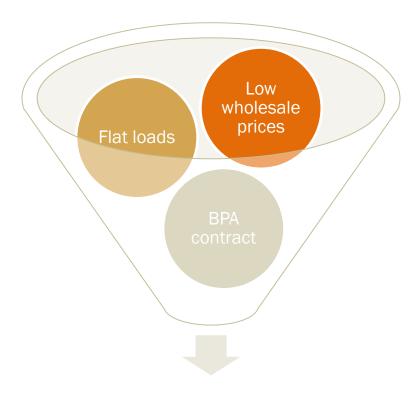


20-year time horizon



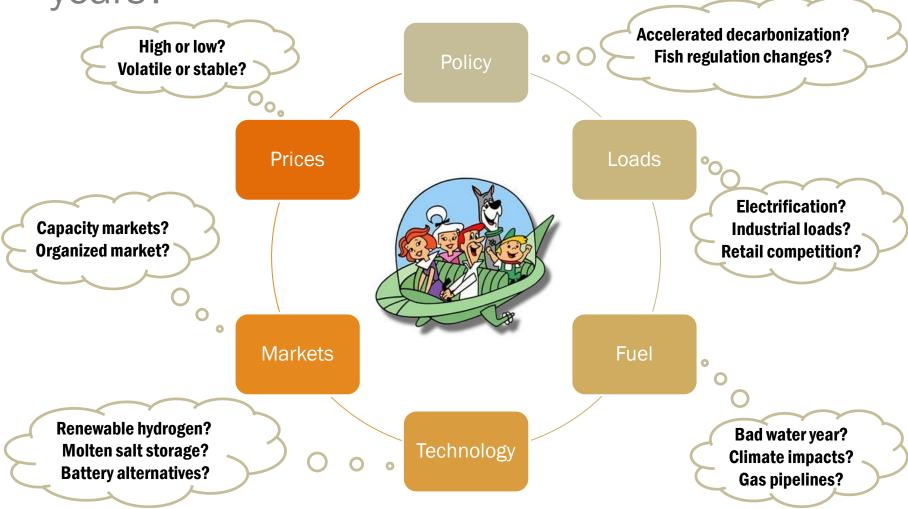
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## **Our Situation Today**



**Ample Resources Today** 

Who knows what will the world look like in 20 years?



## If you are sure of tomorrow, there is no fool greater than you!

**Mehmet Murat ildan** 

## The Future is not what you think: "Woops" (WPPSS)

#### **Situation Before**

- ✓ High growth load forecast
- √ Faith in technology

#### **Surprises**

- ✓ Load growth slows
- ✓ Construction delays
- ✓ Cost overruns
- ✓ Anti-nuclear sentiment

#### **Results**

- ✓ Largest municipal bond default in history
- ✓ Customers still pay for power plants that were never built

## The Future is not what you think: Energy Crisis

#### **Situation Before**

- ✓ Deregulation
- ✓ Surplus power
- ✓ Low wholesale prices
- ✓ Little new capacity built
- ✓ Faith in "the market"
- ✓ Publics reduced BPA take

#### **Surprises**

- ✓ CA Energy Crisis
- ✓ Prolonged drought
- ✓ Market manipulation

#### **Results**

- √ \$1,000+/MWh prices
- ✓ Massive utility debt
- ✓ Tacoma built a diesel generator
- Industrial customers exposed to market closed shop

## The Future is not what you think: Post-Energy Crisis & I-937

#### **Situation Before**

- √ I-937 requiring 15% of portfolio be non-hydro renewables
- ✓ Assumptions that REC prices would skyrocket
- ✓ Little analysis of alternative future scenarios

#### **Surprises**

- ✓ Massive wind buildout
- ✓ Technological improvements in wind turbines

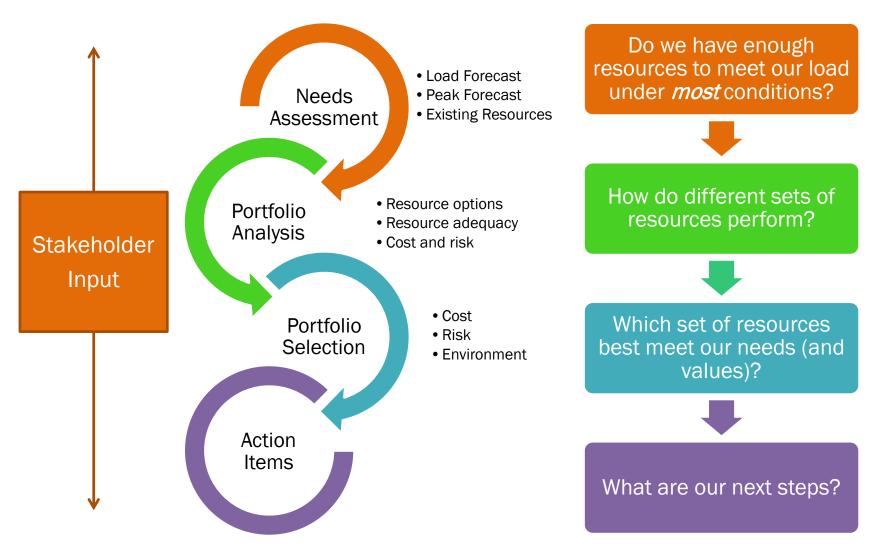
#### **Results**

- ✓ REC prices tanked
- ✓ Utilities that bought ahead of need were forced to raise retail rates

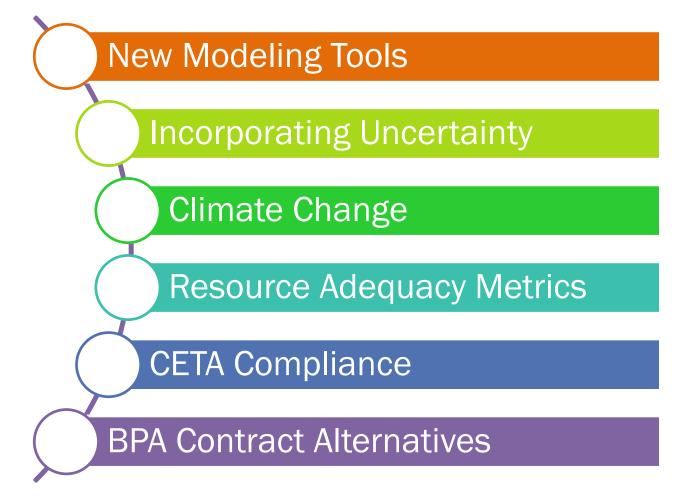
## Tacoma's IRP

**Section 2** 

### **IRP Process Overview**



## Major 2020-2022 Focuses



## 2020-2022 Focus: New Modeling Tools

**OLD MODELING SYSTEM** 



**NEW MODELING SYSTEM** 







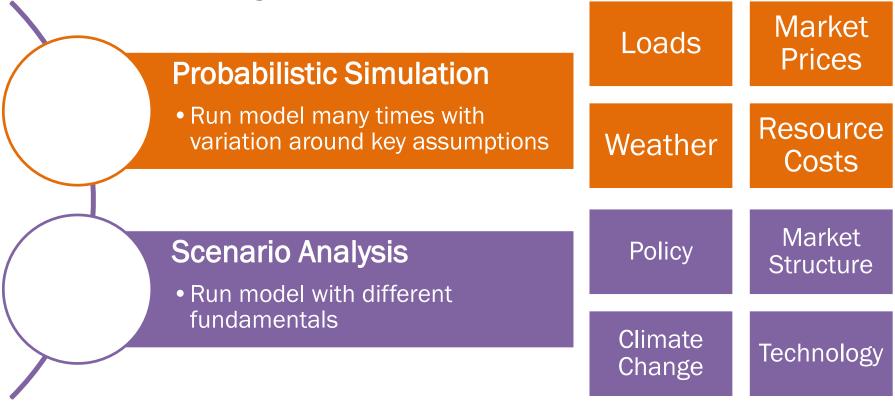
#### **Key Advantages:**

- ✓ Improved visibility
- ✓ Consultation with other utilities
- ✓ More realistic hydro modeling

#### **Key Challenges:**

- ✓ Learning curve
- ✓ Coordination across models

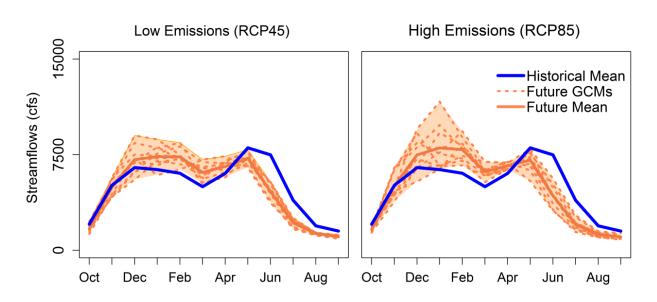
## 2020-2022 Focus: Incorporating Uncertainty



## 2020-2022 Focus: Climate Change

#### **2015 Climate Change Study Findings (2020-2049)**

- ✓ Slightly higher temperatures (+1.8°F to +4.3°F), especially in summer
- ✓ Little change in total inflows
- ✓ More water in winter, less in summer
- ✓ Higher peak flows, lower low flows
- ✓ Impacts on Columbia River system (BPA) less extreme



## 2020-2022 Focus: Resource Adequacy

#### **What is Resource Adequacy?**

The ability of the electric system to supply sufficient generating capacity to reliably meet the system's forecasted peak demand.



## 2020-2022 Focus: Resource Adequacy Metric(s)

Probability (LOLP)

Expected

Loss of Load Hours (LOLH)

Expected
Unserved
Energy (EUE)

Loss of Load

Loss of Load Event (LOLEV)

Load-Resource Balance

Adequate Capacity

#### TO DO LIST

- ✓ Which metric is appropriate for Tacoma?
- ✓ Where to set the bar?
- ✓ Consistency with regional partners?

ETERMINISTIC -

20

### 2020 Focus: CETA Compliance

#### **CETA Compliance**

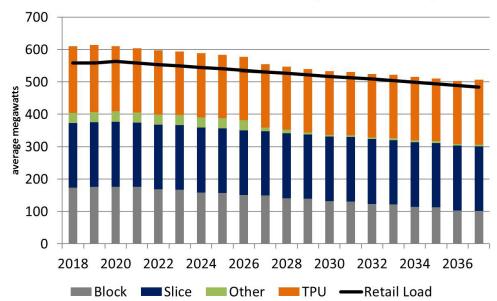
- √ 100% of load met by non-emitting resources or alternative compliance
  2030-2044 (up to 80% from alternative compliance)
- √ 100% of load met by non-emitting resources by 2045
- ✓ Or 2% annual rate increase limit
- √ 10-year Clean Energy Action Plan by 2020
- √ 4-year Clean Energy Implementation Plan by 2022
- ✓ Many details TBD in rulemaking



## 2017 Key Findings

- Sufficient resources to meet load over next 20 years
- Conservation is the only resource needed
- State renewable mandates to be fulfilled through purchase of Renewable Energy Credits (RECs)

#### **Annual Load Resource Balance (Critical Water)**



### 2017 IRP Action Plan

#### 2017 Action Plan

Acquire 6.4 aMW of conservation in 2017-2019 biennium

Investigate future value of capacity

Explore expansion of IRP to include DER planning

Investigate resource planning tools and analysis methodologies

#### 2017-2019 Actions

Acquired 8.4 aMW of conservation to date

Explored methodologies for valuing capacity in absence of capacity market

EV Study to understand charging patterns, DR potential study; downtown network study

Currently updating modeling tools and exploring new approaches to address uncertainty

## What's next?

**Section 3** 

#### **Section 3: What's next?**

### General Schedule

		2019						2020													
	Task Name	Aniticpated Completion	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
	Finalize modeling plan & tools	27-Sep-19																			
SIS	Draft Base Case results	22-Nov-19						CM													
ANALYSIS	Final scenarios & resources selected to evaluate	21-Feb-19																			
ΙŽ	Preliminary portfolio analysis results	10-Mar-20																			
\ ⊗	Final portfolio analysis results	11-May-20																			
Ŋ	Draft IRP document ready for internal review	22-May-20												СМ							
	Final Draft IRP	1-Jul-20																			
MODELING	IRP Approved by PUB	15-Jul-20														CM					
≥	IRP Submitted	29-Jul-20														CM					
	IRP Published	14-Aug-20																			
	PUB Study Sessions (9 to 10 total)	Various																			
NPUT	Public Input Meetings (6 to 7 total)	Various																			
	Neighborhood Council Meetings	31-Dec-20																			

CM= Critical Milestone

#### **Section 3: What's next?**

## Anticipated Study Session Schedule

		Study Session Date
1	Resource Planning 101	August 28 (today)
2	Resource Adequacy	September 11
3	Our Current Portfolio	October 9
4	Resource Options	October 23
5	Small Nuclear Reactors	November 13
6	Energy Storage	December 4
7	Load Management	TBD (2020)
8	Load forecast, Current Position & Metrics	TBD (2020)
9	Scenarios & Resources Considered	TBD (2020)
10	Analysis Results & Portfolio Recommendation	TBD (2020)