

## **EXHIBIT “A”**

### **SCOPE OF WORK**

#### **CITY OF CAMAS PARKER’S LANDING AND WWTP WELL SOURCES PRELIMINARY ENGINEERING SERVICES**

#### **PROJECT OVERVIEW**

The City of Camas would like to develop two new water supply wells. The City has obtained water rights for these wells and they are to be located near Parker’s Landing and the WWTP site. The City would like to identify the optimum locations for these two wells when considering land use, land ownership, access, proximity to existing water transmission infrastructure, and anticipated water quality and quantity. Based on the results of this analysis, the City would like to drill a test well to confirm well capacity and water quality. Due to the greater uncertainties regarding proximity to shallow bedrock, it is anticipated that the test well would be drilled at the WWTP site. In order to expedite the potential schedule for development for the wells, the City may also consider drilling a test well large enough function as a production well at the Parker’s Landing site. An optional task for this work has been provided.

#### **SCOPE OF WORK**

Gray & Osborne, with the assistance of our subconsultant Pacific Groundwater Group (PGG), has prepared the following scope of work for this project. The proposed scope of work to be completed by PGG is attached.

1. Provide Project Management

Provide project management of the project. This task will include coordinating and managing the required resources and the schedule and budget for the project team, including Pacific Groundwater Group. A detailed project schedule will be developed and the City will be provided with monthly progress updates.

2. Complete Site Selection Feasibility Analysis

a. Evaluate Well Site Alternatives

This subtask will be led by Pacific Groundwater Group. Our team will gather information about the area for the potential well sites. We will overlay available information on parcel ownership, proximity to shallow bedrock, the City’s existing water distribution system, potential water quality threats, and potential GWI concerns onto a GIS base map to help identify the preferred location for potential test and/or production wells.

Details of this subtask are provided in the PGG scope of work. Gray & Osborne will assist with providing information about the City's water distribution and transmission system and provide technical oversight for this subtask.

b. Water System Analysis

Gray & Osborne will evaluate the potential well sites with respect to the City's existing water transmission and distribution system. We will identify the infrastructure that will need to be constructed to connect the new wells to the City's existing water system. We will use the City's water model to identify any improvements necessary to the City's existing water transmission and distribution system to convey water from the new wells to the areas where it is needed. As part of this analysis we will also evaluate the optimum location for chlorination and fluoridation of water from these wells. Alternatives that will be considered include construction of treatment facilities at each well, construction of a treatment facility serving both wells at one of the wells, or modification of the existing Washougal Wellfield treatment facilities. Preliminary cost estimates will be developed for each alternative and a decision matrix will be used to assist with determination of the preferred alternative based on both cost and non-cost factors.

c. Prepare Summary Report

We will prepare a summary report documenting the findings of the Site Selection Feasibility Analysis including the findings of the well site alternatives and water system analysis. The report will describe the recommended alternatives and estimated costs for developing the new wells.

3. Complete Test Well Design, Permitting, and Construction

a. Prepare Test Well Drilling Specifications

We will prepare well drilling specifications for the test well to be drilled at the WWTP site.

i. Draft Drilling Specifications

We will prepare draft drilling specifications for the test well. Pacific Groundwater Group will prepare technical specifications for drilling, developing, and testing the wells. As part of development of specifications, drilling methods and water discharge alternatives will be evaluated. Gray & Osborne will

prepare the general requirements sections, the General Conditions and proposal sections. Gray & Osborne will consolidate these components into draft specifications. Draft specifications will be submitted to the City for review.

ii. Prepare Final Drilling Specifications

Draft specifications will be updated based upon City review comments. Final well drilling specifications will be prepared and submitted to the City.

b. Assist Test Well Permitting

PGG will coordinate with DOH and Clark County Public Health to complete the well site approval process. If the preferred drilling site is located inside the same quarter-quarter section but outside of the specific point of withdrawal authorized by the City's water right permit, PGG will coordinate with Ecology to modify the permit as necessary.

c. Provide Bid and Award Assistance

Assist the City with the bid and award process for the well drilling contract. Participate in a pre-bid walkthrough. Respond to bidder inquiries. Prepare addenda as necessary. Review bid results and bidder qualifications. Prepare an award recommendation for the City.

d. Provide Construction Support During Well Drilling

Provide construction support during well drilling, development, and testing. Pacific Groundwater Group will provide on-site oversight of drilling, development, and testing operations. Gray & Osborne will provide construction support consisting of the following:

- Review of submittals
- Response to RFIs and Evaluation/Negotiation of Change Order Requests
- Preparation of Progress Pay Estimates

Pacific Groundwater Group will provide on-site observation of well drilling and will evaluate formation materials, provide screen sizing recommendation, and provide documentation of well test pumping and water quality.

4. Prepare Summary Report with Recommendations

PGG will prepare a report summarizing the results of the test well and providing recommendations for the production wells. Gray & Osborne will provide updated cost estimates for development of the production wells.

5. Complete QA/QC Review of Work Products

We will conduct Quality Assurance/Quality Control reviews of the Well Site Selection Report, draft and final well specifications and the Test Well Summary Report.

6. Attend Meetings and Site Visits

Attend meetings with City staff and the contractor. Complete site visits to review existing conditions, The following meetings have been anticipated:

- Project Kick-off Meeting
- Site Selection Memorandum Review Meeting
- Test Well Prebid Meeting
- Test Well Drilling Preconstruction Meeting
- Well Drilling Construction Meeting (1)

**Optional Task – Drill Parker’s Landing Test/Production Well**

This optional task may be authorized by the City if it determines that is would like to drill a test well large enough to function as a production well at the Parker’s Landing site. For the purposes of developing this scope, we have assumed that the specifications for drilling this well would be included with the specifications for the WWTP test well and a single drilling contractor would drill both wells.

1. Provide Project Management

Provide additional project management for drilling the Parker’s Landing Test/Production Well. This task will include coordinating and managing the schedule and budget for the project team and PGG. The project schedule will be updated and the City will be provided with monthly progress updates.

2. Complete Test Well Design, Permitting, and Construction

a. Prepare Test Well Drilling Specifications

This task will include the additional work to include the Parker’s Landing Test/Production Well in the well drilling specifications.

i. Draft Drilling Specifications

Prepare draft drilling specifications for the Parker's Landing Well. Pacific Groundwater Group will prepare technical specifications for drilling, developing, and testing the well. As part of development of specifications, drilling methods and water discharge alternatives will be evaluated. Gray & Osborne will prepare the general requirements sections, the General Conditions and proposal sections. Gray & Osborne will consolidate these components into draft specifications. Draft specifications will be submitted to the City for review.

ii. Prepare Final Drilling Specifications

Draft specifications will be updated based upon City review comments. Final well drilling specifications will be prepared and submitted to the City.

b. Assist Test Well Permitting

PGG will coordinate with DOH and Clark County Public Health to complete the well site approval process. If the preferred drilling site is located inside the same quarter-quarter section but outside of the specific point of withdrawal authorized by the City's water right permit, PGG will coordinate with Ecology to modify the permit as necessary.

c. Provide Additional Construction Support During Well Drilling

Provide construction support during well drilling, development, and testing. Pacific Groundwater Group will provide on-site oversight of drilling, development, and testing operations. Gray & Osborne will provide construction support consisting of the following:

- Review of submittals
- Response to RFIs and Evaluation/Negotiation of Change Order Requests
- Preparation of Progress Pay Estimates

Pacific Groundwater Group will provide on-site observation of well drilling and will evaluate formation materials, provide screen sizing recommendation, and provide documentation of well test pumping and water quality.

3. Prepare Summary Report with Recommendations

PGG will prepare a report summarizing the results of the test well and providing recommendations for the production wells. Gray & Osborne will provide updated cost estimates for development of the production wells.

4. Attend Meetings and Site Visits

Attend additional meetings with City staff and the contractor. Complete site visits to review existing conditions, The following meetings have been anticipated:

- Additional Well Drilling Construction Meetings (2)

## **BUDGET**

Based on the Scope of Work described above, the total estimated cost for engineering services as shown in the attached Exhibit “B-1” and “B-2.” A summary of the estimated costs as follows:

Parker’s Landing and WWTP Well Preliminary Engineering Services	\$105,200
Optional Task – Drill Parker’s Landing Test/Production Well	\$47,400
<b>Total Estimated Project Cost</b>	<b>\$152,600</b>

## **DELIVERABLES**

Deliverables will be provided in the following format:

- Reports – three paper copies
- Specifications – three paper copies of each submittal

Electronic files will also be supplied for each deliverable.

## **PROJECT SCHEDULE**

The anticipated project schedule is as follows:

Notice to Proceed	July 1, 2018
Submit Site Alternatives Report	September 1, 2018
Prepare Draft Well Drilling Specifications	October 1, 2018
Prepare Final Well Drilling Specifications	November 1, 2018
Drill Well(s)	January – March 2019

## **ASSUMPTIONS**

The following assumptions have been made in developing this scope of work.

1. All permit fees will be paid by the City.

## EXHIBIT "B-1"

### ENGINEERING SERVICES SCOPE AND ESTIMATED COST

*City of Camas  
Parker's Landing and WWTP Well Sources Preliminary Engineering Services*

Tasks	Principal Hours	Project Manager Hours	Civil Eng. Hours	Structural Eng. Hours	Electrical Eng. Hours	Engineer-In-Training Hours	AutoCAD Tech Hours
1. Provide Project Management		8					
2. Complete Site Selection Feasibility Analysis							
a. Evaluate Well Site Alternatives	2	4	4				
b. Water System Analysis	4	24	40	4	4	24	16
c. Prepare Summary Report	2	8	16			8	8
3. Complete Test Well Design, Permitting, and Construction							
a. Prepare Test Well Drilling Specifications							
i. Prepare Draft Specifications	1	4	16			4	8
ii. Prepare Final Specifications	1	2	4			2	4
b. Assist with Test Well Permitting							
c. Provide Bid and Award Assistance		4	4				
d. Provide Construction Support During Well Drilling	2	24	16			8	
4. Prepare Summary Report with Recommendations	1	8	8				
5. Complete QA/QC Review	4	4	4				
6. Attend Meetings and Site Visits		30	6				
Hour Estimate:	17	120	118	4	4	46	36
Fully Burdened Billing Rate Range:*	\$116 to \$190	\$110 to \$190	\$99 to \$130	\$103 to \$173	\$106 to \$190	\$83 to \$127	\$44 to \$124
Estimated Fully Burdened Billing Rate:*	\$165	\$160	\$125	\$150	\$155	\$100	\$95
Fully Burdened Labor Cost:	\$2,805	\$19,200	\$14,750	\$600	\$620	\$4,600	\$3,420

Total Fully Burdened Labor Cost: \$ 45,995

Direct Non-Salary Cost:

    Mileage & Expenses (Mileage @ current IRS rate) \$ 696

Subconsultant:

    Pacific Ground Water Group \$ 53,190

    Subconsultant Overhead (10%) \$ 5,319

**TOTAL ESTIMATED COST: \$ 105,200**

\* Actual labor cost will be based on each employee's actual rate. Estimated rates are for determining total estimated cost only. Fully burdened billing rates include direct salary cost, overhead, and profit.



## EXHIBIT "B-2"

### ENGINEERING SERVICES SCOPE AND ESTIMATED COST

*City of Camas*

*Parker's Landing and WWTP Well Sources Preliminary Engineering Services  
Optional Task - Drill Parker's Landing Test/Production Well*

Tasks	Principal Hours	Project Manager Hours	Civil Eng. Hours	Engineer-In-Training Hours	AutoCAD Tech Hours
1. Provide Project Management		2			
2. Complete Parker's Landing Well Design, Permitting, and Construction					
a. Prepare Parker's Landing Well Drilling Specifications					
i. Prepare Draft Specifications	1	2	4	2	4
ii. Prepare Final Specifications	1	2	4	1	2
b. Assist with Parkers Landing Well Permitting					
c. Provide Additional Construction Support During Well Drilling	2	16	12	4	
3 Prepare Summary Report with Recommendations	1	2	4		
4 Attend Meetings and Site Visits		12	4		
Hour Estimate:	5	36	28	7	6
Fully Burdened Billing Rate Range:*	\$112 to \$184	\$106 to \$184	\$96 to \$126	\$80 to \$123	\$42 to \$120
Estimated Fully Burdened Billing Rate:*	\$165	\$160	\$125	\$100	\$95
Fully Burdened Labor Cost:	\$825	\$5,760	\$3,500	\$700	\$570

Total Fully Burdened Labor Cost: \$ 11,355

Direct Non-Salary Cost:

    Mileage & Expenses (Mileage @ current IRS rate) \$ 196

Subconsultant:

    Pacific Ground Water Group \$ 32,590

    Subconsultant Overhead (10%) \$ 3,259

**TOTAL ESTIMATED COST: \$ 47,400**

\* Actual labor cost will be based on each employee's actual rate. Estimated rates are for determining total estimated cost only. Fully burdened billing rates include direct salary cost, overhead, and profit.

June 15, 2018

Gray & Osborne, Inc.  
701 Dexter Ave N.,  
Seattle, WA 98109

Re: City of Camas Parker's Landing and Wastewater Treatment Well Sources Pre-design Studies, Pacific Groundwater Group Scope of Work and Cost

Attn: Russ Porter, PE

Dear Russ:

This letter summarizes Pacific Groundwater Group's (PGG's) proposed scope of work and cost estimate for assisting the City of Camas (City) with predesign studies for future supply wells at the Parker's Landing and Wastewater Treatment Plant sites. It is our understanding that Gray & Osborne, Inc. (G&O) will be the prime contractor on this project, with PGG providing technical assistance with site selection, well construction, and testing.

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## SCOPE OF WORK

The following scope of work follows the approach proposed in our team's RFQ response, with an additional task option to install a supply well at the Parker's Landing site based on our conversation with Mike Johnson (G&O) on June 13, 2018.

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### TASK 1. SITE SELECTION FEASIBILITY ANALYSIS

Our initial task will be to perform a feasibility analysis to identify the preferred drilling locations for a test well under this scope of work, and for future production wells pending insights from test well drilling and testing.

PGG will perform the Site Selection Feasibility Analysis using GIS to overlay pertinent selection criteria including parcel ownership; and proximity to shallow bedrock, the City's existing distribution system, potential water quality threats, and potential groundwater under the influence of surface water (GWI) concerns. Data sources will include assessor's records, published surficial geology maps, driller's well logs, the Department of Ecology's (Ecology's) online Toxics Cleanup Program viewer, and the City's recent Wellhead Protection Plan update. To evaluate proximity to shallow bedrock, PGG will

request that the City provide all reports of geotechnical and other subsurface investigations performed at the Wastewater Treatment Plant. We will also search for geotechnical reports that may have been prepared for the Washington State Department of Transportation for construction of Highway 14, as well as older well records for Georgia Pacific and the City's operations center.

The spatial analysis will also include evaluating specific well locations in the context of the 100-foot sanitary control area required by the Washington State Department of Health (DOH), and the 200-foot offset from surface water that reduces potential for GWI. Where possible, preference will be given to locations where the entire sanitary control area is within property owned by the City so that a variance is not required, although this preference must be balanced against other key considerations. Since there are significantly higher treatment costs for GWI wells, preference will be given to potential well locations that are greater than 200 feet from surface water bodies.

PGG will prepare maps of the Parker's Landing and Wastewater Treatment Plant sites depicting parcel ownership, land use, the City's water supply lines, and environmental facilities. These maps will be used to support discussions with the City and G&O. PGG have assumed that we will attend one internal team meeting, and participate in site visits with the City and G&O to identify other factors that might influence the preferred drilling location recommendations. If the preferred drilling location at Parker's Landing is on Port of Camas/Washougal (Port) property, PGG will attend one additional meeting with the Port to assist the City negotiate access for well development.

The results of the site selection feasibility analysis will be summarized in a report that will include a recommended location for the test well, and sufficient information to identify preferred locations for the final production wells pending insights from test well drilling and testing. The report will also include a discussion of the cost and risk of installing a production well at Parker's Landing without a prior test well (see Optional Task 6).

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## **TASK 2. WATER SYSTEM ANALYSIS**

PGG will assist the City and G&O as needed with water system design.

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## **TASK 3. PERMITTING AND TEST WELL CONSTRUCTION**

PGG will coordinate with DOH and Clark County Public Health (CCPH) to complete a site review application and obtain approval for the test well location. The City will need to submit the appropriate fees for the site approval application and inspection. As Ecology has already issued the City a water right permit, no preliminary permit will be required. PGG will negotiate with Ecology if the preferred drilling locations are within the same quarter-quarter section, but not at the specific points of withdrawal authorized by the water right permit.

Once the site is approved, PGG will develop technical specifications for test well drilling based on our recommendations and discussion with City Staff. The specifications will

become the basis for the City to solicit bids from qualified well drilling contractors. PGG will provide preliminary drilling cost estimates that the City can incorporate in the bidding process, and we will assist City Staff with selection of a drilling contractor. The selected drilling company will be contracted directly to the City. PGG will act as the City's field representative during the project.

A PGG hydrogeologist will oversee the test well construction and will be present for key portions of the drilling process. Based on the results of drilling, PGG will design a screen assembly for the contractor to install. Once the contractor has placed the screen and successfully exposed it to the target aquifer, PGG will oversee testing, which will include a short-term test at various rates (step-rate test) followed by a longer-term test of up to 24-hours at a constant rate. Water level measurements will be collected by hand and using electronic transducers throughout the testing period. Water quality samples will be collected during the constant-rate test for analysis of inorganic parameters, metals, volatile organic compounds, semi-volatile organic compounds, radionuclides, bacteria, and potentially microscopic particulate analysis (MPA) for potential GWI evaluation.

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#### **TASK 4. SUMMARY REPORT WITH RECOMMENDATIONS FOR SUPPLY WELLS**

PGG will prepare a report summarizing the installation and testing of the test well that also identifies preferred locations for the final production wells. The report will include analysis of the hydraulic test data, an as-built diagram of the test well, and comparison of water quality results to drinking water standards.

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#### **TASK 5. PROJECT MANAGEMENT AND COORDINATION**

PGG will prepare and document monthly invoices, manage staff resources, and communicate with G&O and the City throughout the project. In addition to the meetings discussed above, we anticipate up to two additional meetings with City staff. This may include additional communication with the City, Port or other stakeholders, Ecology, DOH, and CCHP beyond what was assumed above.

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#### **OPTIONAL TASK 6. PRODUCTION WELL INSTALLATION AT PARKER'S LANDING**

Based on our recent conversation with Mike Johnson, we understand that the City may be interested in expediting installation of a supply well at the Parker's Landing or Wastewater Treatment Plant sites. The target aquifer for the new wells occurs in saturated portions of highly-permeable materials deposited by ice-age floods from Glacial Lake Missoula that are underlain by bedrock. Based on our previous experience, bedrock may be shallow in the vicinity of the Wastewater Treatment Plant, which may reduce the saturated thickness of the aquifer at this site and limit well yield. Therefore, it is likely that PGG will recommend drilling the test well at the Wastewater Treatment Plant rather than at Parker's Landing.

Bedrock is anticipated to be deeper at the Parker's Landing site. If this is supported by the findings of Task 1, the City may be willing to accept the risk of installing a production well at Parker's Landing in lieu of a test well at this site in the interest of having a source online in time to meet the anticipated demand schedule. In the event that this approach is consistent with the City's goals, we have included Optional Task 6 in our scope of work. To the extent possible, scope items for Optional Task 6 would be combined with Tasks 3 and 4 for efficiency. For example, efforts to obtain DOH and CCPH site approval for the test well and production well would be combined, and documentation of the test well and production well installation and testing would be combined in a single report.

#### **Task 6a. Permitting and Production Well Installation and Testing**

If the City agrees, PGG's coordination with DOH and CCPH to obtain approval for the test well location would also include obtaining approval for the production well location. PGG would expand the technical specifications described in Task 3 to include installation of a production well at Parker's Landing. The specifications would become the basis for the City to solicit bids from well drilling contractors qualified to install both the test well and the production well. PGG would provide preliminary drilling cost estimates that the City can incorporate in the bidding process, and would assist City Staff with selection of a drilling contractor.

Oversight of production well drilling would be provided by PGG. Based on the results of drilling, PGG would design a screen assembly for the contractor to install. The design would be reviewed by the contractor and the City prior to ordering the screen materials. Once the contractor has placed the screen and successfully exposed it to the target aquifer, we would coordinate the development of the well screen to help maximize well efficiency and minimize sand production.

The production well would be tested to meet Ecology's requirements and DOH/CCPH guidelines for supply sources. We anticipate a short-term, step-rate test followed by a 24-hour, constant-rate test. Water level measurements would be collected by hand and using electronic transducers throughout the testing period. If possible, water levels would also be collected for a few days before and after testing. Water quality samples would be collected near the end of the constant-rate test for analysis of the full suite of drinking water parameters required by DOH for source approval, including: inorganic parameters, metals, volatile organic compounds, semi-volatile organic compounds, radiological compounds, bacteria, and potentially MPA to assess GWI potential.

#### **Task 6b. Additional Reporting**

PGG would expand the Summary Report described in Task 4 to document installation and testing of the production well at Parker's Landing. In addition to the elements described in Task 4, the report would include analysis of the production well hydraulic test data, an as-built diagram of the production well, and comparison of water quality results to drinking water standards. The report would also include our recommendations for long-term use and maintenance of the well. The content of the production well sections of

the report will be tailored to support the City's and G&O's efforts to obtain source approval from DOH.

#### **Task 6c. Additional Project Management**

Additional project management for the optional installation of a production well at Parker's Landing would include scheduling, internal staff coordination, communication with the project team and regulators.

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### **COST ESTIMATE AND TERMS AND CONDITIONS**

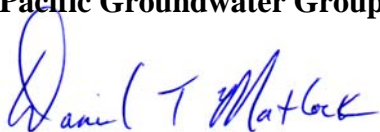
PGG would complete the proposed scope of work described in Tasks 1 through 5 at an estimated cost of \$53,190, and if authorized, we would complete the scope of work described in Optional Task 6 at an additional estimated cost of \$32,590 (Table 1). Our costs will be invoiced monthly, on a time-and-materials basis, in accordance with the attached Terms and Conditions. If unexpected information is encountered that appears to require additional work, PGG will bring them to your attention and seek approval for any added expenditures. The Terms and Conditions are incorporated into our agreement with you, and by your authorization to proceed you are accepting them.

Our professional services will be performed, our findings obtained, and our report prepared in accordance with generally accepted hydrogeologic practices. This warranty is lieu of all other warranties, either expressed or implied.

Please contact Dan Matlock (206-979-3057) or Inger Jackson (206-329-0141 ext. 204) if you have any questions about this scope of work or cost estimate.

Sincerely,

**Pacific Groundwater Group**



Dan Matlock  
Senior Hydrogeologist

Attachments: 2018 Terms and Conditions  
Cost Estimate

*PGG Camas Scope\_v061518.docx*

Table 1. PGG Cost Estimate for Camas Parker's Landing and Wastewater Treatment Plant Supply Wells Predesign Studies  
JM9702.24  
6/14/2018

Task #		Subtask Description	Admin	Staff/GIS	Senior Hydro.	Permit Specialist	Principal	PGG Staff Costs	Direct Costs (1)		Total Costs
			\$ 60	\$ 120	\$ 130	\$ 140	\$ 175				
1		Site Selection Feasibility Analysis									\$ 11,785
	a	Compile background hydrogeologic, land use, supply line, and environmental data		2	6	2	6	\$ 2,350		\$ -	
	b	Assess bedrock configuration near WWT site using surficial geologic maps, WSDOT, and other data		8	8		2	\$ 2,350		\$ -	
	c	Prepare land use, ownership, supply line, and environmental sites maps		4	2		1	\$ 915		\$ -	
	d	Complete site reviews with City and G&O					8	\$ 1,400	mileage	\$ 230	
	e	Assist with negotiating access for well development (primarily Port of C/W)					6	\$ 1,050	mileage	\$ 230	
	f	Prepare site selection summary report with recommendations		4	16		4	\$ 3,260		\$ -	
								\$ -			
2		Water System Analysis									\$ 960
	a	Assist G&O and City on water system design issues as needed			2		4	\$ 960		\$ -	
								\$ -		\$ -	
3		Permitting and Test Well Construction									\$ 25,115
	a	Complete site review forms and obtain SCA variances if required from WDOH			12		12	\$ 3,660		\$ -	
	b	Reassess preferred Points of Withdrawal relative to permit and negotiate (as needed) with Ecology				8	3	\$ 1,645		\$ -	
	b	Prepare technical specifications for bid package and assist with drilling contractor selection		2	20		6	\$ 3,890		\$ -	
	c	Install and test Test Well			60		12	\$ 9,900	mileage, per diem, equip, WQ samples	\$ 3,000	
	d	Reduce and analyze well construction and testing data		2	16		4	\$ 3,020		\$ -	
4		Prepare Phase 1 Summary Reports with Recommendations for Supply Wells									\$ 5,320
	a	Prepare report		2	24	4	8	\$ 5,320		\$ -	
								\$ -		\$ -	
5		Project Management and Coordination									\$ 10,010
	a	Project coordination			4		20	\$ 4,020		\$ -	
	b	Project team meetings			6		12	\$ 2,880	mileage	\$ 460	
	c	Billing, internal management, communication	6		4		10	\$ 2,630	phone, misc.	\$ 20	
6		Optional Production Well Installation at Parker's Landing (combined with Tasks 3 and 4 for efficiency where appropriate)									\$ 32,590
	a	Permitting, Technical Specifications, and Production Well Installation and Testing						\$ -		\$ -	
		i. Site Review Forms and SCA variances if required from WDOH			6		6	\$ 1,830		\$ -	
		ii. Technical Specifications			8		4	\$ 1,740		\$ -	
		iii. Install and test Production Well			80		12	\$ 12,500	mileage, per diem, equip, WQ samples	\$ 5,000	
		iv. Reduce and analyzed well construction and testing data		2	16		4	\$ 3,020			
	b	Reporting		2	16		4	\$ 3,020		\$ -	
	c	Project Management	4		8		24	\$ 5,480		\$ -	
Totals											
	For Tasks 1 through 5		6	24	180	14	118	\$ 49,250		\$ 3,940	\$ 53,190
	For Tasks 1 through 5, plus Optional Task 6		10	28	314	14	172	\$ 76,840		\$ 8,940	\$ 85,780

Notes:  
(1) Includes 10% markup.





## 2018 PACIFIC GROUNDWATER GROUP TERMS AND CONDITIONS

**SCHEDULE OF CHARGES.** The schedule establishing fees for Pacific Groundwater Group's services is presented below. A new schedule is issued at the beginning of each year or when otherwise dictated by inflationary changes. Unless other arrangements have been made, charges for all work, including continuing projects initiated in the prior year, will be based on the latest SCHEDULE OF CHARGES in the latest PACIFIC GROUNDWATER GROUP TERMS AND CONDITIONS.

Principal Technical Services	\$175-190/hr.	Travel & Sustenance	Cost plus 10%
Senior Technical Services	\$130-155/hr.	Subcontract and Direct Expense	Cost plus 10%
Associate Technical Services	\$155/hr.	Long Distance and Cellular Phone Expenses	Cost plus 10%
Staff Technical Services	\$120-135/hr.	Xerox & Oversize Copies	\$0.15/b&w \$0.25/color & \$1/sq. ft
Technical Support Services	\$120/hr.	Automobile Mileage	Federal mileage + \$0.05
Legal Support (Preparation, Deposition, Testimony, Travel )	\$275/hr.	Truck Mileage	Federal mileage + \$0.10

**PAYMENT, INTEREST, COLLECTION.** Invoices will be submitted once per month for service expenses rendered during the prior month. Payment will be due within thirty (30) days of the invoice date. Interest will be added to accounts in arrears at the rate of one and one-half percent (1-1 1/2%) of the average for each month of delinquency not to exceed the maximum annual percentage rate allowed by law. All expenses incurred for liening or collecting any delinquent amount, including but not limited to reasonable attorney fees, witness fees, reasonable charges at current billing rates for the time devoted by the Pacific Groundwater Group's personnel, document duplication, organization and storage costs, taxable court costs, travel and subsistence, shall be paid to the Pacific Groundwater Group in addition to the delinquent amount. If at any time, present or future, the State, County, City or Municipality assesses a sales, use, or ad-valorem tax upon Pacific Groundwater Group for any of the services, supplies, testing or other work performed by Pacific Groundwater Group and/or its subcontractors under this contract, the client agrees to pay such taxes in addition to, and hold Pacific Groundwater Group harmless from such, or should Pacific Groundwater Group elect to pay such taxes directly, the client agrees to reimburse and indemnify Pacific Groundwater Group in full.

**TERMINATION.** In the event the client requests termination of the work prior to completion, Pacific Groundwater Group will be paid for all work performed up to the notice of termination and for all expenses incurred or committed to that cannot be canceled. Pacific Groundwater Group also has the right to complete, at the client's expense, the analysis and records necessary to so order the work as to protect our professional reputation. A termination charge may also be made to cover the preparation and administrative costs related to the work. Charges will include all reasonable expenses incurred, and time for Pacific Groundwater Group's personnel, charged at the current rates.

**CLIENT FURNISHED INFORMATION.** The client is responsible to provide, by map or drawing, a description of the property, its location and the location of any buried structures or utilities. Pacific Groundwater Group will not be held liable for damage or injury to subterranean structures (pipes, tanks, telephone cables, etc.), nor to injury to persons arising from damage to subterranean structures, which are not called to our attention and correctly shown on the plans furnished to Pacific Groundwater Group in connection with the work performed by Pacific Groundwater Group. The client agrees to indemnify and hold harmless Pacific Groundwater Group for any and all incorrect or omitted location information to the extent and terms provided in the paragraph entitled "INDEMNIFICATION."

**RIGHT OF ENTRY.** Unless otherwise agreed, Pacific Groundwater Group will be furnished right of entry on the land to make planned borings, surveys and other explorations. Pacific Groundwater Group will take reasonable precautions to minimize damage from use of equipment, but have not included in our fee the cost of restoration of damage which may result from work as outlined in this contract. If Pacific Groundwater Group is required to restore the property to its former condition, the cost of such restoration will be estimated. The additional sum will be agreed upon in writing between Pacific Groundwater Group and the client, and added to the original fee.

**SAMPLE RETENTION.** Due to the expense of storage costs and limited storage life of samples, Pacific Groundwater Group will discard samples sixty (60) days after submission of the report unless arrangements are made for repackaging and storage fees. Alternatively, at the client's request, the samples will be delivered to the client at the client's expense. All samples containing hazardous materials will be returned to the client, at the client's expense, subsequent to use.

**OWNERSHIP OF DOCUMENTS.** Any documentary report or tangible item developed and furnished under this agreement is intended solely for the purpose of communicating and transferring tangible information relating to professional services. All designs, drawings, specifications, notes, data samples, materials, report reproduces, and other works developed by Pacific Groundwater Group, are instruments of service and, as such, remain the property of Pacific Groundwater Group. The client agrees to hold harmless and indemnify Pacific Groundwater Group against all claims, demands, losses, penalties, or damages, including reasonable attorney's fees, arising use of these documents on extensions of this project or any other project without the written permission of Pacific Groundwater Group.

**INSURANCE.** Pacific Groundwater Group maintains Worker's Compensation for its employees as required by State law. Pacific Groundwater Group is protected by Public Liability Insurance to a maximum of \$1,000,000 combined single limits, for bodily injury and property damage liability, and will furnish certificates thereof upon request. Within the limits of said insurance, Pacific Groundwater Group agrees to hold the client harmless from and against loss, damage, injury or liability arising directly from negligent acts committed by Pacific Groundwater Group, its employees, agents, subcontractors and subcontractors' employees and agents.

**INDEMNIFICATION.** To the fullest extent permitted by law, the client agrees to defend, indemnify and hold Pacific Groundwater Group, including but not limited to Pacific Groundwater Group's agents, employees, subcontractors and subcontractors' employees, agents and subcontractors, harmless from and against any and all claims, associated defense costs (including reasonable attorney's fees) damages and other liabilities arising out of or in any way related to Pacific Groundwater Group's work on the project. The client shall indemnify Pacific Groundwater Group against liability for damages caused by or resulting from the concurrent negligence of (a) the client, its agents, employees, subcontractors and subcontractors' employees, agents and subcontractors, and (b) Pacific Groundwater Group, and its agents, employees, subcontractors and subcontractors' employees, agents only to the extent of the client's negligence or the negligence of the clients' agents, employees, subcontractors and subcontractors' employees, agents and subcontractors.

**LIMITATION OF LIABILITY.** With the exception of claims covered by Pacific Groundwater Group's insurance, as provided in the paragraph entitled "INSURANCE" above, and notwithstanding any other term or condition hereof to the contrary, Pacific Groundwater Group's liability under this contract shall, under no circumstances exceed \$50,000 or the total of the fees paid by the Client to Pacific Groundwater Group under the attached scope of work and contract, whichever is greater.

**STANDARD OF CARE.** Pacific Groundwater Group agrees to provide the client, for its sole benefit and exclusive use, the consulting services set forth in Pacific Groundwater Group's attached proposal. Pacific Groundwater Group's services shall be performed in accordance with generally accepted practices in the same or similar localities, related to the nature of the work accomplished, at the time the services are performed.

**HAZARDOUS SUBSTANCES AND CONDITIONS.** The client recognizes that Pacific Groundwater Group's services do not include generating, storing, transporting, or disposing of substances considered to be hazardous and requiring permits under Federal, State or local environmental laws. The client warrants that if it knows or suspects that hazardous substances may exist on the property, the client has so informed Pacific Groundwater Group.

**UNFORESEEN OCCURRENCES.** If any unforeseen conditions or occurrences, including but not limited to hazardous substances or pollutants, are encountered which, in Pacific Groundwater Group's sole judgment, significantly affect the recommended scope of work, Pacific Groundwater Group will promptly notify the client. After such notification, Pacific Groundwater Group will complete its original scope of work, if appropriate, or agree with the client to modify the agreement, or to terminate the work pursuant to the termination clause listed above.

**SUBSURFACE RISKS AND SITE DAMAGE.** The client recognizes that special risks occur and "guarantees" cannot be expected whenever professional consulting services are applied in evaluating subsurface conditions. Pacific Groundwater Group cannot eliminate these risks altogether, but can apply professional techniques to reduce the risks to a level considered tolerable and the client agrees to accept that level of risk. The client recognizes that the use of exploration and test equipment may unavoidably damage or alter the property surface or subsurface and the client agrees to assume responsibility for such unavoidable damages or alterations. Further, the client assumes responsibility for personal or property damage due to interference with subterranean structures, including but not limited to subsurface pipes, tanks and utility lines, that are not called to Pacific Groundwater Group's attention in writing or correctly as shown on plans provided by the client.

**INTERPRETATIONS AND TIME BAR TO LEGAL ACTION.** Interpretations and enforcement of this agreement shall be governed by the laws of the State of Washington. All legal actions by either party to this contract against the other, related to this agreement or any addendum to it, shall be barred after two years have passed from the time the claimant knew or should have known of its claim, and under no circumstances shall be initiated after four years have passed from the date by which Pacific Groundwater Group completes its services.

**SEVERABILITY AND SURVIVAL.** Any element of this agreement later held to violate a law shall be deemed void and all remaining provisions shall continue in force. However the client and Pacific Groundwater Group will, in good faith, attempt to replace any invalid or unenforceable provision with another provision that is valid and enforceable, and which comes as close as possible to expressing the intent of the original provision. All terms and conditions of this agreement allocating liability between the client and Pacific Groundwater Group shall survive the completion of the services hereunder and the termination of this agreement.

**PRECEDENCE.** These terms and conditions shall take precedence over any inconsistent or contradictory provisions contained in any proposal, contract, purchase order, requisition, notice to proceed, or like document, regarding Pacific Groundwater Group's services.

rev: 1/2001