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Header 1

List View

General Information

Contact

Default Values

Discount

Document Information

Procurement Folder: 542450

Procurement Type: Central Contract - Fixed Amt

Vendor ID:

Legal Name: PINNACLE ACTUARIAL RESOURCES INC

Alias/DBA:

Total Bid: \$348,000.00

Response Date:

Response Time:

SO Doc Code: CRFQ

SO Dept: 0313

SO Doc ID: DEP1900000020

Published Date: 3/6/19

Close Date: 3/13/19

Close Time: 13:30

Status: Closed

Solicitation Description:

Apply Default Values to Commodity Lines

View Procurement Folder



Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

**State of West Virginia  
 Solicitation Response**

**Proc Folder :** 542450  
**Solicitation Description :** Addendum 2-OSR Actuarial Consulting Services  
**Proc Type :** Central Contract - Fixed Amt

Date issued	Solicitation Closes	Solicitation Response	Version
	2019-03-13 13:30:00	SR 0313 ESR03131900000004176	1

<b>VENDOR</b>
000000102966 PINNACLE ACTUARIAL RESOURCES INC

**Solicitation Number:** CRFQ 0313 DEP1900000020

**Total Bid :** \$348,000.00      **Response Date:** 2019-03-13      **Response Time:** 12:39:19

**Comments:**

**FOR INFORMATION CONTACT THE BUYER**  
 Jessica S Chambers  
 (304) 558-0246  
 jessica.s.chambers@wv.gov

<b>Signature on File</b>	<b>FEIN #</b>	<b>DATE</b>
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All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Actuarial consulting services - Years 1 & 2				\$82,000.00

Comm Code	Manufacturer	Specification	Model #
80101512			

**Extended Description :** Actuarial consulting services for the WVDEP Office of Special Reclamation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
2	Actuarial consulting services - Renewal Years 3 & 4				\$85,500.00

Comm Code	Manufacturer	Specification	Model #
80101512			

**Extended Description :** Actuarial consulting services for the WVDEP Office of Special Reclamation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
3	Actuarial consulting services - Renewal Years 5 & 6				\$88,500.00

Comm Code	Manufacturer	Specification	Model #
80101512			

**Extended Description :** Actuarial consulting services for the WVDEP Office of Special Reclamation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
4	Actuarial consulting services - Renewal Years 7 & 8				\$92,000.00

Comm Code	Manufacturer	Specification	Model #
80101512			

**Extended Description :** Actuarial consulting services for the WVDEP Office of Special Reclamation

*A Proposal to Serve the  
State of West Virginia  
Department of Environmental Protection  
Office of Special Reclamation  
CRFQ 0313 DEP 1900000020*

*Technical Proposal*

**March 12, 2019**



One Glenlake Parkway, Suite 1285  
Atlanta, GA 30328  
770.587.0351  
pinnacleactuaries.com

*Commitment Beyond Numbers*



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Arthur R. Randolph, II, FCAS, MAAA, CPCU, ARM, ARe  
Principal and Consulting Actuary  
arandolph@pinnacleactuaries.com

March 12, 2019

Jessica S. Chambers  
Department of Administration  
Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130

RE: West Virginia Department of Environmental Protection, Office of Special Reclamation  
CRFQ 0313 DEP 190000020

Dear Ms. Chambers:

On behalf of Pinnacle Actuarial Resources, Inc., I am pleased to offer our proposal to provide the requested actuarial services to West Virginia Department of Environmental Protection's Office of Special Reclamation (Agency). We trust that you will find it in accordance with your Request for Quotation.

As Principal of Pinnacle, I am empowered to bind the company to this proposal. The attached proposal is "a firm and irrevocable offer" for 120 days or as long as necessary to finalize contract details.

Please feel free to contact me to discuss any issues or concerns or if additional information is needed.

Pinnacle appreciates this opportunity to potentially be of service to the West Virginia Department of Environmental Protection. If you have any questions now or throughout the course of your review process, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Arthur R. Randolph, II".

Arthur R. Randolph, II, FCAS, MAAA, CPCU, ARM, ARe  
Principal & Consulting Actuary  
Direct Dial: 678.894.7258

State of West Virginia Department of Environmental Protection  
Office of Special Reclamation  
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## **1. SPECIAL RECLAMATION FUNDS BACKGROUND**

The Special Reclamation Fund and the Special Reclamation Water Trust Fund (collectively referred to as the Funds) are both programs within the West Virginia Department of Environmental Protection (DEP) designed to provide funding if necessary to reclaim and restore land and/or water sites. The programs are funded through coal taxes, investment income, and other minor, miscellaneous sources of income. The Funds' objectives are to have systems that allow for maximum flexibility in a dynamic environmental restorations and protection program and to achieve greater cost savings and budget predictability.

The DEP seeks actuarial services in connection with the review of the programs' fiscal soundness. The review is to include an evaluation of the present and prospective assets and liabilities of the Special Reclamation Program (the special reclamation fund and the water trust fund).

## **2. PINNACLE OVERVIEW**

Pinnacle Actuarial Resources, Inc. (Pinnacle) is one of the larger property/casualty actuarial consulting firms in the U.S. whose specialties include loss reserving, insurance pricing, alternative markets and financial risk modeling. Our clients include insurance companies, state regulators and state-operated funds, insurance trade organizations, captive insurers, self-insured businesses, accounting firms and a variety of risk retention groups. As a result of this broad client base, we are called on to provide a wide variety of actuarial consulting services.

Pinnacle Actuarial Resources, Inc. is an independent Illinois corporation, privately owned by its professional actuarial staff. Pinnacle took its current corporate form in January 2003, but our core operations and many of our customer relationships have been maintained continuously since 1984.

Our actuaries have provided loss reserve (unpaid liability) analyses, pricing and funding studies for commercial insurers, state-operated funds self-insured entities and captives. We serve as appointed actuaries and provide public Statements of Actuarial Opinion for a number of insurers in accordance with National Association of Insurance Commissioners (NAIC) Annual Statement instructions and the Actuarial Standards of Practice.

Also included among our practice specialties is the costing of proposed legislation. In this regard, we have performed costing studies of insurance legislation in California, Colorado, Florida, Hawaii, Louisiana, Maryland, New Jersey, New York, Pennsylvania, Texas and West Virginia.

Pinnacle has offices in, Atlanta, Bloomington, IL, Chicago, Indianapolis, and San Francisco. Pinnacle has nearly thirty credentialed actuaries, another twenty analysts and technicians, and more than a dozen additional support staff, assuring that we can handle projects of any size in a timely manner. A project team of three consultants has been assembled should Pinnacle be selected for this engagement. The rest of the project team will include actuarial analysts and administrative support to assist the consultants in the various projects.

For more information concerning our firm and all the services we provide, please visit our web site at [www.pinnacleactuaries.com](http://www.pinnacleactuaries.com).



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### **3. QUALIFICATIONS**

A summary of Pinnacle’s ability to meet the minimum qualification requirements, as set out in Section 3 of the RFQ, immediately follows.

#### **3.1 Licensure**

All of our credentialed actuaries are members of the American Academy of Actuaries (AAA) and the Casualty Actuarial Society (CAS). The Pinnacle consultants assigned to this proposed project are both knowledgeable and experienced in liability estimation projects involving mine reclamation and other state funds for state-owned insurers, as well as private carriers. Below we provide a list of the consultants who will be assigned to this project and what role each will play.

- Arthur R. Randolph, II, FCAS, MAAA, CPCU, ARM, ARe – Principal & Consulting Actuary  
Role: Lead FCAS  
7 years with Pinnacle, over 20 years in the insurance industry  
7 years of mine reclamation fund experience
- Laura A. Maxwell, FCAS, MAAA, CSPA – Senior Consulting Actuary  
Role: Supporting Consultant and Peer Reviewer  
13 years with Pinnacle, over 30 years in the insurance industry  
7 years of mine reclamation fund experience, including West Virginia
- Legaré W. Gresham, FCAS, MAAA – Consultant  
Role: Peer Reviewer  
3 years with Pinnacle, over 10 years in the insurance industry  
3 years of mine reclamation fund experience

It should be noted that each of these consultants has worked with John E. Wade, ACAS, MAAA (retiring Pinnacle consultant, 2019) on previous mine reclamation studies in West Virginia and other states. Mr. Wade has been the project manager for the last several West Virginia mine reclamation studies conducted by Pinnacle and has been shifting these responsibilities to other consultants, particularly Mr. Randolph, as he transitions into retirement.

##### **3.1.1 Credentials**

Documentation of our actuarial credentials is included as Appendix B.1 and B.2.

##### **3.1.2 Continuing Education**

Documentation of our continuing education compliance is included as Appendix B.3

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### **3.2 Conflict of Interest**

We have reviewed our current and past work for the state of West Virginia and have found no conflict of interest. Our policy regarding possible conflict of interest is listed below.

Before responding to any RFP the consultant must first determine that no potential conflict of interest, or no appearance of conflict of interest, exists. At Pinnacle our conflict check covers past, current and future client relationships.

A conflict of interest may exist on two levels:

- i) A conflict of interest exists if Pinnacle, or the account executive, has any financial interest which may limit the consultant's ability to render an objective, professional opinion.
- ii) A conflict exists if working for one client harms our ability to do business with another client.

In most cases, if the work is more than three years old that should remove concerns about potential conflicts of interest.

The "business" conflict in (ii) typically arises when a client demands that Pinnacle not do business with one of the client's competitors. This should not be a conflict we would face in any work done for the West Virginia DEP.

The "professional" conflict of interest in (i) is the more common situation and the one to which references of "conflict of interest" usually applies. The key in determining the existence of a conflict is the ability of the consultant and Pinnacle to render an objective opinion.

Our consultant base is large enough to exclude any consultant from the team of consultants that might be reviewing a specific company and still provide an efficient, professional, and comprehensive work product. However, we do and will continue to check with the Client on any potential conflicts before accepting an assignment where the potential for conflict exists.

It can be specifically noted that Pinnacle consultants have been and are currently actively engaged by the West Virginia Offices of the Insurance Commissioner (OIC) in annual actuarial reviews of workers compensation funds managed by the State. The engagement with the OIC does not present itself as a conflict of interest with the services to be provided under this proposal.

We have endeavored to determine the existence of any potential conflict of interests which may exist that would impair our ability, or perceived ability, to render objective actuarial services. We have identified no conflict of interest with regard to any officer or employee of the organizations involved in this assignment.

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Specifically, none of the consultants and other staff that would be assigned to this engagement have a conflict of interest with the State, their current leadership or their senior staff members.

### **3.3 External Quality Control**

Pinnacle does not have an external quality control report. However, Pinnacle requires, and our governing professional organization encourages, that all actuarial work products be peer reviewed before release. The intent of the peer review process is to foster the maintenance of high professional standards and practices, and to consistently apply these standards to all assignments. Peer review is also important to our clients because it serves to increase the confidence in our opinions by all users that rely on them.

Pinnacle also requires that an employee who is independent of entering data and making calculations completely check all data inputs and any non-automated calculations which are carried out in a work product. This technical review is done to assure that our findings are based on the information that is precisely as provided as well as free from errors in calculation. Our peer review and technical review processes on each and every assignment contribute to our standard of excellence. These technical and peer reviews are a mandatory component of each project.

Pinnacle's Professionalism Committee is charged with ensuring the firm's policies and procedures meet or exceed the standards promulgated by the AAA, the CAS, NAIC and individual state departments of insurance. It is the express duty of the Professional Standards Officer (PSO) to ensure the work product of the firm abides by these guidelines. Ms. Maxwell currently serves as Pinnacle's PSO.

### **3.4 Federal or State Reviews**

Pinnacle has not been subject to any federal or state desk reviews or field reviews in the past three years.

### **3.5 Litigation**

Pinnacle has not been subject to any litigation, taken or pending, in the past three years with any government regulatory bodies or professional organizations.

### **3.6 Client References**

Pinnacle has provided actuarial studies related to mine reclamation liabilities to West Virginia and other states. Contacts with the West Virginia DEP include Michael Sheehan. Contact information for other State programs (Ohio, Kentucky, and Virginia) will be provided upon request.

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**3.7 Sample Reports**

We have included our most recent (2017) West Virginia Special Reclamation Fund and Special Reclamation Water Trust Fund actuarial valuation reports as Appendix A to this proposal. Other recent mine reclamation reports may be available upon request, including

- 2017 Ohio Mine Reclamation Forfeiture Fund
- 2017 Kentucky Reclamation Guaranty Fund

**4. MANDATORY REQUIREMENTS**

Pinnacle will provide actuarial services that will meet or exceed the mandatory requirements listed below.

**4.1.1 Timeline and Deliverables**

The following dates will be met:

- |                            |                          |
|----------------------------|--------------------------|
| • Upon Receipt of Contract | Work Commences           |
| • June 15, 2019            | Progress Report          |
| • August 15, 2019          | Progress Report          |
| • October 15, 2019         | Draft Report             |
| • November 15, 2019        | Exit Conference          |
| • November 30, 2019        | Delivery of Final Report |

Similar dates will be met with subsequent biennial renewals, with work commencing on April 1 of the renewal years.

**4.1.2 Report and Statement of Actuarial Opinion**

We reiterate here key components of the Report and Statement of Actuarial Opinion as listed in Section 4.1.2 of the RFQ to indicate our understanding and acceptance of the required services. Pinnacle will prepare a report with a statement of actuarial opinion as to the Program’s fiscal soundness, in accordance with West Virginia Code §22-1-17. The report and opinion will include the following items:

1. A valuation in accordance with applicable actuarial standards of practice promulgated by the actuarial standards board of American Academy of Actuaries that will determine the Program’s fiscal soundness;
2. An evaluation of the **present** (as of June 30 of each evaluation year) assets and liabilities of the Special Reclamation Program for a minimum of 20 years, including an annual table illustrating those assets and liabilities for underground versus surface mine permits, small versus large permits (based on bond amounts or acreage) and permits for tipplés, preparation plants and impoundments and illustrating land and water liabilities separately;

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3. An evaluation of the **prospective** assets and liabilities of the Special Reclamation Program for a minimum of 20 years, including a table illustrating estimates of underground versus surface mine permits, small versus large permits (based on bond amounts or acreage) and permits for tipples, preparation plants and impoundments and illustrating land and water liabilities separately, including the funded status of the water trust fund as well as the special reclamation fund;
4. A table combining the present and prospective findings of items 4.1.2.2 and 4.1.2.3;
5. An analysis and discussion of the ability of the Program to support long term and/or perpetual liabilities;
6. A one page executive summary of conclusion with references to the body of the report;
7. An electronic copy of the final report in Microsoft Word 2016 or comparable format;
8. An electronic copy of work papers, table and models in Microsoft Excel 2016 or comparable format.

**4.1.3 On-Site Entrance Conference**

Pinnacle will participate in an on-site entrance conference involving interviews of each Special Reclamation Advisory Council member and other significant staff.

**4.1.4 On-Site Entrance Conference**

Pinnacle will provide two (2) on-site consultations, which may include presentation at quarterly Council meetings or presentations to the Legislature, in addition to the entrance and exit conferences.

**4.1.5 Teleconference**

Pinnacle will provide one (1) teleconference with the Special Reclamation Advisory Council and significant staff.

**4.1.6 Exit Conference**

Pinnacle will provide an on-site exit conference with the Special Reclamation Advisory Council and significant staff.

**5. PAYMENT, TRAVEL & FACILITIES ACCESS**

Pinnacle recognizes and accepts the payment schedule as listed in Section 7 of the RFQ. Pinnacle further acknowledges that travel costs are inclusive in the Pricing Page and will not bill these costs separately to the Agency as stipulated in Section 8. We will also comply with all facilities access requirements as described in Section 9.

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## **6. MISCELLANEOUS ITEMS**

### **Specific Work Plan**

In completing the elements of Section 4 above, the following Specific Work Plan will be adopted:

- Review of previous actuarial reports and all other presently available information concerning the present assets and liabilities of the Special Reclamation Fund and the Special Reclamation Water Trust Fund, expected future assets and liabilities of the Funds, and all other information related to the timing of fund deposits/collections and fund reclamation payments.
- On-site Entrance Conference – On-site meeting in Charleston to gain insight as to background, operations and significance of obtained data.
- Data Request – Immediately following the on-site entrance conference, Pinnacle will issue a formal data request outlining all additional required elements to support our study.
- Data Assimilation – Pinnacle will organize and assimilate available data into electronic worksheets for technical analysis
- Analysis
  - Observations of historical financial data
  - Review of structure of the Funds
  - Selection of appropriate methods and assumptions
  - Incorporation of Business Plan
- Results
  - Preliminary results
  - Diagnostics and fine-tuning
  - Finalization of range
  - Follow-Up with DEP and Special Reclamation Advisory Council
- Development of Report
  - Draft and Discussion
  - Final Report
- On-site exit conference and presentation to Special Reclamation Advisory Council in Charleston.
- Two Additional Onsite Consultations and One Teleconference which may include presentations at quarterly Council meetings or presentations to the West Virginia Legislature will be worked into the above project plan.

### **Assurance of Quality of Staff**

We have assigned three highly qualified experienced consulting actuaries to this engagement team. These three individuals have worked closely together on numerous projects, including mine reclamation studies. Each of these consultants are qualified, able, and available to step in and fill the role of any other one of the consultants on the project team should one of the consultants become unavailable for any reason. We also have a pool of additional consulting actuaries that we could call upon, if needed. No changes would be made to the

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Office of Special Reclamation  
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professional staff assigned to this team without the prior written consent of the Department of Environmental Protection. Finally it can also be noted that our lead supporting analyst on this engagement will be the same analyst used in our prior West Virginia mine reclamation studies, as well as in our studies of our other State mine reclamation programs.

**General Terms and Conditions**

Pinnacle agrees with the General Terms and Conditions as listed in the RFQ. Specifically, we currently maintain professional liability insurance in the amount of \$2,000,000 and agree to maintain the professional liability insurance. We also reaffirm that our managing actuary for this assignment, Art Randolph is a Fellow of the Casualty Actuarial Society, a member of the American Academy of Actuaries, and has the necessary experience to see this engagement is completed as specified.

**Prior Engagements with the State of West Virginia**

Pinnacle has provided the three of the prior actuarial studies of the Special Reclamation Fund and the Special Reclamation Water Trust Fund for the West Virginia Department of Environmental Protection.

Pinnacle is currently engaged by the State of West Virginia, Department of Revenue, Offices of the Insurance Commissioner (OIC) to provide actuarial services in relation to the review of the remaining workers’ compensation liabilities from coverage provided by the state run workers’ compensation funds until 2005 and the successor funds created to supplement the private insurance market. Most recently the State has added their own State Entities Workers Compensation (SEWC) self-insurance fund into the mix. Pinnacle provided the original feasibility study for the SEWC and assists in the subsequent evaluations of the financial soundness of this and the other workers compensation funds. The annual contract for the OIC began in 2009 and has been extended/renewed through 2019.

**Contract Manager**

Per Section 11.1 of the RFQ, during the course of this engagement, Arthur Randolph will serve as the primary contract manager responsible for overseeing Pinnacle’s responsibilities under the contract. Laura Maxwell is available as an alternate contact point.

	Primary Contact	Alternate Contact
Contract Manager	Arthur Randolph	Laura Maxwell
Telephone Number	678.894.7258	415.692.0938
Fax Number	770.587.0304	309.807.2301
Email Address	ARandolph@PinnacleActuaries.com	LMaxwell@PinnacleActuaries.com



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Greenwood, IN 46143  
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John E. Wade, ACAS, MAAA  
Consulting Actuary  
jwade@pinnacleactuaries.com

December 7, 2017

Special Reclamation Advisory Council  
c/o Department of Environmental Protection  
Division of Land Restoration – Office of Special Reclamation  
601 57<sup>th</sup> Street S.E.  
Charleston, West Virginia 25304

Dear Council Members:

Pinnacle Actuarial Resources, Inc is pleased to provide the enclosed report to the Special Reclamation Advisory Council of the West Virginia Department of Environmental Protection. The report provides summary and various details regarding the actuarial valuation of the Special Reclamation Fund and the Special Reclamation Water Trust Fund as of June 30, 2017.

If you have any questions, or require anything further please call us at the numbers listed below. Thank you for allowing us to be of service to the Council again this year. We look forward to the opportunity to work with you again in the near future.

Best Regards,

A handwritten signature in blue ink that reads "John E. Wade".

John E. Wade, ACAS, MAAA  
Consulting Actuary  
[jwade@pinnacleactuaries.com](mailto:jwade@pinnacleactuaries.com)  
317-889-5760





**Report for the  
West Virginia Department of Environmental Protection  
Office of Special Reclamation  
  
Actuarial Valuation of the  
Special Reclamation Fund &  
Special Reclamation Water Trust Fund**

Actuarial Analysis as of June 30, 2017



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## **REPORT ORGANIZATION**

**EXECUTIVE SUMMARY** provides a thumbnail sketch of the results of our analysis.

**ACTUARIAL CERTIFICATION** attests that this valuation has been conducted in accordance with generally accepted actuarial principles and practices.

**SECTION 1** describes the actuarial model in detail and the development of the assumptions used to estimate the revenues and liabilities of the Special Reclamation Fund and the Special Reclamation Water Trust Fund.

**SECTION 2** provides a projection of required income for solvency through the next 35 years.

**SECTION 3** describes the data reviewed and used in the report.

**SECTION 4** describes the actuarial assumptions used in the valuation.

The timely completion of our report depended on complete responses to our data and information requests. The Department of Environmental Protection staff provided us with timely and complete responses to all of our requests for information. We wish to thank them, especially Michael Sheehan, Lewis Halstead, Dianna Wright, Michael Fairchild, and Patricia Hickman for their time and for providing us with their counsel as well as the information that we used in this report.

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### Exhibits

## ***EXECUTIVE SUMMARY***

This report from Pinnacle Actuarial Resources provides the Department of Environmental Protection (DEP) with information regarding the funded status of the Special Reclamation Fund (SRF or contextually Fund) and the Special Reclamation Water Trust Fund (SRWTF or contextually Fund) and an analysis of the SRF's and SRWTF's projected financial statuses under a range of operational parameters. This report updates and expands our previous actuarial study completed in 2013. This analysis incorporates the current estimates of future water treatment costs under the expanded National Pollutant Discharge Elimination System (NPDES) standards.

This valuation is a "closed" valuation in that it only considers liabilities associated with permits that have already been issued. The estimated Fund liabilities account for both known forfeitures and anticipated forfeitures from permits issued before July 1, 2017. Accordingly, we have included in this report reclamation liabilities based on the date of forfeiture as well as based on the issue date of permit, to provide the SRF Advisory Council with a complete picture of the Fund's current obligations.

The estimates in this report are actuarial central estimates. As actuarial central estimates, they represent an expected value within the range of reasonably possible outcomes. The bond recoveries are considered as an income item rather than an adjustment to the liabilities as the Fund is responsible for the reclamation of bond forfeiture sites regardless of bond collection. The estimates do not consider any excess insurance or other recoveries because there is no excess insurance and no other recoveries are expected. The estimated liability at June, 30, 2017 is based on permit and forfeiture data through June 30, 2017 and data received through October 6, 2017.

### **BACKGROUND ON COAL TAX RATES FOR FUNDS**

In Senate Bill No. 751 (SB 751), a separate Special Reclamation Water Trust Fund (SRWTF or Water Trust Fund) was established effective July 1, 2008. Beginning in 2012, coal tax revenues based on a tax rate of 15.0 cents per ton are being paid into the Special Reclamation Water Trust Fund. In addition, coal tax revenues based on 12.9 cents per ton (7 cents plus 5.9 cents per SB 751) are being paid into the Special Reclamation Fund (SRF). These rates have continued into 2017 and our estimates assume they will for the foreseeable future.

Unless modified in response to future legislation, for budgeting and analysis purposes the Department of Environmental Protection plans to continue paying all costs for both land and water reclamation work out of the Special Reclamation Fund (SRF) through June 2018. This delay better enables the

SRWTF to build up assets and reach a position where it is large enough to begin covering water treatment costs – both water capital costs and ongoing water treatment costs.

**ASSUMPTION CHANGES**

Except as noted below, there were no major changes to methodologies or assumptions compared to our 2013 analysis.

- Release rates were reviewed and reduced from the prior analysis.
- Forfeiture rates were reviewed and reduced from the prior analysis.
- Investment rates were reviewed and adjustments made in keeping with current listings of recent West Virginia State investment pools, U.S. Treasury rates and a segmentation between the SRF and SRWTF. In addition, investable amounts were restricted within each fund to allow for liquidity in paying ongoing expenses.
- Inflationary cost trends have been lowered based on changes in the Consumer Price Index.
- Discount rates were adjusted to reflect selected investment rates.
- Water treatment costs are based on new standards of the NPDES.
- Water capital costs have increased due to a reassignment of “ACT” (active chemical treatment) and “P” (passive treatment) permits from closed in our prior analysis to open in our current analysis.
- Administrative cost estimates were decreased based on historical data.

These changes and the impact are described in more detail in the text of the report.

**FUNDED STATUS**

Separate projections of the SRF and the SRWTF have been developed to show the overall financial solvency of each fund. For the funded status, we have compared the present value of future expenditures with the current value of the Fund’s assets plus the present value of future income, using a 20-year cash-flow projection and a 35-year cash-flow projection.

Funded Status (on a present value basis)			
Fund	20 Year Projection	35 Year Projection	Year Fund Becomes Negative
SRF	97.3%	93.6%	2021
SRWTF	162.6%	151.4%	Fully Funded
Combined	123.4%	115.8%	Fully Funded

The funded status of the SRF has deteriorated significantly since our 2013 review, primarily as a result of increasing water treatment costs which more than offset more favorable selected forfeiture rates. The SRF is projected to develop a negative Fund balance in 2021. The benefit of the improved forfeiture rates, however, has moved the SRWTF into a fully funded status on a present value basis.

It is noted that on a combined basis the two Funds maintain a positive balance throughout the projection periods. In Exhibit 6.1 it can be seen that combined transfers of \$38 million in assets from the SRWTF to the SRF would keep the SRF in a positive balance position throughout the projection period without causing the SRWTF to move to a negative balance position. If those Fund transfers were to occur, the above table could be restated as below.

Funded Status (on a present value basis)			
Fund	20 Year Projection	35 Year Projection	Year Fund Becomes Negative
SRF	110.9%	105.6%	Fully Funded
SRWTF	130.3%	115.7%	Fully Funded
Combined	118.6%	109.5%	Fully Funded

A second alternative to keep the SRF in a positive Fund balance position would be to raise the SRF coal extraction fee from 12.9 cents a ton to 20.6 cents a ton in 2018 and for the next four years, and then dropping it back down to 12.9 cents a ton in 2023.

**Fund transfers of \$38 million from the SRWTF to the SRF as noted in Exhibit 6.1 are assumed throughout the remainder of this report, without any changes to the extraction fees.**

## VALUATION RESULTS

### *Expenditures*

Tables A-1 through A-4 below show the present value of future expenditures from July 2017 to June 2037 and from July 2017 to June 2052 for the Special Reclamation Fund and the Special Reclamation Water Trust Fund. The future expenditures associated with these Funds include:

- land capital expenditures (restoring the land to the approved reclamation plan),
- water capital expenditures (creation of water treatment facilities),
- ongoing water treatment expenditures, and
- administration costs.

These amounts include the Department of Environmental Protection estimated costs for reclamation activities on permits that have already been forfeited, including the estimated on-going water treatment costs. The projected amounts are the discounted present value of projected cash flows using a discount rate equal to the expected investment returns based upon recent returns on West Virginia investments and US Treasury Notes. Since the estimated annual reclamation cost inflation rate of 2.5 percent is fairly close to the implicit discount rate, the discounted figures are nearly the same as the estimated costs in 2017 dollar terms for the SRF. Discounting has a larger impact on the SRWTF, which is projected to have much larger investment returns.

A complete description of all of the assumptions used in the valuation can be found in Section 4. The Water Capital and Water Treatment costs are only included in the Special Reclamation Fund figures until July of 2018, at which point following a ten year capital build up, the Water Trust Fund will begin covering water capital and water treatment costs on forfeitures occurring after June 30, 2018.

- Table A-1 - Special Reclamation Fund 20 Year Liabilities for Known and Expected Forfeitures
- Table A-2 - Special Reclamation Fund 35 Year Liabilities for Known and Expected Forfeitures
- Table A-3 - Special Reclamation Water Trust Fund 20 Year Liabilities for Known and Expected Forfeitures
- Table A-4 - Special Reclamation Water Trust Fund 35 Year Liabilities for Known and Expected Forfeitures

<p style="text-align: center;">Table A-1 <b>Special Reclamation Fund</b> Liability as of June 30, 2017 for Known and Expected Forfeitures <b>Limited to a 20-Year Cash Flow</b> (Present Value in \$ Millions)</p>			
	Currently Forfeited Permits	Projected Future Forfeitures	<b>Total Liabilities</b>
Land Capital	\$27.7	\$49.2	\$76.9
Water Capital	95.2	0.0	95.2
Ongoing Water Treatment	4.8	0.0	4.8
Administration			76.3
<b>Total</b>			<b>\$253.3</b>

For comparison purposes, the 20-Year SRF cost projection prepared by Pinnacle in 2013 was \$284.0 million. Projected Land and Water Capital costs on currently forfeited permits are up substantially in

West Virginia Special Reclamation Fund

spite of the improved forecast of forfeiture rates because of the backlog in payments. Future forfeited permits costs are down because of the more favorable selected forfeiture rates.

<p style="text-align: center;">Table A-2 <b>Special Reclamation Fund</b> Liability as of June 30, 2017 for Known and Expected Forfeitures <b>Limited to a 35-Year Cash Flow</b> (Present Value in \$ Millions)</p>			
	Currently Forfeited Permits	Projected Future Forfeitures	<b>Total Liabilities</b>
Land Capital	\$27.7	\$55.7	\$83.4
Water Capital	95.2	0.0	95.2
Ongoing Water Treatment	4.8	0.0	4.8
Administration			148.6
<b>Total</b>			<b>\$332.0</b>

For comparison purposes, Pinnacle’s 35-Year SRF cost projection in 2013 was \$389.9 million.



Table A-3 <b>Special Reclamation Water Trust Fund</b> Liability as of June 30, 2017 for Known and Expected Forfeitures <i>Limited to a 20-Year Cash Flow</i> (Present Value in \$ Millions)			
	Currently Forfeited Permits	Projected Future Forfeitures	<b>Total Liabilities</b>
Land Capital	\$0.0	\$0.0	\$0.0
Water Capital	46.7	38.0	84.7
Ongoing Water Treatment	70.6	13.1	83.7
Administration			0.0
<b>Total</b>			<b>\$168.4</b>

For comparison purposes, Pinnacle’s 20-Year SRWTF cost projection in 2013 was \$151.5 million. Water treatment costs are up due to the increased costs related to the new NPDES standards.

Table A-4 <b>Special Reclamation Water Trust Fund</b> Liability as of June 30, 2017 for Known and Expected Forfeitures <i>Limited to a 35-Year Cash Flow</i> (Present Value in \$ Millions)			
	Currently Forfeited Permits	Projected Future Forfeitures	<b>Total Liabilities</b>
Land Capital	\$0.0	\$0.0	\$0.0
Water Capital	46.7	40.9	87.6
Ongoing Water Treatment	96.0	23.9	119.9
Administration			0.0
<b>Total</b>			<b>\$207.4</b>

For comparison purposes, the 35-Year SRWTF cost projection in 2013 was \$290.4 million.

**Revenues**

The SRF and SRWTF receive revenues from several sources. The primary funding source for both Funds is tax on current coal extraction. The second funding source, available only to the SRF, is from the underlying security on forfeited permits, as the Fund collects the bond amounts associated with the forfeited permits and/or civil penalties and court settlements. The third funding source, available to both Funds, is interest income earned on the SRF and SRWTF assets invested in State investment pools (SRF) and other higher yielding instruments (SRWTF).

As with the projection of expenses, we have developed income projections across both a 20 year and 35 year time horizon for each Fund. Future revenue streams have been discounted at the implicit annual investment returns for both the SRF and the SRWTF.

- Table B-1 - Special Reclamation Fund 20 Year Revenue
- Table B-2 - Special Reclamation Fund 35 Year Revenue
- Table B-3 - Special Reclamation Water Trust Fund 20 Year Revenue
- Table B-4 - Special Reclamation Water Trust Fund 35 Year Revenue

Overall estimated SRF revenues have not changed substantially since our 2013 estimates, although the individual components have shifted. Coal tax is down somewhat because of lower estimated coal production. Projected revenues from bond forfeitures are down because of the improved projected forfeiture rates. Miscellaneous income is up quite a bit based on recent past experience. Interest income is negligible because of the very low asset base of the SRF.

Table B-1 <b><u>Special Reclamation Fund</u></b> Revenue Projection as of June 30, 2017 for Known and Expected Forfeitures <i>Limited to a 20-Year Cash Flow</i> (Present Value in \$ Millions)					
Coal Tax Current Permits	Bond Forfeiture	Civil Penalties & Court Settlements	Fund Transfers	Interest Income	<b>Total Income</b>
\$134.5	\$26.3	\$28.4	\$29.5	\$5.9	<b>\$224.7</b>

<p style="text-align: center;">Table B-2 <b>Special Reclamation Fund</b> Revenue Projection as of June 30, 2013 for Known and Expected Forfeitures <i>Limited to a 35-Year Cash Flow</i> (Present Value in \$ Millions)</p>					
Coal Tax Current Permits	Bond Forfeiture	Civil Penalties & Court Settlements	Fund Transfers	Interest Income	<b>Total Income</b>
\$182.2	\$28.3	\$42.8	\$29.5	\$11.5	<b>\$294.4</b>

Estimated SRWTF revenues are down in our 20 and 35 year forecasts compared to our 2013 estimates due to decreased projected coal production and projected lower forfeiture of bonds.

<p style="text-align: center;">Table B-3 <b>Special Reclamation Water Trust Fund</b> Revenue Projection as of June 30, 2017 for Known and Expected Forfeitures <i>Limited to a 20-Year Cash Flow</i> (Present Value in \$ Millions)</p>					
Coal Tax Current Permits	Bond Forfeiture	Civil Penalties & Court Settlements	Fund Transfers	Interest Income	<b>Total Income</b>
\$113.5	\$0.0	\$0.0	-\$29.5	\$42.3	<b>\$126.3</b>

<p style="text-align: center;">Table B-4 <b>Special Reclamation Water Trust Fund</b> Revenue Projection as of June 30, 2017 for Known and Expected Forfeitures <i>Limited to a 35-Year Cash Flow</i> (Present Value in \$ Millions)</p>					
Coal Tax Current Permits	Bond Forfeiture	Civil Penalties & Court Settlements	Fund Transfers	Interest Income	<b>Total Income</b>
\$133.5	\$0.0	\$0.0	-\$29.5	\$42.9	<b>\$146.9</b>

Note that SRWTF interest income is nearly stagnant between the 20 year and 35 year forecasts because our model does not allow interest to be earned when the undiscounted fund balance is negative. See Exhibits 6.2 and 10.2.

**Fund Status as of June 30, 2017**

The Special Reclamation Fund had accumulated assets of \$56.2 million while the Special Reclamation Water Trust Fund had accumulated \$93.1 million in assets as of June 30, 2017. The SRF assets have decreased by nearly \$20 million since 2013 while the SRWTF assets are up by more than \$70 million. These levels reflect both the continued benefit of significant reclamation efforts in the past and the revenue from various sources including the coal tax collections.

In Tables C-1 and C-2 below, we combine the projected reclamation liabilities, current assets and expected future revenue and fund transfers to produce the Funded Status for each of the Funds. A Funded Status of above 100 percent indicates that the current revenue structure (i.e. legislated coal tax revenues and amounts of permit bonds) should provide sufficient funding to meet the long-term obligations of the Fund for the reclamation of forfeitures of permitted mining operations. A Funded Status of less than 100 percent would indicate that the Fund’s assets, combined with expected future revenues and fund transfers, are not sufficient to cover the expected future expenditures for the reclamation of forfeitures of the permitted mining operations.

Table C-1 <b>Special Reclamation Fund</b> Funded Status as of June 30, 2017 (in \$ Millions)		
	20 Years	35 Years
Present Value of Future Revenues	\$195.2	\$264.9
Assets as of June 30, 2017	56.2	56.2
Present Value of Fund Transfers	29.5	29.5
Assets + Present Value of Future Revenues and Transfers	280.9	350.6
Present Value of Future Expenditures	253.3	332.0
Funded Status	110.9%	105.6%
Year Fund Balance Becomes Negative	Fully Funded Through 35 Years	

<b>Table C-2</b>		
<b><u>Special Reclamation Water Trust Fund</u></b>		
Funded Status as of June 30, 2017		
(in \$ Millions)		
	20 Years	35 Years
Present Value of Future Revenues	\$155.8	176.4
Assets as of June 30, 2013	93.1	93.1
Present Value of Fund Transfers	-29.5	-29.5
Assets + Present Value of Future Revenues and Transfers	219.4	240.0
Present Value of Future Expenditures	168.4	207.4
Funded Status	130.3%	115.7%
Year Fund Balance Becomes Negative	Fully Funded Through 35 Years	

On a combined basis, the SRF and SRWTF are projected to carry a positive balance through year 2047 on an undiscounted basis, but throughout 2052 on a discounted basis. See additional details in Exhibits 6.3 and 6.6.

In Exhibits 6 we provide projections of the estimated cash flows over the next 35 years.

The expenditures are comprised of:

- Land capital expenditures
- Water capital expenditures
- Ongoing water treatment expenditures
- Administration costs

The revenues are comprised of:

- Coal tax receipts
- Bond forfeitures, civil penalties, and court settlements
- Investment income

We also bring the Fund transfers into Exhibit 6.

The investment income is determined by applying recent West Virginia rates of return (extended into the future based on varied US Treasury interest rates) against the prior year-end closing fund balance plus one-half the year's income less one-half of the year's expenditure. For projected years where the total undiscounted fund balance is negative, total investment income is set to zero.

Exhibits 6 shows the projected cash flows for the next 35 years assuming continuation of current law, whereby the coal tax continues to be collected at a rate of 27.9 cents per ton with 15.0 cents per ton allocated to the Special Reclamation Water Trust Fund.

Exhibit 6.1 shows that under the current law, the SRF balance is projected to become negative in 2021 on an undiscounted basis, even though water treatment costs shift to the SRWTF in 2019. However, as shown in the exhibit, an infusion of funds from the SRWTF to the SRF would prevent that from happening. Exhibit 6.4 restates Exhibit 6.1 on a present value (discounted) basis, including the transferred fund amounts.

Exhibit 6.2 shows the accumulation of assets in the Water Trust Fund. The SRWTF will begin making payments for water capital and ongoing water treatment in Fiscal Year 2019. On an undiscounted basis (non-present value basis) the Fund is projected to have sufficient capital to operate until some point in 2041 before experiencing a deficit. This is after consideration the fund transfers to the SRF 2021 and 2022. We expect that the Water Trust Fund will have accumulated \$110.7 million at the end of fiscal year 2018. When payment and revenue streams are viewed on a present value basis the SRWTF is fully funded over the next 35 years. This is displayed in Exhibit 6.5.

Exhibit 6.3 projects that on a combined basis the Funds will remain solvent through 2047 on an undiscounted basis. When present valued in Exhibit 6.6, the combined Funds projected balance remains positive throughout the 35 year projection period.

Table D below shows the expected capital costs for reclamation based upon previously forfeited permits in 2017 dollars. With the current bond limit of \$5,000 per acre, the expected receipts from permits issued in the future will not be sufficient to cover the expected reclamation costs for Underground Permits or Other Permits.

<b>Table D</b>			
<b>Cost Per Acre by Permit Type</b>			
<b>(in 2017 Dollars)</b>			
<b><i>Based on Forfeited Permits</i></b>	<b>Surface</b>	<b>Underground</b>	<b>Other Types</b>
<b>Land Capital</b>	\$3,200	\$13,800	\$9,100
<b>Water Capital</b>	4,500	14,400	5,200
<b>Water Treatment</b>	140	260	200
<b>Total Capital</b>	7,840	28,460	14,500

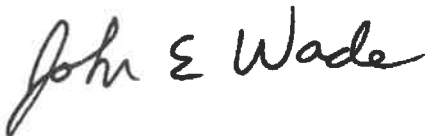
**ACTUARIAL CERTIFICATION**

The State of West Virginia's Department of Environmental Protection retained Pinnacle Actuarial Resources, Inc. to perform an actuarial valuation of the Special Reclamation Fund for the purposes of reporting the progress of the Fund.

John E. Wade, ACAS, MAAA, Consulting Actuary is a member of the American Academy of Actuaries and meets its Qualification Standards of Actuaries Issuing Statement of Actuarial Opinion in the United States to render the actuarial opinion contained here.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. The actuarial assumptions and methods employed in the measurement of the liability have been selected by Pinnacle Actuarial Resources, Inc. after consultation with the staff of the Department of Environmental Protection and the Special Reclamation Fund Board.

The results shown in this report are reasonable actuarial results. However, a different set of results could also be considered reasonable actuarial results. The reason for this is that actuarial standards of practice describe a "central estimate" for each assumption, rather than a single best-estimate value. Thus, reasonable results differing from those presented in this report could have been developed by selecting different points within the best-estimate ranges for various assumptions.



**John E. Wade, ACAS, MAAA**  
Consulting Actuary  
Pinnacle Actuarial Resources, Inc

**CRFQ 0313 DEP1900000020**

Appendix B – Credentials and Continuing Education



# The Actuarial Directory

## Arthur R Randolph II

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### Designations

MAAA 2005

FCAS 2007

### Other professional designations

CPCU

Associate in Reinsurance

Associate in Risk Management

### Industry

Consulting

### Primary area of practice

General Insurance/Property Casualty

### Specializations

Commercial Lines

Financial Reporting

Liability Insurance

Personal Lines

### Society of Actuaries Sections

Joint Risk Management (SOA - CAS - CIA)

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## Designations

MAAA 2002

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## Academic degrees

B.S.

## Industry

Consulting

## Primary area of practice

General Insurance/Property Casualty

## Society of Actuaries Sections

Joint Risk Management (SOA - CAS - CIA)

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### Designations

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FCAS 2009

---

### Academic degrees

B.E.  
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---

### Industry

Consulting

---

### Primary area of practice

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2014 - Have complied  
2015 - Have complied  
2016 - Have complied  
2017 - Have complied  
2018 - Have complied  
2019 - Have complied

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2014 - Have complied

2015 - Have complied

2016 - Have complied

2017 - Have complied

2018 - Have complied

2019 - Have complied

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FCAS, MAAA, CPCU, ARM, ARE  
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#### Focus

Medical Professional Liability Insurers, Traditional Property/Casualty Insurers and Reinsurers, Self-Insured Hospitals, Hospital and Physician Groups, Captive Insurers and Large Employers, Ratemaking, Reserving, Risk Transfer Testing, Developing Experience and Retrospective Rating Plans, Personal and Commercial Property, Workers' Compensation

#### Education

Temple University  
B.B.A. in Actuarial Science & Risk Management

#### Certifications

Fellow of the Casualty Actuarial Society (FCAS)  
Member of the American Academy of Actuaries (MAAA)  
Chartered Property Casualty Underwriter (CPCU)  
Associate in Risk Management (ARM)  
Associate in Reinsurance (ARE)

### Professional Experience

Arthur Randolph is a Principal and Consulting Actuary with Pinnacle Actuarial Resources, Inc. managing the firm's Atlanta, Georgia office. He has been in the insurance industry since 1998 and has been consulting since 2001. Mr. Randolph's consulting career has focused on medical professional liability, homeowners, workers' compensation, commercial and personal automobile, general liability, and commercial multi-peril exposures.

Mr. Randolph provides actuarial consulting services to medical professional liability insurers, traditional property and casualty insurers and reinsurers, self-insured hospitals and physician groups, public and private self-insured entities, risk retention groups (RRGs), and captive insurers. His core services include reserving, ratemaking, risk transfer testing, funding allocations among members of risk sharing groups, and developing experience and retrospective rating plans. Mr. Randolph also conducts alternative risk financing feasibility and funding studies (e.g., large deductible plans, self-insurance structures, RRGs, captives) for organizations in both the public and private sectors that face various risk exposures. When clients have become involved in mergers and acquisitions, he has worked with them to seamlessly address all associated actuarial issues.

Mr. Randolph is a member of the AAA Medical Professional Liability Committee and the Alabama Actuarial Council. He is actively involved with Physician Insurers Association of America (PIAA), Florida Chamber of Commerce, National Association of Mutual Insurance Companies (NAMIC), Casualty Actuaries of the Southeast (CASE), Gamma Iota Sigma Insurance Fraternity (GIS), and International Association of Black Actuaries (IABA, Past Director & Treasurer). Mr. Randolph is a past member of the CAS Examination Committee and the CAS Program Planning Committee, and served as President & Director of the IABA Foundation.

### Engagement Experience

- Serves as Appointed Actuary and/or Loss Reserve Specialist for numerous insurance and reinsurance carriers, captive insurance companies, and self-insured entities
- Advises numerous self-insured entities and insurance companies on matters related to financial reporting of unpaid claim liabilities, routinely presenting to Boards of Directors and Executive Committees charged with financial reporting
- Performs extensive rate level reviews for a variety of coverages, including preparing and submitting filings, and responding to insurance department inquiries
- Establishes proper funding allocations among members of risk sharing groups and among revenue cost centers
- Conducts valuation analyses of merger and acquisition targets
- Performs alternative risk financing feasibility studies and retention optimization studies including financial performance modeling
- Performs classification relativity studies to ensure price equity between classes and overall rate level adequacy
- Develops experience and retrospective rating plans for medical professional liability and workers' compensation insurers, including post-implementation parameter testing
- Assists insurance companies with new product development and expansion into new territories, states, and risk classes

## ***CURRICULUM VITAE***

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<b>EDUCATION</b>	<table border="0" style="width: 100%;"> <tr> <td>TEMPLE UNIVERSTY, PHILADELPHIA, PA</td> <td></td> </tr> <tr> <td style="padding-left: 40px;">Bachelor of Business Administration</td> <td style="text-align: right;">1997</td> </tr> <tr> <td style="padding-left: 40px;">Major – Actuarial Science &amp; Risk Management</td> <td></td> </tr> </table>	TEMPLE UNIVERSTY, PHILADELPHIA, PA		Bachelor of Business Administration	1997	Major – Actuarial Science & Risk Management																	
TEMPLE UNIVERSTY, PHILADELPHIA, PA																							
Bachelor of Business Administration	1997																						
Major – Actuarial Science & Risk Management																							
<b>CONTINUING EDUCATION</b>	<p>Estimated study time exceeding over 5,000 hours necessary for completion of qualifying exams for membership in the Casualty Actuarial Society (CAS) and the American Institute for Chartered Property Casualty Underwriters (AICPCU)</p> <p>Participation as an attendee at the CAS Ratemaking &amp; Product Management Seminar, Casualty Loss Reserve Seminar, CAS Annual and Spring Meetings, Insurance Managers Association of Cayman (IMAC), Captive Insurance Companies Association (CICA), Physician Insurers Association of America (PIAA), Risk and Insurance Management Society (RIMS), American Society for Healthcare Risk Management (ASHRM), National Association of Mutual Insurance Companies (NAMIC), Florida Chamber of Commerce Insurance Summit, Insurance Conference on Financial Reporting (INCON) and other educational seminars on special topics (e.g., medical professional liability, captive and alternative markets, property catastrophe risk)</p> <p>Meets all continuing education requirements of the American Academy of Actuaries (AAA) necessary to sign statements of actuarial opinion</p>																						
<b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</b>	<table border="0" style="width: 100%;"> <tr> <td>Casualty Actuarial Society (CAS)</td> <td></td> </tr> <tr> <td style="padding-left: 40px;">Associate Member (ACAS)</td> <td style="text-align: right;">2005</td> </tr> <tr> <td style="padding-left: 40px;">Fellow (FCAS)</td> <td style="text-align: right;">2007</td> </tr> <tr> <td>American Academy of Actuaries (AAA)</td> <td style="text-align: right;">2005</td> </tr> <tr> <td>American Institute of CPCU (AICPCU)</td> <td></td> </tr> <tr> <td style="padding-left: 40px;">Associate in Risk Management (ARM)</td> <td style="text-align: right;">2011</td> </tr> <tr> <td style="padding-left: 40px;">Chartered Property Casualty Underwriter (CPCU)</td> <td style="text-align: right;">2012</td> </tr> <tr> <td style="padding-left: 40px;">Associate in Reinsurance (ARe)</td> <td style="text-align: right;">2012</td> </tr> <tr> <td>International Association of Black Actuaries (IABA)</td> <td style="text-align: right;">2001 - Present</td> </tr> <tr> <td>Casualty Actuaries of the Southeast (CASE)</td> <td style="text-align: right;">2007 - Present</td> </tr> <tr> <td>CPCU Society</td> <td style="text-align: right;">2012 - Present</td> </tr> </table>	Casualty Actuarial Society (CAS)		Associate Member (ACAS)	2005	Fellow (FCAS)	2007	American Academy of Actuaries (AAA)	2005	American Institute of CPCU (AICPCU)		Associate in Risk Management (ARM)	2011	Chartered Property Casualty Underwriter (CPCU)	2012	Associate in Reinsurance (ARe)	2012	International Association of Black Actuaries (IABA)	2001 - Present	Casualty Actuaries of the Southeast (CASE)	2007 - Present	CPCU Society	2012 - Present
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Casualty Actuaries of the Southeast (CASE)	2007 - Present																						
CPCU Society	2012 - Present																						



<b>EMPLOYMENT HISTORY</b>	Pinnacle Actuarial Resources, Inc.	2012 - Present
	Towers Watson / Towers Perrin	2005 - 2012
	PMA Insurance Group	2003 - 2005
	PricewaterhouseCoopers LLP	2001 - 2003
	Allstate Insurance Company / CNA Personal Insurance	1998 - 2001
<b>ACTUARIAL INTERNSHIPS</b>	Towers Perrin	1997
	American International Group	1996
	Milliman & Robertson	1994 - 1995
<b>PROFESSIONAL ACTIVITIES</b>	AAA Medical Professional Liability Committee	2012 - Present
	Alabama Actuarial Council	2017 - Present
	CAS Program Planning Committee	2013 - 2015
	Director, IABA	2014 - 2015
	CAS Joint Committee on Actuarial Diversity	2006 - 2014
	CAS Examination Committee	2007 - 2011
	Treasurer & Director, IABA	2003 - 2006
	President & Director, IABA Foundation	2004 - 2007
<b>APPOINTED ACTUARY</b>	American Coastal Insurance Company	2017
	Anchor Property & Casualty Insurance Company	2015 - 2017
	Anchor Specialty Insurance Company	2015 - 2017
	BlueLine Re	2017
	Capitol Preferred Insurance Company, Inc.	2014 - 2017
	CRAW Insurance Company, IC	2014 - 2017
	Florida Medical Insurance Corporation	2016, 2017
	Family Security Insurance Company, Inc.	2015 - 2017
	Florida Sheriffs Risk Management Fund	2014 - 2017
	Gray Hawk Insurance Company	2015 - 2017
	Harco National Insurance Company	2014, 2015
	IAT Reinsurance Company, Ltd.	2014, 2015
	Interboro Insurance Company	2016, 2017
	Kentucky Reclamation Guaranty Fund	2016, 2017
	KESA, The Kentucky Workers' Compensation Fund	2014 - 2017
	Lincoln General Insurance Company	2010, 2011, 2013, 2014
	PDC Insurance Company, IC	2014 - 2017
	Purus Insurance Company, SC	2014 - 2017
	Security First Insurance Company, Inc.	2015 - 2017
	Southern Fidelity Insurance Company, Inc.	2014 - 2017
Southern Fidelity Property & Casualty, Inc.	2014 - 2017	
St. Johns Insurance Company, Inc.	2014 - 2017	
United Property & Casualty Insurance Company	2013 - 2017	

**PROFESSIONAL  
PRESENTATIONS**

Numerous presentations at educational seminars and professional conferences conducted by a variety of organizations including the CAS, Florida Chamber of Commerce, INCON, PIAA, South Carolina Captive Insurance Association, CICA, Temple University, Alabama University, Howard University and IABA on topics including medical professional liability and the impact of the Patient Protection and Affordable Care Act, Florida sinkhole reform and assignment of benefits, workers' compensation, credit score utilization in personal automobile insurance and homeowners insurance



**Laura A. Maxwell**

FCAS, MAAA, CSPA  
Senior Consulting Actuary

**Contact Information**

Pinnacle Actuarial Resources, Inc.  
2410 Camino Ramon, Suite 346  
San Ramon, CA 94583  
[www.pinnacleactuaries.com](http://www.pinnacleactuaries.com)

Direct: (415) 692-0938  
Mobile: (925) 487-3590  
[lm Maxwell@pinnacleactuaries.com](mailto:lm Maxwell@pinnacleactuaries.com)

**Focus**

Public Entities, Enterprise Risk Management, Loss Reserving, Predictive Analytics, Pricing/Product Management, Regulatory Support, Large Project Management

**Education**

Moravian College  
B.S. Mathematics

**Certifications**

Fellow of the Casualty Actuarial Society (FCAS)

Member of American Academy of Actuaries (MAAA)

Certified Specialist in Predictive Analytics (CSPA)

SAS® Certified Predictive Modeler  
Using SAS® Enterprise Miner™ 5

**Professional Experience**

Laura Maxwell is a Senior Consulting Actuary with Pinnacle Actuarial Resources, Inc. in the San Francisco, California office. She holds a Bachelor of Science degree in Mathematics from Moravian College. She has 30 years of actuarial experience in the property/casualty insurance industry and has provided consulting services since 2003.

Ms. Maxwell currently serves the Casualty Actuarial Society (CAS) as a member of the Casualty Loss Reserve Seminar Planning Committee, E-Forum Committee, Examination Committee, Cyber Risk Task Force, Working Party on On-Demand Insurance and Secretary/Treasurer of the Casualty Actuaries of the Bay Area.

Prior to consulting she was a product manager for a direct auto insurer and held actuarial positions with a state insurance department and national rating bureau. Her background includes personal and commercial lines pricing and reserving.

**Engagement Experience**

- Serves as the Appointed Actuary to several domestic insurance companies
- Provides loss reserve and funding analysis for several public entities self-insurance exposure
- Conducts reserve analyses for the State of West Virginia monopolistic state funds
- Participates in insurance company audits for the New York State Insurance Department
- Prepares California rate filings
- Conducted rate filing reviews for several insurance departments including the California Department of Insurance
- Serves as actuarial expert for catastrophe modeler submissions to The Florida Commission on Hurricane Loss Projection Methodology

**Publications/Panelist Venues**

- "Cybersecurity and the Insurance Market," *Cybersecurity: Impact on Insurance Business and Operations*, Joint Risk Management Section, 2017
- "Estimating Liabilities for Losses and Loss Adjustment Expenses," (co-written with Derek Freihaut), Insurance Accounting and Systems Association (IASA) Property & Casualty Insurance Accounting Textbook – 9th Edition, Chapter 5, 2016
- "Regulatory Review of ORSA Framework," *Risk Management: Part Five How to Review an ORSA*, Joint Risk Management Section, 2014
- "Free Markets are the Best Way to Lower Workers Compensation Costs," Pinnacle Research Brief, January, 2010
- Casualty Actuarial Society Centennial Meeting
- Casualty Actuarial Society, Casualty Loss Reserve Seminars
- Casualty Actuarial Society, Webinars
- Pinnacle Apex Discussion Series
- IASA Conference, June 4, 2013
- CWC & Risk Conference, Dana Point, CA, September 20, 2012
- National Underwriter Annual Claim Event, Las Vegas, NV, June 25, 2007

## ***CURRICULUM VITAE***

<b>NAME</b>	Laura A. Maxwell	
<b>BUSINESS ADDRESS</b>	2410 Camino Ramon, Suite 346 San Ramon, California 94583 Phone: (415) 692-0938 Fax: (309) 807-2301 E-mail: <a href="mailto:lmaxwell@pinnacleactuaries.com">lmaxwell@pinnacleactuaries.com</a>	
<b>EDUCATION</b>	MORAVIAN COLLEGE Bachelor of Science Major – Mathematics	1985
<b>CONTINUING EDUCATION</b>	Attendance at CAS meetings and seminars  Meets all continuing education requirements of the American Academy of Actuaries (AAA) necessary to sign statements of actuarial opinion  SAS® Certified Predictive Modeler Using SAS® Enterprise Miner™ 5	
<b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</b>	Casualty Actuarial Society (CAS) Associate Member Fellow American Academy of Actuaries (AAA) The CAS Institute Certified Specialist in Predictive Analytics (CSPA)	2002 2004 2002 2017
<b>EMPLOYMENT HISTORY</b>	Pinnacle Actuarial Resources, Inc. Milliman, Inc. Kemper Direct NJ Dept. of Banking & Insurance National Council on Compensation Insurance	2006 - Present 2003 - 2005 1998 - 2003 1991 - 1998 1987 - 1991
<b>PROFESSIONAL ACTIVITIES</b>	CAS Casualty Loss Reserve Seminar Planning Committee CAS E-Forum Committee CAS Working Party on On-Demand Insurance CAS Cyber Risk Task Force Casualty Actuaries of the Bay Area Secretary/Treasurer Chairperson CAS Webinar Committee CAS Examination Committee CAS Student Liaison Committee	2018 - Present 2018 - Present 2017 - Present 2016 - Present 2016 - Present 2016 - Present 2015 - 2018 2009 - 2018 2004 - Present 1996 - 1998

Laura A. Maxwell – Curriculum Vitae  
Page 2

**PROFESSIONAL  
PRESENTATIONS**

“Status of Cyber Liability Insurance and Methodology,” *Pinnacle APEX Webinar*, October 2018

“Actuarial Standards of Practice - Actuarial Standards Board Recent Activity,” Pinnacle Actuarial Resources, Inc. Apex Webinar series, December 14, 2017

“ORSA Has Anything Changed,” Pinnacle Apex Discussion Series, July 18, 2017

“Actuarial Issues with Ride Sharing Exposure,” Casualty Loss Reserve Seminar, Chicago, IL, September 20, 2016

“Actuarial Communications – ASOP 41 and More,” Pinnacle Apex Discussion Series, December 10, 2015

“Ride Sharing and the Impact of the Private Passenger Automobile Insurance Industry,” Casualty Actuarial Society Centennial Meeting, November 10 & 11, 2014, Pinnacle Apex Discussion Series, November 20, 2015 and Casualty Actuarial Society Webinar, July 23, 2015

“Effective Reserving Project Management,” Casualty Loss Reserve Seminar, September 16, 2014

“The Challenge of Property & Casualty ASOPs,” Pinnacle Apex Discussion Series, June 17, 2014

“ORSA Implementation Planning – The Time is Now,” IASA Conference Washington, D.C., June 4, 2013 and Pinnacle Apex Discussion Series, June 20, 2013

“You’ve Set Your Goals! You’ve Evaluated Your Outcomes! Are You Realizing Your Rewards,” CWC & Risk Conference, Dana Point, CA, September 20, 2012

“Lights! Camera! Professionalism!” Casualty Loss Reserve Seminar, Denver, CO, September 6, 2012 and San Diego, CA, September 15, 2014

“Current State of Enterprise Risk Management,” Pinnacle Apex Discussion Series, March 15, 2012

“Using Predictive Modeling to Investigate the Underlying Claims Process and Understand its Impact on Traditional Loss Reserving Methods,” Casualty Loss Reserve Seminar, Las Vegas, NV, September 16, 2011

“Workers Compensation Healthier in Competitive States,” Pinnacle Apex Discussion Series, May 21, 2009

“Workshop: How to Use Predictive Modeling in Claim Organizations,” National Underwriter Annual Claim Event, Las Vegas, NV, June 25, 2007

Laura A. Maxwell – Curriculum Vitae  
Page 3

**PROFESSIONAL  
PUBLICATIONS**

“Cybersecurity and the Insurance Market,” *Cybersecurity: Impact on Insurance Business and Operations*, Joint Risk Management Section, 2017

“Estimating Liabilities for Losses and Loss Adjustment Expenses,” (co-written with Derek Freihaut) *Insurance Accounting and Systems Association (IASA) Property & Casualty Insurance Accounting Textbook – 9th Edition, Chapter 5*, 2016

“Regulatory Review of ORSA Framework,” *Risk Management: Part Five How to Review an ORSA*, Joint Risk Management Section, 2014

“Free Markets are the Best Way to Lower Workers Compensation Costs,” *Pinnacle Research Brief*, January, 2010

**APPOINTED  
ACTUARY**

Alliance United Insurance Company	2009 – 2015
Century Insurance Company (Guam), Ltd.	2015 – Present
Century Insurance Company (Saipan), Ltd.	2015 – Present
Homestead Insurance Company	2012 – 2015
ION Insurance Company	2018 – Present
Pacific Capital Insurance Company	2013 – Present
Southern Pacific Insurance Company	2018 – Present



### **Legaré W. Gresham**

FCAS, MAAA  
Consulting Actuary

#### **Contact Information**

Pinnacle Actuarial Resources, Inc.  
PO Box 81075  
Charleston, SC 29416  
[www.pinnacleactuaries.com](http://www.pinnacleactuaries.com)

Direct: (678) 367-2683  
Mobile: (843) 344-3202  
[lgresham@pinnacleactuaries.com](mailto:lgresham@pinnacleactuaries.com)

#### **Focus**

Captives/Alternative Markets, Loss Reserving, Pricing/Product Management, Proforma Financial Modeling, Public Entities, Regulatory Support, Traditional Property/Casualty Insurers

#### **Education**

University of South Carolina  
Master of Industrial Statistics

Vanderbilt University  
B.E. in Chemical Engineering and French,  
summa cum laude

#### **Certifications**

Fellow of the Casualty Actuarial Society  
(FCAS)

Member of American Academy of  
Actuaries (MAAA)

### **Professional Experience**

Legaré Gresham is a Consulting Actuary with Pinnacle Actuarial Resources, Inc. with over ten years of experience in the property/casualty practice area. She has worked extensively with traditional insurers, captive insurers and self-insureds, including public entities. Her expertise includes loss reserving, pricing and product management, Proforma financial modeling and regulatory support.

Ms. Gresham is a past member of the Board of Directors for the Delaware Captive Insurance Association, the Conference Committee for the Vermont Captive Insurance Association, the Examination Committee of the Casualty Actuarial Society as well as the Education and Membership Committees for the South Carolina Captive Insurance Association. She currently serves on the University Liaison Committee of the Casualty Actuarial Society and Conference Committee for the South Carolina Captive Insurance Association.

### **Engagement Experience**

- Served as the Appointed Actuary and/or Loss Reserve Specialist for numerous domestic insurance companies, captive insurance companies and self-insured entities
- Advises insurance companies on matters relating to financial reporting of unpaid claims liabilities, routinely presenting to Boards of Directors and Executive Committees charged with financial reporting
- Provides consulting services to state insurance departments including captive application review, loss reserve analysis and risk-focused financial examination support
- Performs alternative risk financing feasibility studies and retention optimization studies including financial performance modeling
- Assists insurance companies with new product development and geographic expansion into new territories and states
- Provided expert testimony on actuarial and commercial insurance matters

### **Publications**

- "ERM and Captives – A Perspective on Risk," *Captive Review*, March 2013
- "Captive Insurance Opportunities in the Transportation Industry," *Captive.com*, September 2017

### **Presentation/Panelist Venues**

- South Carolina Captive Insurance Association
- Vermont Captive Insurance Association
- USA Risk Group Conference
- Webinars

## ***CURRICULUM VITAE***

<b>NAME</b>	Legaré W. Gresham	
<b>BUSINESS ADDRESS</b>	PO Box 81075 Charleston, SC 29416 Phone: (678) 367-2683 E-mail: <a href="mailto:lgresham@pinnacleactuaries.com">lgresham@pinnacleactuaries.com</a>	
<b>EDUCATION</b>	UNIVERSITY OF SOUTH CAROLINA Master of Industrial Statistics	2005
	VANDERBILT UNIVERSITY Bachelor of Engineering Summa cum laude Dual Major: Chemical Engineering/French	2000
<b>CONTINUING EDUCATION</b>	Estimated study time exceeding 2,500 hours necessary for completion of qualifying exams for membership in Casualty Actuarial Society (CAS)  Meets all continuing education requirements of the American Academy of Actuaries (AAA) necessary to sign statements of actuarial opinion	
<b>MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS</b>	Casualty Actuarial Society (CAS) Associate Member Fellow American Academy of Actuaries (AAA)	2008 2009 2008
<b>EMPLOYMENT HISTORY</b>	Pinnacle Actuarial Resources, Inc. Bartlett Actuarial Group E.I. Du Pont De Nemours and Company/Invista	2016 - Present 2004 - 2015 2000 - 2004
<b>PROFESSIONAL ACTIVITIES</b>	CAS Examination Committee CAS University Liaison Committee Vermont Captive Insurance Association Conference Committee Delaware Captive Insurance Association Board of Directors South Carolina Captive Insurance Association Education/Conference Committees  South Carolina Captive Insurance Association Membership Committee South Carolina Captive Insurance Association Chair-Friendly Society Restored	2010, 2013, 2015 2010 - Present  2011, 2014, 2015  2009 - 2013  2008, 2009, 2011, 2017 - Present  2006, 2007  2018



<b>APPOINTED ACTUARY</b>	Southern Mutual Church Insurance Company	2014
	OrthoForum Insurance Company, A Risk Retention Group	2012 - 2014
	Pinelands Insurance Company Risk Retention Group, Inc.	2010 - 2014
	Carolina Farmers Mutual Insurance Company	2009 - 2013
	United Contractors Insurance Company Risk Retention Group	2012
	Canal Insurance Company	2010
	Canal Indemnity Company	2010
	Lincoln Mutual Insurance Company	2009 - 2010

**PROFESSIONAL  
PUBLICATIONS**

“ERM and Captives – A Perspective on Risk,” *Captive Review*, March 2013

“Captive Insurance Opportunities in the Transportation Industry,”  
*Captive.com*, September 2017

**PROFESSIONAL  
PRESENTATIONS**

“Audit Update – Loss Footnote Disclosures for Insurance Contracts,”  
South Carolina Captive Insurance Association, December 2017

“Captives and Transportation,” Pinnacle APEX Webinar, April 2017

“Technology and Insurance: Are You Prepared for the Coming Disruptions,”  
Pinnacle APEX Webinar, December 2016

“The Reserve Review Process,” South Carolina Captive Insurance Association,  
September 2015

“Big Data Analytics for Risk Management Success,” (Moderator) Vermont  
Captive Insurance Association, August 2015

“Captives 101,” South Carolina Captive Insurance Association, 2008, 2010, 2012,  
2013

“Captive Feasibility Studies,” USA Risk Conference, May 2013

“Keys to a Successful Year End,” Webinar, November 2012

## ***PROPERTY/CASUALTY ACTUARIAL CONSULTING ENGAGEMENTS***

Our firm has over 500 active clients including insurers of all sizes, state insurance regulators, government insurance programs, captive insurance companies, self-insured entities, municipal pools, and risk retention groups. Following is a list of selected clients:

Alacomp	Midwestern Higher Education Commission
American Medical Association	Missouri Department of Insurance
Amerisure Insurance Companies	Missouri Workers Compensation Division
Artex	Moore, Ingram, Johnson and Steele
California Department of Insurance	Nationwide Insurance Group
California State University System	New Mexico Public Regulation Commission
Captive Alternatives	New Mexico Patient Compensation Fund
Captive Resources, LLC	New York State Insurance Department
Chubb/ACE	Nodak Mutual
CIC Services	North Carolina Department of Insurance
City of Detroit, MI	Ohio Bureau of Workers Compensation
City of Los Angeles	Ohio Department of Insurance
City of Phoenix, AZ	Oregon Insurance Division
City of Wichita, KS	Oxford Risk Partners
Connecticut Department of Insurance	QBE Insurance
Crowe	Quality Distribution
Educational School Insurance Cooperative	ResCare
Florida Office of Insurance Regulation	Risk Services
Florida Sheriffs Association	River Oak Risk
GEICO	Security First Insurance Company
GreenlightRe	South Carolina Department of Insurance
Hartford Insurance Group	Southwest Agency Risk Management
Illinois Department of Insurance	State Farm Insurance Company
Illinois State Toll Highway Authority	Strategic Risk Services
Indiana Department of Insurance	Tennessee Department of Corrections
Indiana Farm Bureau	Tennessee Department of Insurance
Johnson Lambert Company	United P&C Insurance Company
Kansas City Area Transit Authority	US Department of Health & Human Services
Kansas Workers Compensation Division	USA Risk Group
Kentucky Farm Bureau	Vermont Department of Insurance
Kentucky Office of Insurance	Virginia Birth Related Injury Fund
Kentucky Transportation Cabinet	Virginia State Corporation Commission
Kentucky Underground Storage Tank Fund	Weiser Mazars
Kentucky Workers Compensation Funding Commission	West Virginia Office of the Insurance Commissioner
Keystone Risk Partners	Willis Captive Management
Maine Bureau of Insurance	
Maryland Insurance Administration	
Massachusetts Division of Insurance	
Michigan Division of Insurance	



# Certificate

*I, Mac Warner, Secretary of State of the State of West Virginia, hereby certify that*

**PINNACLE ACTUARIAL RESOURCES, INC.**

a corporation formed under the laws of Illinois filed an application to be registered as a foreign corporation authorizing it to transact business in West Virginia. The application was found to conform to law and a "Certificate of Authority" was issued by the West Virginia Secretary of State on June 11, 2009.

I further certify that the corporation has not been revoked by the State of West Virginia nor has a Certificate of Withdrawal been issued to the corporation by the West Virginia Secretary of State.

Accordingly, I hereby issue this Certificate of Authorization

## CERTIFICATE OF AUTHORIZATION

Validation ID:8WV65\_3Q8SB



*Given under my hand and the  
Great Seal of the State of  
West Virginia on this day of*

*February 28, 2019*

*Mac Warner*

*Secretary of State*



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

1/15/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

**IMPORTANT:** If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Arthur J. Gallagher Risk Management Services, Inc. 2850 Golf Road Rolling Meadows IL 60008	<b>CONTACT NAME:</b> PHONE (A/C, No, Ext): 630-595-5300      FAX (A/C, No): 630-694-4401 E-MAIL ADDRESS: CertRequests@ajg.com														
<b>INSURED</b> PINNACT-01 Pinnacle Actuarial Resources, Inc. PO Box 6139 Bloomington, IL 61702	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">INSURER(S) AFFORDING COVERAGE</th> <th style="text-align: center;">NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A : Hartford Casualty Insurance Company</td> <td style="text-align: center;">29424</td> </tr> <tr> <td>INSURER B : Hartford Insurance Company of Illinois</td> <td style="text-align: center;">38288</td> </tr> <tr> <td>INSURER C : Twin City Fire Insurance Company</td> <td style="text-align: center;">29459</td> </tr> <tr> <td>INSURER D : BCS Insurance Company</td> <td style="text-align: center;">38245</td> </tr> <tr> <td>INSURER E : Indian Harbor Insurance Company</td> <td style="text-align: center;">36940</td> </tr> <tr> <td>INSURER F :</td> <td></td> </tr> </tbody> </table>	INSURER(S) AFFORDING COVERAGE	NAIC #	INSURER A : Hartford Casualty Insurance Company	29424	INSURER B : Hartford Insurance Company of Illinois	38288	INSURER C : Twin City Fire Insurance Company	29459	INSURER D : BCS Insurance Company	38245	INSURER E : Indian Harbor Insurance Company	36940	INSURER F :	
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INSURER C : Twin City Fire Insurance Company	29459														
INSURER D : BCS Insurance Company	38245														
INSURER E : Indian Harbor Insurance Company	36940														
INSURER F :															

**COVERAGES**

CERTIFICATE NUMBER: 1869505388

REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:			83SBAPL7914	1/17/2019	1/17/2020	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
A	<input type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input checked="" type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY			83SBAPL7914	1/17/2019	1/17/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
A	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			83SBAPL7914	1/17/2019	1/17/2020	EACH OCCURRENCE \$ 4,000,000 AGGREGATE \$ 4,000,000 \$
B	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	83WECKB7307	1/17/2019	1/17/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000
C D E	Directors & Officers Liability Cyber Liability Professional Liability			83KB033424319 RPS-P-50142295M MPP002287712	1/17/2019 1/17/2019 2/14/2019	1/17/2020 1/17/2020 1/17/2020	Policy Aggregate \$1,000,000 Policy Aggregate \$5,000,000 Policy Aggregate \$2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Umbrella Liability- Follow Form  
 Professional Liability - Each Incident Limit \$2,000,000  
 Crime/Employee Theft - Each Incident Limit \$1,000,000/ Aggregate Limit \$1,000,000; Per D&O policy with carrier C.

**CERTIFICATE HOLDER****CANCELLATION**

Evidence of Insurance	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.  AUTHORIZED REPRESENTATIVE 
-----------------------	---

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STATE OF WEST VIRGINIA  
Purchasing Division

**PURCHASING AFFIDAVIT**

**CONSTRUCTION CONTRACTS:** Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

**ALL CONTRACTS:** Under W. Va. Code §5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code §61-5-3) that: (1) for construction contracts, the vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: Pinnacle Actuarial Resources, Inc.

Authorized Signature:  Date: March 7, 2019

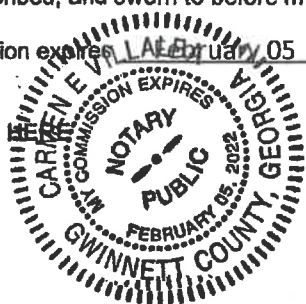
State of Georgia

County of Gwinnett, to-wit:

Taken, subscribed, and sworn to before me this 7th day of March, 2019.

My Commission expires Late February 05, 2022.

AFFIX SEAL



NOTARY PUBLIC





Purchasing Division  
 2019 Washington Street East  
 Post Office Box 50130  
 Charleston, WV 25305-0130

State of West Virginia  
 Request for Quotation  
 10 – Consulting

Appendix H  
 Page 1

Proc Folder: 542450

Doc Description: Addendum 2-OSR Actuarial Consulting Services

Proc Type: Central Contract - Fixed Amt

Date Issued	Solicitation Closes	Solicitation No	Version
2019-03-06	2019-03-13 13:30:00	CRFQ 0313 DEP1900000020	3

**BID RECEIVING LOCATION**

BID CLERK  
 DEPARTMENT OF ADMINISTRATION  
 PURCHASING DIVISION  
 2019 WASHINGTON ST E  
 CHARLESTON WV 25305  
 US

**VENDOR**

**Vendor Name, Address and Telephone Number:**

Pinnacle Actuarial Resources, Inc.  
 1 Glenlake Parkway, Ste. 1285  
 Atlanta, GA 30328  
 770.587.0351

**FOR INFORMATION CONTACT THE BUYER**

Jessica S Chambers  
 (304) 558-0246  
 jessica.s.chambers@wv.gov

Signature X

FEIN # 11-3669570

DATE

March 7, 2019

All offers subject to all terms and conditions contained in this solicitation

**ADDITIONAL INFORMATION:**

Addendum

Addendum No.02 issued to publish and distribute the attached information to the vendor community.

No other changes.

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The West Virginia Purchasing Division is soliciting bids on behalf of the Department of Environmental Protection/ Office of Special Reclamation, located at 601 57th Street SE, Charleston, WV 25304 to establish a two-year contract with three renewal periods to provide actuarial services to assist the Department and the Special Reclamation Advisory Council in fulfilling the requirements of West Virginia State Code §22-1-17 which states "In managing the special reclamation program, the secretary shall: (A) Pursue cost-effective alternative water treatment strategies; and (B) conduct formal actuarial studies every two years and conduct informal reviews annually on the Special Reclamation Fund and Special Reclamation Water Trust Fund." per the terms and conditions and specifications as attached.

INVOICE TO		SHIP TO	
ENVIRONMENTAL PROTECTION OFFICE OF SPECIAL RECLAMATION 47 SCHOOL ST, STE 301		ENVIRONMENTAL PROTECTION OFFICE OF SPECIAL RECLAMATION 47 SCHOOL ST, STE 301	
PHILIPPI	WV26416	PHILIPPI	WV 26416-9998
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Actuarial consulting services - Years 1 & 2				\$82,000.00

Comm Code	Manufacturer	Specification	Model #
80101512			

**Extended Description :**

Actuarial consulting services for the WVDEP Office of Special Reclamation

INVOICE TO		SHIP TO	
ENVIRONMENTAL PROTECTION OFFICE OF SPECIAL RECLAMATION 47 SCHOOL ST, STE 301		ENVIRONMENTAL PROTECTION OFFICE OF SPECIAL RECLAMATION 47 SCHOOL ST, STE 301	
PHILIPPI	WV26416	PHILIPPI	WV 26416-9998
US		US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	Actuarial consulting services - Renewal Years 3 & 4				\$85,000.00

Comm Code	Manufacturer	Specification	Model #
80101512			

**Extended Description :**

Actuarial consulting services for the WVDEP Office of Special Reclamation

INVOICE TO		SHIP TO	
ENVIRONMENTAL PROTECTION OFFICE OF SPECIAL RECLAMATION 47 SCHOOL ST, STE 301 PHILIPPI WV26416 US		ENVIRONMENTAL PROTECTION OFFICE OF SPECIAL RECLAMATION 47 SCHOOL ST, STE 301 PHILIPPI WV 26416-9998 US	

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Page 3

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
3	Actuarial consulting services - Renewal Years 5 & 6				\$88,500.00

Comm Code	Manufacturer	Specification	Model #
80101512			

**Extended Description :**

Actuarial consulting services for the WVDEP Office of Special Reclamation

INVOICE TO		SHIP TO	
ENVIRONMENTAL PROTECTION OFFICE OF SPECIAL RECLAMATION 47 SCHOOL ST, STE 301 PHILIPPI WV26416 US		ENVIRONMENTAL PROTECTION OFFICE OF SPECIAL RECLAMATION 47 SCHOOL ST, STE 301 PHILIPPI WV 26416-9998 US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
4	Actuarial consulting services - Renewal Years 7 & 8				\$92,000.00

Comm Code	Manufacturer	Specification	Model #
80101512			

**Extended Description :**

Actuarial consulting services for the WVDEP Office of Special Reclamation




<b>DEP1900000020</b>	<b>Document Phase</b> Final	<b>Document Description</b> Addendum 2-OSR Actuarial Consulting Services	<b>Page 4</b> <b>of 4</b>
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**ADDITIONAL TERMS AND CONDITIONS**

See attached document(s) for additional Terms and Conditions

**DESIGNATED CONTACT:** Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

 PRINCIPAL & CONSULTING ACTUARY  
 (Name, Title)  
Arthur R. Randolph, II, Principal and Consulting Actuary  
 (Printed Name and Title)  
One Glenlake Parkway, Suite 1285, Atlanta, GA 30328  
 (Address)  
678.894.7258 / 770.587.0304  
 (Phone Number) / (Fax Number)  
arandolph@pinnacleactuaries.com  
 (email address)

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

Pinnacle Actuarial Resources, Inc.

(Company)

 PRINCIPAL & CONSULTING ACTUARY  
 (Authorized Signature) (Representative Name, Title)

Arthur R. Randolph, II, Principal and Consulting Actuary

(Printed Name and Title of Authorized Representative)

March 7, 2019

(Date)

678.894.7258 / 770.587.0304

(Phone Number) (Fax Number)

**ADDENDUM ACKNOWLEDGEMENT FORM****SOLICITATION NO.:** CRFQ 0313 DEP 1900000020

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**

(Check the box next to each addendum received)

<input checked="" type="checkbox"/> Addendum No. 1	<input type="checkbox"/> Addendum No. 6
<input checked="" type="checkbox"/> Addendum No. 2	<input type="checkbox"/> Addendum No. 7
<input type="checkbox"/> Addendum No. 3	<input type="checkbox"/> Addendum No. 8
<input type="checkbox"/> Addendum No. 4	<input type="checkbox"/> Addendum No. 9
<input type="checkbox"/> Addendum No. 5	<input type="checkbox"/> Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Pinnacle Actuarial Resources, Inc.

Company



Authorized Signature

March 7, 2019

Date

**NOTE:** This addendum acknowledgment should be submitted with the bid to expedite document processing.

Revised 6/8/2012