



North Dakota Legislative Management – Actuarial Consulting Services Proposal

Presented April 23, 2014

Presented By:

John Dowell, FSA, FCA, EA, MAAA
john.dowell@nyhart.com
(317) 845-3580

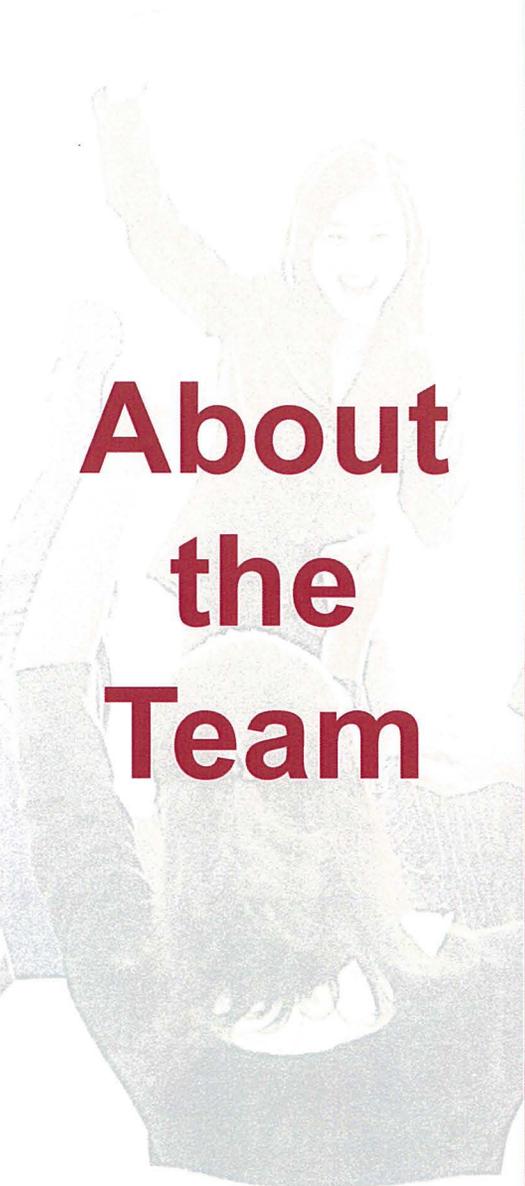
Carter Angell, FSA, EA
carter.angell@nyhart.com
(317) 845-3577

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- **Founded in 1943 by Howard E. Nyhart**
- **Headquartered in Indianapolis**
- **1,000+ clients in 48 states**
- **Approximately 110 consultants, actuaries, employees**
- **100% employee owned**
- **Firm strengthened in last decade through hiring talented actuaries and consultants from large global firms, bringing ability to provide top-notch consulting**
 - **Recent hires have learned to provide the same kind of value-added service**





About the Team

- **Consulting team**
 - John Dowell , Consultant and Lead Actuary
 - Carter Angell, Project Manager and Actuary
 - Taylor Fireoved, Actuarial Analyst

About the Team

Education

- B.S. in Mathematics, Rose-Hulman Institute of Technology
- M.S. in Applied Mathematics, University of Illinois

Professional Designations

- Fellow of the Society of Actuaries
- Fellow of the Conference of Consulting Actuaries
- Enrolled Actuary

Pension Experience

- 24 years

Corporate Role

- Responsible for consulting with clients
- Manages the firm's defined benefit practice
- Principal of the firm
- Member of the Board of Directors



About the Team

Education

- B.S. in Mathematics, University of Notre Dame

Professional Designations

- Enrolled Actuary
- FSA

Corporate Role

- Performs, reviews, and consults on accounting and funding valuations
- Assists in benefit administration
- Consults on plan design analysis

Contact Information

- 8415 Allison Pointe Boulevard, Suite 300
Indianapolis, IN 46250
- 317-845-3577 / 800-428-7106 X 3577
- carter.angell@nyhart.com



About the Team

Education

- B.S. in Actuarial Science and Applied Statistics, Purdue University
- Minors in Management and Economics, Purdue University

Area of Expertise

- Performs accounting and funding valuations
- Assists in benefit administration
- Prepares and reviews valuation data for numerous clients
- Prepares benefit statements for numerous clients

Contact Information

- 8415 Allison Pointe Boulevard, Suite 300
Indianapolis, IN 46250
- 317-845-3578 / 800-428-7106 X 3578
- taylor.fireoved@nyhart.com





About the Team

- **John, Carter, and Taylor work together on a daily basis, sharing clients of all sizes**
 - Plans with fewer than 100 participants and less than \$1 million in assets
 - A Plan with approximately 140,000 participants and more than \$10 billion in assets

Sample Public Pension Plan Clients

City of Miami Firefighters and Police Officers' Retirement System

Retirement Plan for Employees of The Kansas University Endowment Association

City of Daytona Beach Police and Fire Retirement System

Retirement Plan for Employees of the Town of West Warwick

Indiana State Teachers' Retirement Fund

Baton Rouge Employees' Retirement System

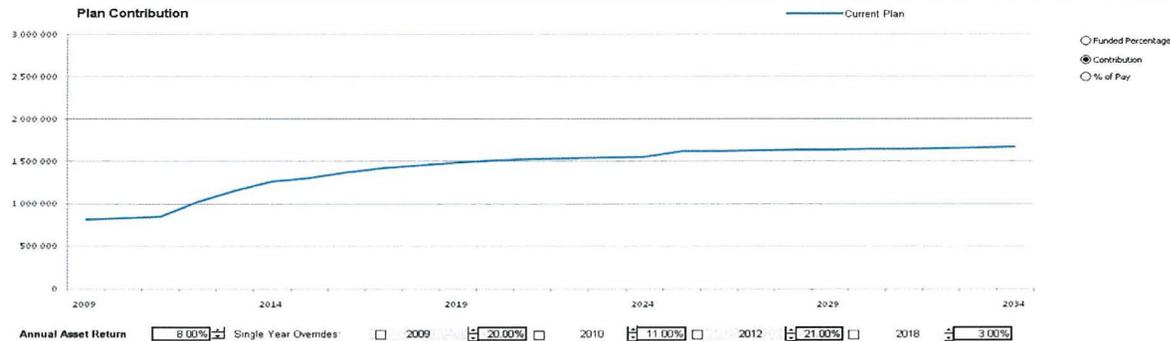
- **Over 200 actuarial public sector clients**

- **Reputation**
 - Quality consulting service, just ask our clients
- **Quality and Cost**
 - Top-notch consulting at a reasonable price
- **Communication**
 - Simple approach – unlock the mystery of actuarial work to educate key decision makers
- **Growing Company**
 - Investment in our business through talented people and creative tools
- **Right People**
 - Consultants with the right experience to understand your challenges and help solve the problems

Sample Pension Financial Manager

nyhart

Pension Financial Manager: XYZ Retirement Fund



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2034
Current Plan												
Plan Contribution	816	833	849	1,018	1,156	1,263	1,302	1,367	1,418	1,456	1,486	1,648
Contribution Override												
Actual Contribution	816	833	849	1,010	1,156	1,263	1,302	1,367	1,410	1,456	1,486	1,640
as % of Pay	21%	21%	21%	25%	23%	30%	30%	31%	32%	32%	32%	28%
Accrued Liability (AL)	26,679	27,829	28,993	30,169	31,352	32,538	33,723	34,901	36,065	37,208	38,322	44,902
Actuarial Asset Value	30,050	29,407	-29,032	-28,869	-29,025	-29,438	-30,054	-30,822	-31,707	-32,673	-33,693	-41,597
Unfunded AL	(3,371)	(1,578)	(99)	1,300	2,327	3,100	3,669	4,079	4,358	4,535	4,629	3,305
Actuarial Funded %	113%	106%	100%	96%	93%	90%	89%	88%	88%	88%	88%	93%
Liability	26,679	27,829	28,993	30,169	31,352	32,538	33,723	34,901	36,065	37,208	38,322	44,902
Market Asset Value	22,304	23,133	23,951	24,754	25,692	26,740	27,869	29,053	30,274	31,513	32,754	41,529
Shortfall/(Surplus)	4,375	4,696	5,042	5,415	5,660	5,798	5,854	5,848	5,791	5,695	5,568	3,373
Market Funded %	84%	83%	83%	82%	82%	82%	83%	83%	84%	85%	85%	92%

XYZ Corporation
Pension Design Manager

Proposed Plan Value vs. Current Plan Value
Values Included for: DB and DC (Er-Pd Only)

Design 2 - \$.30 match plus 0.60% DB accruals

Age at Transition	Service at Transition						Totals
	0-4	5-9	10-14	15-19	20-24	25-29	
< 25							0%
25-29	70%	75%	78%				75%
30-34	69%	75%	77%				74%
35-39	69%	73%		83%	83%		75%
40-44	70%	75%	78%	83%	85%		79%
45-49	71%	79%	81%	80%	86%	89%	84%
50-54	72%	79%	81%	86%	87%	90%	87%
55-59	75%	84%	89%	90%	91%	93%	90%
60+	100%	93%		98%	96%	94%	96%
Totals	73%	78%	80%	87%	88%	90%	95%

Measured %	Ppt. Count	% of Total	Cumulative
Below 60%	-	0%	0%
60% - 70%	4	3%	3%
70% - 80%	52	33%	35%
80% - 90%	51	32%	67%
90% - 100%	52	33%	99%
100% - 110%	1	1%	100%
110% - 120%	-	0%	100%
120% or Above	-	0%	100%

Based on age, service, and estimated pay on 12/31/2008

9/2/2009

What would you like to illustrate?

Proposed Plan Value vs. Current Plan Value

What values would you like to include?

- Defined Benefit
- Defined Contribution - Employer-Paid
- Defined Contribution - Employee-Paid
- Social Security

Initial Inputs

Retirement Age: 65 or, years from now: 5 Years, not age

Present Value Conversion Rate: 6.0%

DC Investment Return Rate: 7.5%

Annual Pay Increases: 3.5%

Employee DC Deferral Rates: 4.0%

Age at Death: 85 or, use expected annuity factor

Current Employer DC Match: \$0.375 per \$1.00 on 4%

Current DB Accrual Rate: 0.95%

Proposed Design Inputs

Type of Prospective Plan: Adjust Accruals in Current Plan

Freeze Service, but allow FAP to grow? Yes No

DB Accrual Rate: 0.60%

CB Pay Credit Rate: N/A

CB Int Crediting Rate: N/A

- DC Plan Age Service Points

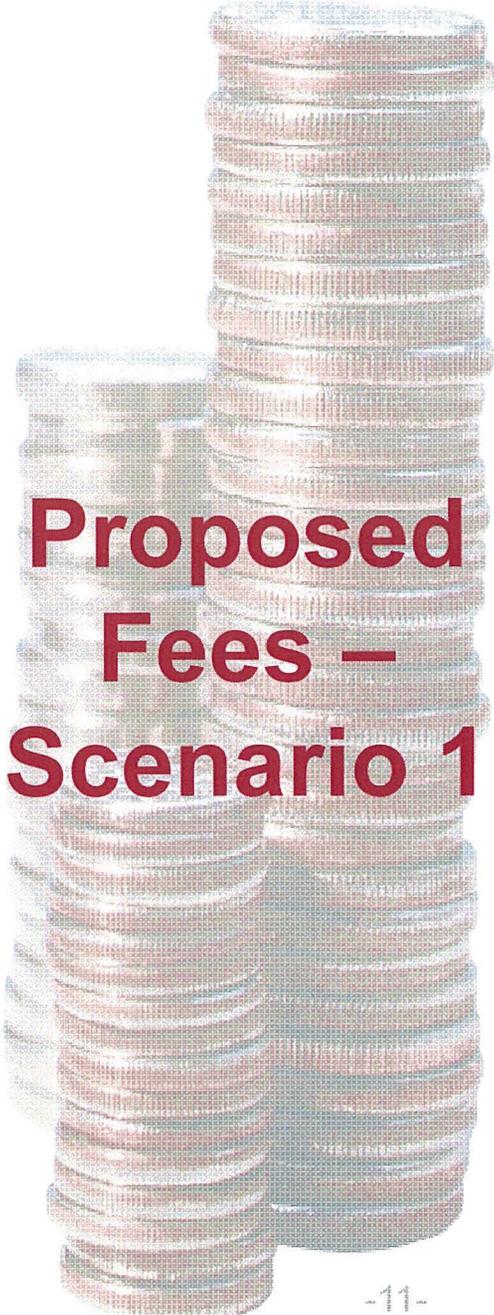
Matching Contribution		Non-Matching Contribution	
Points	Rate	Points	Rate
<20	30%	<20	0.00%
20-29	30%	20-29	0.00%
30-39	30%	30-39	0.00%
40-49	30%	40-49	0.00%
50-59	30%	50-59	0.00%
60-69	30%	60-69	0.00%
70-79	30%	70-79	0.00%
80-89	30%	80-89	0.00%
90+	30%	90+	0.00%

All Pts

Up to: 6.0%

Avg Contribution: 0.00%

- **Phase One** **\$7,000**
 - **Review Current Actuary Information**
 - Provisions, Assumptions, Actuarial Reports
- **Phase Two** **\$30,000**
 - **Review Five Scenarios per RFP**
 - Use Prior Actuary Liabilities
 - Model Liabilities without Gathering Census
 - Test Validity of Projections
- **Phase Three** **\$0**
 - **Independent Measurement of Scenarios**
 - **Deemed Unnecessary**
 - Prior Actuary Liabilities Valid
- **Phase Four** **\$8,000 plus Travel**
 - **Report and Meeting to Present Findings,**
 - Including Modelling of Multiple Economic Scenarios
- **Optional Other Services**
 - Pension Design Manager **\$15,000**
 - Other **Time and Materials**



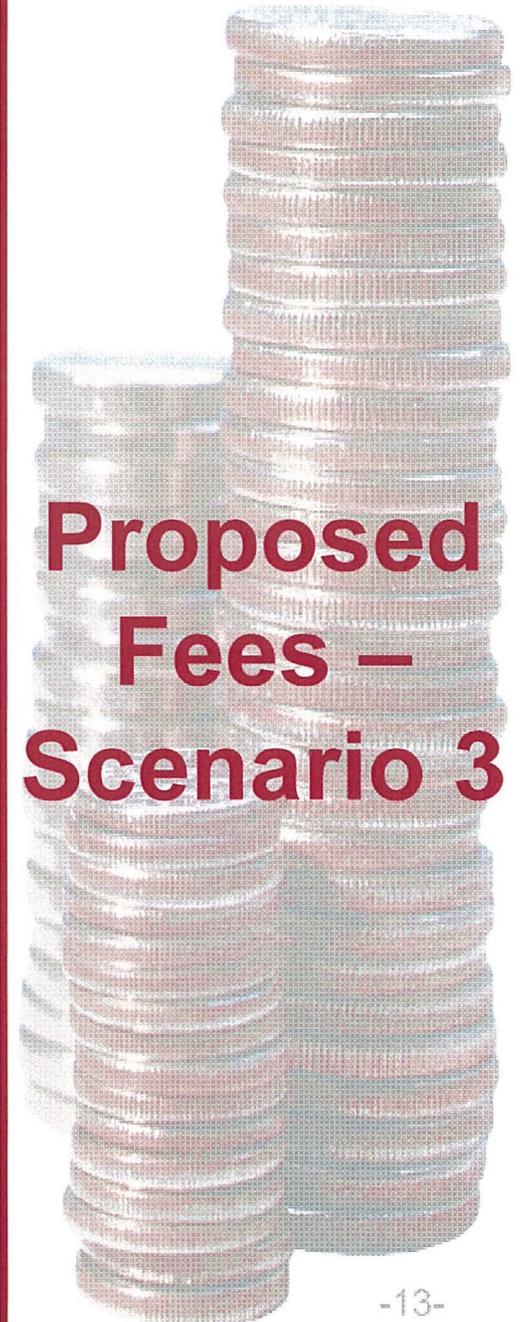
**Proposed
Fees –
Scenario 1**

- **Phase One** **\$7,000**
 - **Review Current Actuary Information**
 - Provisions, Assumptions, Actuarial Reports
- **Phase Two** **\$30,000**
 - **Review Five Scenarios per RFP**
 - Use Prior Actuary Liabilities
 - Model Liabilities without Gathering Census
 - Test Validity of Projections
- **Phase Three** **\$80,000**
 - **Independent Measurement of Scenarios**
 - **Unable to Reconcile Prior Actuary Results**
 - Assumes Edited Census Data Provided to Nyhart
 - Full Measurement of Current Liabilities and Projections of Liabilities
- **Phase Four** **\$8,000 plus Travel**
 - **Report and Meeting to Present Findings,**
 - Including Modelling of Multiple Economic Scenarios
- **Optional Other Services**
 - Pension Design Manager **\$15,000**
 - Other **Time and Materials**



**Proposed
Fees –
Scenario 2**

- **Phase One** **\$7,000**
 - **Review Current Actuary Information**
 - Provisions, Assumptions, Actuarial Reports
- **Phase Two** **\$0**
 - **Review Five Scenarios per RFP**
 - Deemed Unnecessary
 - Go Directly to Phase Three
- **Phase Three** **\$80,000**
 - **Independent Measurement of Scenarios**
 - Assumes Edited Census Data Provided to Nyhart
 - Full Measurement of Current Liabilities and Projections of Liabilities
- **Phase Four** **\$8,000 plus Travel**
 - **Report and Meeting to Present Findings,**
 - Including Modelling of Multiple Economic Scenarios
- **Optional Other Services**
 - Pension Design Manager **\$15,000**
 - Other **Time and Materials**



Time for Questions