



Oversight, Transparency & Administration Subcommittee

March 13, 2017
1:00 PM -6:00 PM
Morris Hall

Action Packet

Committee Meeting Notice

HOUSE OF REPRESENTATIVES

Oversight, Transparency & Administration Subcommittee

Start Date and Time: Monday, March 13, 2017 01:00 pm
End Date and Time: Monday, March 13, 2017 06:00 pm
Location: Morris Hall (17 HOB)
Duration: 5.00 hrs

Consideration of the following bill(s):

HB 103 Public Records/Nonviable Birth Records by Cortes, B.
CS/HB 239 Public Records/Protective Injunction Petitions by Civil Justice & Claims Subcommittee, Lee
CS/HB 369 Pub. Rec./Prearrest Diversion Programs by Criminal Justice Subcommittee, Plakon
HB 671 Reemployment Assistance Fraud by La Rosa
HB 681 Unclaimed Funds Held by the Clerks of Court by Clemons
HB 789 Procurement of Professional Services by Stone
HJR 811 Membership of Cabinet; Election of Secretary of State by Harrell
HB 1137 Use of State Funds by Edwards
HB 1141 State Employment by Yarborough

Workshop on the following:

HB 143 Firefighters by Fitzenhagen, Willhite Firefighter Presumption

NOTICE FINALIZED on 03/09/2017 4:08PM by Larson.Lisa

COMMITTEE MEETING REPORT
Oversight, Transparency & Administration Subcommittee
3/13/2017 1:00PM

Location: Morris Hall (17 HOB)

Summary:

Oversight, Transparency & Administration Subcommittee

Monday March 13, 2017 01:00 pm

HB 103	Favorable	Yeas: 11	Nays: 0
CS/HB 239	Favorable	Yeas: 11	Nays: 0
CS/HB 369	Favorable	Yeas: 11	Nays: 0
HB 671	Favorable	Yeas: 11	Nays: 0
HB 681	Favorable With Committee Substitute Amendment 578847 Adopted Without Objection	Yeas: 12	Nays: 0
HB 789	Not Considered		
HJR 811	Favorable	Yeas: 11	Nays: 0
HB 1137	Favorable	Yeas: 11	Nays: 0
HB 1141	Favorable	Yeas: 11	Nays: 0
HB 143	Workshopped		

Committee meeting was reported out: Monday, March 13, 2017 6:23PM

COMMITTEE MEETING REPORT
Oversight, Transparency & Administration Subcommittee
3/13/2017 1:00PM

Location: Morris Hall (17 HOB)

Attendance:

	<i>Present</i>	<i>Absent</i>	<i>Excused</i>
Neil Combee (Chair)	X		
Daisy Baez			X
Kimberly Daniels	X		
Tracie Davis	X		
Brad Drake	X		
Katie Edwards	X		
Eric Eisnaugle			X
Patrick Henry	X		
Blaise Ingoglia	X		
Bobby Payne	X		
Cary Pigman	X		
Daniel Raulerson			X
Bob Rommel	X		
Rick Roth	X		
Clay Yarborough	X		
Totals:	12	0	3

Committee meeting was reported out: Monday, March 13, 2017 6:23PM

COMMITTEE MEETING REPORT
Oversight, Transparency & Administration Subcommittee
3/13/2017 1:00PM

Location: Morris Hall (17 HOB)

HB 103 : Public Records/Nonviable Birth Records

Favorable

	<i>Yea</i>	<i>Nay</i>	<i>No Vote</i>	<i>Absentee Yea</i>	<i>Absentee Nay</i>
Daisy Baez			X		
Kimberly Daniels	X				
Tracie Davis	X				
Brad Drake	X				
Katie Edwards	X				
Eric Eisnaugle			X		
Patrick Henry	X				
Blaise Ingoglia	X				
Bobby Payne	X				
Cary Pigman	X				
Daniel Raulerson			X		
Bob Rommel			X		
Rick Roth	X				
Clay Yarborough	X				
Neil Combee (Chair)	X				
Total Yeas: 11		Total Nays: 0			

Appearances:

DeVane, Barbara (Lobbyist) - Waive In Opposition
 Florida National Organization for Women, Inc
 625 E Brevard St
 Tallahassee FL 32308
 Phone: (850) 251-4280

Committee meeting was reported out: Monday, March 13, 2017 6:23PM

COMMITTEE MEETING REPORT
Oversight, Transparency & Administration Subcommittee

3/13/2017 1:00PM

Location: Morris Hall (17 HOB)

CS/HB 239 : Public Records/Protective Injunction Petitions

Favorable

	<i>Yea</i>	<i>Nay</i>	<i>No Vote</i>	<i>Absentee Yea</i>	<i>Absentee Nay</i>
Daisy Baez			X		
Kimberly Daniels	X				
Tracie Davis	X				
Brad Drake	X				
Katie Edwards	X				
Eric Eisnaugle			X		
Patrick Henry	X				
Blaise Ingoglia	X				
Bobby Payne	X				
Cary Pigman	X				
Daniel Raulerson			X		
Bob Rommel			X		
Rick Roth	X				
Clay Yarborough	X				
Neil Combee (Chair)	X				
Total Yeas: 11		Total Nays: 0			

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Location: Morris Hall (17 HOB)

CS/HB 369 : Pub. Rec./Prearrest Diversion Programs

Favorable

	<i>Yea</i>	<i>Nay</i>	<i>No Vote</i>	<i>Absentee Yea</i>	<i>Absentee Nay</i>
Daisy Baez			X		
Kimberly Daniels	X				
Tracie Davis	X				
Brad Drake	X				
Katie Edwards	X				
Eric Eisnaugle			X		
Patrick Henry	X				
Blaise Ingoglia	X				
Bobby Payne	X				
Cary Pigman	X				
Daniel Raulerson			X		
Bob Rommel			X		
Rick Roth	X				
Clay Yarborough	X				
Neil Combee (Chair)	X				
Total Yeas: 11		Total Nays: 0			

Appearances:

Frost, Greg - Waive In Support
 Civil Citation Network
 President
 3333 W. Pensacola St.
 Tallahassee FL
 Phone: 850-544-7350

Daniels, Nancy (Lobbyist) - Waive In Support
 Florida Public Defender Association, Inc.
 103 N Gadsden St
 Tallahassee FL 32301
 Phone: (850) 488-6850

Bishop, Barney (Lobbyist) - Waive In Support
 Florida Smart Justice Alliance
 204 S Monroe St Ste 201
 Tallahassee FL 32301
 Phone: (850) 907-3436

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COMMITTEE MEETING REPORT
Oversight, Transparency & Administration Subcommittee
3/13/2017 1:00PM

Location: Morris Hall (17 HOB)

HB 671 : Reemployment Assistance Fraud

Favorable

	<i>Yea</i>	<i>Nay</i>	<i>No Vote</i>	<i>Absentee Yea</i>	<i>Absentee Nay</i>
Daisy Baez			X		
Kimberly Daniels	X				
Tracie Davis	X				
Brad Drake	X				
Katie Edwards	X				
Eric Eisnaugle			X		
Patrick Henry	X				
Blaise Ingoglia	X				
Bobby Payne	X				
Cary Pigman	X				
Daniel Raulerson			X		
Bob Rommel			X		
Rick Roth	X				
Clay Yarborough	X				
Neil Combee (Chair)	X				
Total Yeas: 11					
		Total Nays: 0			

Appearances:

Johnson, Carolyn (Lobbyist) - Waive In Support
 Florida Chamber of Commerce
 Policy Director
 136 S Bronough St
 Tallahassee FL 32301
 Phone: (850) 521-1235

Dawes, Alexia (Lobbyist) (State Employee) - Waive In Support
 Department of Economic Opportunity
 Deputy, Legislative Affairs
 107 E Madison St MSC 55
 Tallahassee FL 32399
 Phone: (850) 245-7113

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COMMITTEE MEETING REPORT
Oversight, Transparency & Administration Subcommittee
3/13/2017 1:00PM

Location: Morris Hall (17 HOB)

HB 681 : Unclaimed Funds Held by the Clerks of Court

Favorable With Committee Substitute

	Yea	Nay	No Vote	Absentee Yea	Absentee Nay
Daisy Baez			X		
Kimberly Daniels	X				
Tracie Davis	X				
Brad Drake	X				
Katie Edwards	X				
Eric Eisnaugle			X		
Patrick Henry	X				
Blaise Ingoglia	X				
Bobby Payne	X				
Cary Pigman	X				
Daniel Raulerson			X		
Bob Rommel	X				
Rick Roth	X				
Clay Yarborough	X				
Neil Combee (Chair)	X				
Total Yeas: 12		Total Nays: 0			

HB 681 Amendments

Amendment 578847

Adopted Without Objection

Appearances:

Murphy, BG (Lobbyist) - Proponent
 Department of Financial Services
 Deputy Legislative Affairs Director
 400 N Monroe St
 Tallahassee FL 32399
 Phone: (850) 413-2863

Kupperman, David (General Public) - Opponent
 Surplus Trustee clients
 Attorney
 101 NE 3rd Ave. Suite 1500
 Fort Lauderdale FL 33301
 Phone: 954-332-3684

Costello, Jonathan (Lobbyist) - Opponent
 Citizens for Judicial Process, Inc.
 119 S Monroe St Ste 202
 Tallahassee FL 32301
 Phone: (850) 681-6788

Committee meeting was reported out: Monday, March 13, 2017 6:23PM



Amendment No. 1

COMMITTEE/SUBCOMMITTEE ACTION

ADOPTED	<input type="checkbox"/>	(Y/N)
ADOPTED AS AMENDED	<input type="checkbox"/>	(Y/N)
ADOPTED W/O OBJECTION	<input checked="" type="checkbox"/>	(Y/N)
FAILED TO ADOPT	<input type="checkbox"/>	(Y/N)
WITHDRAWN	<input type="checkbox"/>	(Y/N)
OTHER	<input type="checkbox"/>	

1 Committee/Subcommittee hearing bill: Oversight, Transparency &
 2 Administration Subcommittee
 3 Representative Clemons offered the following:

Amendment (with directory and title amendments)

Remove lines 34-129 and insert:

(3) During the 60 days after the clerk issues a certificate of disbursements, the clerk shall hold the surplus pending a court order.

(c) If the remainder of the surplus has not been paid to the owner of record or any subordinate lienholder, it is subject to s. 717.113 and shall be reported and remitted to the Department of Financial Services in accordance with ss. 717.117 and 717.119. For purposes of establishing entitlement to the property, only the owner of record reported by the clerk, or the estate or beneficiary as defined in s. 731.201 of a deceased



Amendment No. 1

17 owner of record reported by the clerk, is entitled to the
18 surplus. Any surplus of less than \$10 escheats to no claim is
19 filed during the 60-day period, the clerk shall appoint a
20 surplus trustee from a list of qualified

23 **D I R E C T O R Y A M E N D M E N T**

24 Remove lines 26-29 and insert:

25 Section 2. Paragraph (d) of subsection (1), paragraph (c)
26 of subsection (3), and subsection (4) of section 45.032, Florida
27 Statutes, are amended to read:

30 **T I T L E A M E N D M E N T**

31 Remove lines 9-11 and insert:

32 circumstances; specifying the entities who

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Location: Morris Hall (17 HOB)

HB 681 : Unclaimed Funds Held by the Clerks of Court (continued)

Appearances: (continued)

Graham, Walter - Information Only
Director of Division of Unclaimed Property
200 E. Gaines St.
Tallahassee FL 32301
Phone: 850-413-5590

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COMMITTEE MEETING REPORT
Oversight, Transparency & Administration Subcommittee

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Location: Morris Hall (17 HOB)

HB 789 : Procurement of Professional Services

Not Considered

Committee meeting was reported out: Monday, March 13, 2017 6:23PM

COMMITTEE MEETING REPORT
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Location: Morris Hall (17 HOB)

HJR 811 : Membership of Cabinet; Election of Secretary of State

Favorable

	<i>Yea</i>	<i>Nay</i>	<i>No Vote</i>	<i>Absentee Yea</i>	<i>Absentee Nay</i>
Daisy Baez			X		
Kimberly Daniels	X				
Tracie Davis	X				
Brad Drake	X				
Katie Edwards	X				
Eric Eisnaugle			X		
Patrick Henry	X				
Blaise Ingoglia	X				
Bobby Payne	X				
Cary Pigman	X				
Daniel Rauferson			X		
Bob Rommel			X		
Rick Roth	X				
Clay Yarborough	X				
Neil Combee (Chair)	X				
Total Yeas: 11		Total Nays: 0			

Appearances:

Mortham, Sandra (Lobbyist) - Proponent
 Self
 6675 Weeping Willow Way
 Tallahassee FL 32311
 Phone: (850) 251-2283

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Oversight, Transparency & Administration Subcommittee
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Location: Morris Hall (17 HOB)

HB 1137 : Use of State Funds

Favorable

	<i>Yea</i>	<i>Nay</i>	<i>No Vote</i>	<i>Absentee Yea</i>	<i>Absentee Nay</i>
Daisy Baez			X		
Kimberly Daniels	X				
Tracie Davis	X				
Brad Drake	X				
Katie Edwards	X				
Eric Eisnaugle			X		
Patrick Henry	X				
Blaise Ingoglia	X				
Bobby Payne	X				
Cary Pigman	X				
Daniel Raulerson			X		
Bob Rommel			X		
Rick Roth	X				
Clay Yarborough	X				
Neil Combee (Chair)	X				
Total Yeas: 11		Total Nays: 0			

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COMMITTEE MEETING REPORT
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Location: Morris Hall (17 HOB)

HB 1141 : State Employment

Favorable

	<i>Yea</i>	<i>Nay</i>	<i>No Vote</i>	<i>Absentee Yea</i>	<i>Absentee Nay</i>
Daisy Baez			X		
Kimberly Daniels	X				
Tracie Davis	X				
Brad Drake	X				
Katie Edwards	X				
Eric Eisnaugle			X		
Patrick Henry	X				
Blaise Ingoglia	X				
Bobby Payne	X				
Cary Pigman			X		
Daniel Raulerson			X		
Bob Rommel	X				
Rick Roth	X				
Clay Yarborough	X				
Neil Combee (Chair)	X				
Total Yeas: 11		Total Nays: 0			

Appearances:

Lowe-Minor, Jessica (Lobbyist) - Opponent
 Institute for Nonprofit Innovation and Excellence
 300 W Pensacola St
 Tallahassee FL 32301-16
 Phone: 850-201-9766

Gregory, Matt (State Employee) - Information Only
 Department of Management Services
 Workforce development & benefits manager
 4050 Esplanade Way
 Tallahassee FL

Ferrin, Samantha (Lobbyist) (State Employee) - Proponent
 Department of Management Services
 Deputy Director of Legislative & External Affairs
 4050 Esplanade Way
 Tallahassee FL 32399-70
 Phone: (850) 410-0804

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COMMITTEE MEETING REPORT
Oversight, Transparency & Administration Subcommittee
3/13/2017 1:00PM

Location: Morris Hall (17 HOB)

Workshop

HB 143: Firefighter Presumption

Workshopped

Appearances:

Blanco, Omar - Information Only
Metro-Dade Firefighters Local 1403
President
8000 NW 21 St.
Miami FL 33187
Phone: 305-593-6100

Chandler, Chris - Information Only
BSO Fire Rescue
Captain
5108 SW 87 SW Terrace
Cooper City FL
Phone: 954-684-0651

Conn, Kraig (Lobbyist) - Opponent
Florida League of Cities
301 S. Bronough
Tallahassee FL 32301
Phone: 850-222-9684

Perez, Otema - Information Only
Miami Dade Fire Rescue
5750 NW 112 Terrace
Miami FL 33012
Phone: 305-588-6196

Petrick, Lawrence - Information Only
Health & Safety
Deputy Director
1750 New York Ave. NW
Washington DC 20006
Phone: 216-287-2524

Suarez, Luis - Information Only
Miami Dade Fire Rescue
16203 NW 84 Pl
Miami Lakes FL
Phone: 305-803-5361

Committee meeting was reported out: Monday, March 13, 2017 6:23PM

COMMITTEE MEETING REPORT
Oversight, Transparency & Administration Subcommittee
3/13/2017 1:00PM

Location: Morris Hall (17 HOB)

Workshop (continued)

Tolley, James (Lobbyist) - Proponent
Florida Professional Firefighters
President
343 W Madison St
Tallahassee FL 32301
Phone: (850) 224-7333

Tyson, Keith - Information Only
Education & Research/ Firefighter Cancer Support Network
Vice President
10217 SW Fernwood Ave.
Port St. Lucie FL 34987
Phone: 786-351-3276

Committee meeting was reported out: Monday, March 13, 2017 6:23PM

W10



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

<input checked="" type="checkbox"/> Bill	<input type="checkbox"/> Amendment
Bill/PCS/PCB Number: <u>103</u>	
Amendment Number: _____	

Name: Barbara DeLore

Representing: FNOW (National Organization for Women)

Title: MS

Address: 1025 E. Bernard ST

City: Tallahassee State/Zip: FL 32308

Phone Number: 950-251-4280 Meeting Date: 3-13-17

Committee/Subcommittee: Oversight, Transparency - - -

Presentation/Workshop Topic: Certificates for Non-Viable Births

Registered Lobbyist: YES NO

State Employee: YES NO

- I wish to speak *Waive in Opposition*
- Appearing in response to an inquiry for information made by member, committee, or staff
- Appearing in response to subpoena
- Appearing at the written request of the chair
- Judge or elected officer appearing in official capacity
- Lobbyist Appearance form submitted online

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent Opponent Info only

Amendment: Proponent Opponent Info only

WIS



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

<input checked="" type="checkbox"/> Bill	<input type="checkbox"/> Amendment
Bill/PCS/PCB Number: <u>H369</u>	
Amendment Number: _____	

Name: GREG FROST

Representing: CIVIL CITATION NETWORK

Title: PRESIDENT

Address: 3333 W. PENSACOLA ST.

City: TALLAHASSEE State/Zip: FL

Phone Number: 850-544-7350 Meeting Date: 3/13

Committee/Subcommittee: GOV'T OVERSIGHT

Presentation/Workshop Topic: PRE-ARREST DIVERSION PUBLIC RECORDS EX.

Registered Lobbyist: YES NO

State Employee: YES NO

- I wish to speak
- Appearing in response to an inquiry for information made by member, committee, or staff
- Appearing in response to subpoena
- Appearing at the written request of the chair
- Judge or elected officer appearing in official capacity
- Lobbyist Appearance form submitted online

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent Opponent Info only

Amendment: Proponent Opponent Info only

WLS



75618369



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit two copies to the committee/subcommittee administrative assistant at the meeting.

<input checked="" type="checkbox"/> Bill <input type="checkbox"/> Amendment Bill Number: CS/HB 369 : Pub. Rec./Prearrest Diversion Programs PCB/PCS/Amendment #: N/A

Name: **Daniels, Nancy**

Representing: **Florida Public Defender Association**

Title: **Legislative Consultant**

Address: **103 N. Gadsden Street**

City: **Tallahassee** State/Zip: **FL 32301**

Phone Number: **850-488-6850** Meeting Date: **Mar 13 2017 1:00PM**

Committee/Subcommittee: **Oversight, Transparency & Administration Subcommittee**

Presentation/Workshop Topic: **Pub. Rec/Pre-arrest Diversion Programs**

- Registered Lobbyist
- State Employee
- I Wish To Speak
- Appearing in response to subpoena
- Appearing in response to an inquiry for information made by member, committee or staff
- Appearing at the written request of the chair
- Judge or elected officer appearing in official capacity
- Lobbyist Appearance Form Submitted

<u>Bill</u>
Proponent
<u>Amendment</u>
N/A

W15



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

<input checked="" type="checkbox"/> Bill	<input type="checkbox"/> Amendment
Bill/PCS/PCB Number: <u>369</u>	
Amendment Number: _____	

Name: Barney Bishop

Representing: Fla. Smart Justice Alliance

Title: Pres & CEO

Address: 204 S. Monroe

City: Tall State/Zip: FL 32301

Phone Number: 850.510.9922 Meeting Date: 13 Mch 17

Committee/Subcommittee: Oversight, Transparency & Admin

Presentation/Workshop Topic: Public Records - Prearrest Diversion

Registered Lobbyist: YES NO

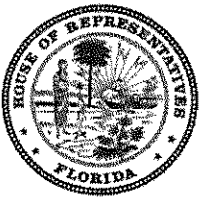
State Employee: YES NO

- I wish to speak
- Appearing in response to an inquiry for information made by member, committee, or staff
- Appearing in response to subpoena
- Appearing at the written request of the chair
- Judge or elected officer appearing in official capacity
- Lobbyist Appearance form submitted online

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent Opponent Info only

Amendment: Proponent Opponent Info only



WIS

COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

<input checked="" type="checkbox"/> Bill	<input type="checkbox"/> Amendment
Bill/PCS/PCB Number: <u>421</u>	
Amendment Number: _____	

Name: Carolyn Johnson

Representing: FL Chamber of Commerce

Title: Policy Director

Address: 126 S Bronough St

City: Tallahassee State/Zip: 32301

Phone Number: 521-1200 Meeting Date: 3/13/17

Committee/Subcommittee: Oversight

Presentation/Workshop Topic: Reemployment Assistance Fraud

Registered Lobbyist: YES NO

State Employee: YES NO

- I wish to speak
- Appearing in response to an inquiry for information made by member, committee, or staff
- Appearing in response to subpoena
- Appearing at the written request of the chair
- Judge or elected officer appearing in official capacity
- Lobbyist Appearance form submitted online

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent Opponent Info only

Amendment: Proponent Opponent Info only



WIS

40218156



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit two copies to the committee/subcommittee administrative assistant at the meeting.

<input checked="" type="checkbox"/> Bill <input type="checkbox"/> Amendment Bill Number: HB 671 : Reemployment Assistance Fraud PCB/PCS/Amendment #: N/A
--

Name: **Dawes, Alexia**

Representing: **Department of Economic Opportunity**

Title: **Deputy, Legislative Affairs**

Address: **107 E Madison St, MSC 55**

City: **Tallahassee** State/Zip: **FL 32399**

Phone Number: **(850) 245-7113** Meeting Date: **Mar 13 2017 1:00PM**

Committee/Subcommittee: **Oversight, Transparency & Administration Subcommittee**

Presentation/Workshop Topic: **N/A**

<input checked="" type="checkbox"/> Registered Lobbyist <input checked="" type="checkbox"/> State Employee <input type="checkbox"/> I Wish To Speak <input type="checkbox"/> Appearing in response to subpoena <input type="checkbox"/> Appearing in response to an inquiry for information made by member, committee or staff <input type="checkbox"/> Appearing at the written request of the chair <input type="checkbox"/> Judge or elected officer appearing in official capacity <input type="checkbox"/> Lobbyist Appearance Form Submitted	<table border="1"> <tr> <td style="text-align: center;"><u>Bill</u></td> </tr> <tr> <td>Proponent</td> </tr> <tr> <td style="text-align: center;"><u>Amendment</u></td> </tr> <tr> <td>N/A</td> </tr> </table>	<u>Bill</u>	Proponent	<u>Amendment</u>	N/A
<u>Bill</u>					
Proponent					
<u>Amendment</u>					
N/A					



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

Bill/PCB/PCB Number: 681
Amendment Number:
[] Bill [] Amendment

Name: BG Murphy

Representing: CFO Atwater

Title: Deputy Legislative Affairs Director

Address: 400 South Monroe

City: Tallahassee State/Zip: 32303

Phone Number: 850-413-2890 Meeting Date: 3/13/17

Committee/Subcommittee: Oversight, Transparency & Administration Sub.

Presentation/Workshop Topic:

Registered Lobbyist: YES [x] NO []
State Employee: YES [x] NO []

- I wish to speak [x]
Appearing in response to an inquiry for information made by member, committee, or staff []
Appearing in response to subpoena []
Appearing at the written request of the chair []
Judge or elected officer appearing in official capacity []
Lobbyist Appearance form submitted online []

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent [x] Opponent [] Info only []
Amendment: Proponent [] Opponent [] Info only []



83163334



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit two copies to the committee/subcommittee administrative assistant at the meeting.

<input checked="" type="checkbox"/> Bill <input type="checkbox"/> Amendment Bill Number: HB 681 : Unclaimed Funds Held by the Clerks of Court PCB/PCS/Amendment #: N/A

Name: **Kupperman, David**

Representing: **Surplus Trustee clients**

Title: **Attorney**

Address: **101 NE 3rd Ave, Suite 1500**

City: **Fort Lauderdale** State/Zip: **FL 33301**

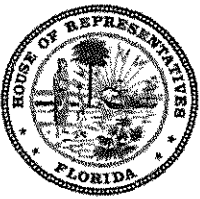
Phone Number: **954-332-3684** Meeting Date: **Mar 13 2017 1:00PM**

Committee/Subcommittee: **Oversight, Transparency & Administration Subcommittee**

Presentation/Workshop Topic: **N/A**

- Registered Lobbyist
- State Employee
- I Wish To Speak
- Appearing in response to subpoena
- Appearing in response to an inquiry for information made by member, committee or staff
- Appearing at the written request of the chair
- Judge or elected officer appearing in official capacity
- Lobbyist Appearance Form Submitted

<u>Bill</u>
Opponent
<u>Amendment</u>
N/A



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

<input checked="" type="checkbox"/> Bill	<input type="checkbox"/> Amendment
Bill/PCS/PCB Number: <u>681</u>	
Amendment Number: _____	

Name: Jon Costello

Representing: Citizens for Judicial Process

Title: lobbyist

Address: _____

City: _____ State/Zip: _____

Phone Number: 766-8654 Meeting Date: _____

Committee/Subcommittee: _____

Presentation/Workshop Topic: _____

Registered Lobbyist: YES NO

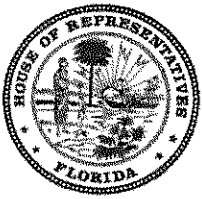
State Employee: YES NO

- I wish to speak
- Appearing in response to an inquiry for information made by member, committee, or staff
- Appearing in response to subpoena
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- Lobbyist Appearance form submitted online

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent Opponent Info only

Amendment: Proponent Opponent Info only



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

Bill/Amendment selection box with checkboxes and handwritten number 681.

Name: Walter Graham

Representing: Division of Unclaimed Property

Title: Director of the Division of Unclaimed Property

Address: 200 E. Gaines St.

City: Tallahassee State/Zip: FL/32301

Phone Number: 850-413-5590 Meeting Date: 3/13/17

Committee/Subcommittee: Oversight, Transparency & Administration Subcommittee

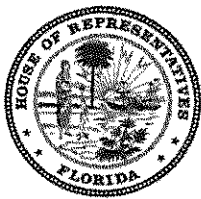
Presentation/Workshop Topic:

Registered Lobbyist: YES NO State Employee: YES NO

- I wish to speak
Appearing in response to an inquiry for information made by member, committee, or staff
Appearing in response to subpoena
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Bill: Proponent Opponent Info only
Amendment: Proponent Opponent Info only



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

Bill [checked] Amendment []
Bill/PCS/PCB Number: HJR 811
Amendment Number: []

Name: Sandra Mortham

Representing: self

Title: []

Address: 6675 Weeping Willow Way

City: Tallahassee State/Zip: FL 32311

Phone Number: 850-251-2283 Meeting Date: 13 Mar 17

Committee/Subcommittee: Oversight, Transparency + Admin

Presentation/Workshop Topic: []

Registered Lobbyist: YES [checked] NO []

State Employee: YES [] NO []

- I wish to speak [checked]
Appearing in response to an inquiry for information made by member, committee, or staff []
Appearing in response to subpoena []
Appearing at the written request of the chair []
Judge or elected officer appearing in official capacity []
Lobbyist Appearance form submitted online []

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent [checked] Opponent [] Info only []

Amendment: Proponent [] Opponent [] Info only []



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

Bill/PCB/PCB Number: 1141
Amendment Number:
Bill [checked] Amendment []

Name: Jessica Lowe-Miner

Representing: Institute for Nonprofit Innovation and Excellence

Title: Executive Director

Address: 300 W. Pensacola St.

City: Tallahassee State/Zip: FL 32301

Phone Number: (850) 201-9766 Meeting Date: 3/13/17

Committee/Subcommittee: Oversight, Transparency & Administration Subcom

Presentation/Workshop Topic: FSECC

Registered Lobbyist: YES [checked] NO []
State Employee: YES [] NO [checked]

- I wish to speak [checked]
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Appearing in response to subpoena []
Appearing at the written request of the chair []
Judge or elected officer appearing in official capacity []
Lobbyist Appearance form submitted online [checked]

(If you are testifying on an amendment, please also indicate your position as a prop

Bill: Proponent [] Opponent [checked] Info c

Amendment: Proponent [] Opponent [] Info only



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

<input checked="" type="checkbox"/> Bill	<input type="checkbox"/> Amendment
Bill/PCS/PCB Number: <u>1141</u>	
Amendment Number: _____	

Name: Matt Gregory

Representing: Department of Management Services

Title: Workforce development & benefits manager

Address: 4050 Esplanade way

City: Tallahassee State/Zip: FL

Phone Number: _____ Meeting Date: 3/13/17

Committee/Subcommittee: Oversight, transparency & administration sub.

Presentation/Workshop Topic: _____

Registered Lobbyist: YES NO

State Employee: YES NO

I wish to speak

- Appearing in response to an inquiry for information made by member, committee, or staff
- Appearing in response to subpoena
- Appearing at the written request of the chair
- Judge or elected officer appearing in official capacity
- Lobbyist Appearance form submitted online

If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent Opponent Info only

Amendment: Proponent Opponent Info only



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

Bill [checked] Amendment []
Bill/PCS/PCB Number: HB 1141
Amendment Number: []

Name: Samantha Ferrin

Representing: Department of Management Services

Title: Deputy Director of legislative & external affairs

Address: 4050 Esplanade Way

City: Tallahassee State/Zip: FL

Phone Number: Meeting Date: 3/13/17

Committee/Subcommittee: Oversight, Transparency & Administration Sub.

Presentation/Workshop Topic:

Registered Lobbyist: YES [checked] NO []

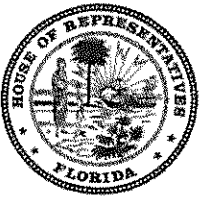
State Employee: YES [checked] NO []

- I wish to speak
Appearing in response to an inquiry for information made by member, committee, or staff
Appearing in response to subpoena
Appearing at the written request of the chair
Judge or elected officer appearing in official capacity
Lobbyist Appearance form submitted online

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent [checked] Opponent [] Info only []

Amendment: Proponent [] Opponent [] Info only []



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

Bill [checked] Amendment []
Bill/PCS/PCB Number: 143
Amendment Number: []

Name: Jim Tolley
Representing: Florida Professional Firefighters
Title: President
Address: 343 West Madison St.
City: Tallahassee State/Zip: FL 32301
Phone Number: 850 224 7333 Meeting Date: 3/13/17
Committee/Subcommittee: OTAS
Presentation/Workshop Topic: Firefighter Lance

Registered Lobbyist: YES [checked] NO []
State Employee: YES [] NO [checked]

- I wish to speak [checked]
Appearing in response to an inquiry for information made by member, committee, or staff []
Appearing in response to subpoena []
Appearing at the written request of the chair []
Judge or elected officer appearing in official capacity []
Lobbyist Appearance form submitted online []

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent [checked] Opponent [] Info only []
Amendment: Proponent [] Opponent [] Info only []



Did Not Appear

COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

Bill Amendment

Bill/PCS/PCB Number: 143

Amendment Number: _____

Name: JEFF SHARKEY

Representing: CITY OF ST PETERSBURG

Title: Mayor

Address: 100 E College Ave

City: Tallahassee State/Zip: FL 32301

Phone Number: 850 224 1000 Meeting Date: 3/13/17

Committee/Subcommittee: Design Transparency & Access

Presentation/Workshop Topic: PREFILTER RESUMPTION

Registered Lobbyist: YES NO

State Employee: YES NO

- I wish to speak
- Appearing in response to an inquiry for information made by member, committee, or staff
- Appearing in response to subpoena
- Appearing at the written request of the chair
- Judge or elected officer appearing in official capacity
- Lobbyist Appearance form submitted online

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent Opponent Info only

Amendment: Proponent Opponent Info only



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit two copies to the committee/subcommittee administrative assistant at the meeting.

Type or Print Clearly

Bill Number: 143 Meeting Date: 3/13/17

Fill in appropriate information:

PCB/PCS/Amendment # or

Presentation/Workshop Topic: _____

Committee/Subcommittee: OTAS

Name: Luis Suarez

Title: _____

Address: 16203 NW 84 PL

City: Miami Lakes State/Zip: FL 33016

Phone Number: 305 803-5361

Representing: Miami Dade Fire Rescue

Registered Lobbyist: YES NO

State Employee: YES NO

I Wish To Speak: YES NO

I Have Been Requested to Speak: YES NO

Bill		Amendment	
Proponent <input type="checkbox"/>	Opponent <input type="checkbox"/>	Proponent <input type="checkbox"/>	Opponent <input type="checkbox"/>
Info Only <input type="checkbox"/>		Info Only <input type="checkbox"/>	



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit two copies to the committee/subcommittee administrative assistant at the meeting.

Type or Print Clearly

Bill Number: 143 Meeting Date: 3/13/17

Fill in appropriate information:

PCB/PCS/Amendment # or Presentation/Workshop Topic: C/A

Committee/Subcommittee: OTAS

Name: Chris Chandler

Title: Capt.

Address: 5108 SW 87 Terrace

City: Cooper City State/Zip: Fl.

Phone Number: 954-684-0651

Representing: BSO Fire Rescue

Registered Lobbyist: YES NO

State Employee: YES NO

I Wish To Speak: YES NO

I Have Been Requested to Speak: YES NO

Bill		Amendment	
Proponent <input type="checkbox"/>	Opponent <input type="checkbox"/>	Proponent <input type="checkbox"/>	Opponent <input type="checkbox"/>
Info Only <input type="checkbox"/>		Info Only <input type="checkbox"/>	



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit two copies to the committee/subcommittee administrative assistant at the meeting.

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Bill Number: HB 143 Meeting Date: 3.13.17

Fill in appropriate information:

PCB/PCS/Amendment # or

Presentation/Workshop Topic: ~~OTAS~~ ~~OTAS~~

Committee/Subcommittee: OTAS

Name: Otema Perez

Title: _____

Address: 5750 NW 112 Terrace

City: Miami State/Zip: 33012

Phone Number: 305.588.6196

Representing: Miami - Dade Fire Rescue

Registered Lobbyist: YES NO

State Employee: YES NO

I Wish To Speak: YES NO

I Have Been Requested to Speak: YES NO

Bill		Amendment	
Proponent <input type="checkbox"/>	Opponent <input type="checkbox"/>	Proponent <input type="checkbox"/>	Opponent <input type="checkbox"/>
Info Only <input type="checkbox"/>		Info Only <input type="checkbox"/>	



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit two copies to the committee/subcommittee administrative assistant at the meeting.

Type or Print Clearly

Bill Number: HB 143 Meeting Date: 3/13/17

Fill in appropriate information:
PCB/PCS/Amendment # or
Presentation/Workshop Topic: _____

Committee/Subcommittee: OTAS

Name: Kath Tyson

Title: Vice President Education + Research Firefighter Cancer Support Network

Address: 10217 SW Fernwood Ave

City: Port St Lucie State/Zip: FL 34987

Phone Number: 786 351-3276

Representing: myself + FCSN

Registered Lobbyist: YES NO

State Employee: YES NO

I Wish To Speak: YES NO

I Have Been Requested to Speak: YES NO

Bill		Amendment	
Proponent <input type="checkbox"/>	Opponent <input type="checkbox"/>	Proponent <input type="checkbox"/>	Opponent <input type="checkbox"/>
Info Only <input type="checkbox"/>		Info Only <input type="checkbox"/>	



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit two copies to the committee/subcommittee administrative assistant at the meeting.

Type or Print Clearly

Bill Number: 143 Meeting Date: MARCH 13, 2017

Fill in appropriate information:

PCB/PCS/Amendment # or

Presentation/Workshop Topic: _____

Committee/Subcommittee: OTALS

Name: LAWRENCE G. PETRICK JR.

Title: DEPUTY DIRECTOR HEALTH & SAFETY

Address: 1750 NEW YORK AVE. N.W.

City: WASHINGTON State/Zip: DC 20006

Phone Number: 202-287-2524

Representing: INTERNATIONAL ASSOCIATION OF FIRE FIGHTERS

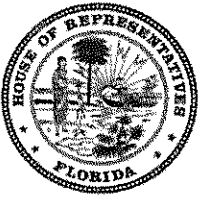
Registered Lobbyist: YES NO

State Employee: YES NO

I Wish To Speak: YES NO

I Have Been Requested to Speak: YES NO

Bill		Amendment	
Proponent <input type="checkbox"/>	Opponent <input type="checkbox"/>	Proponent <input type="checkbox"/>	Opponent <input type="checkbox"/>
Info Only <input type="checkbox"/>		Info Only <input type="checkbox"/>	



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

Bill [checked] Amendment []
Bill/PCS/PCB Number: HB 143
Amendment Number: []

Name: Kraig Conn

Representing: Florida League of Cities

Title: []

Address: 301 S. Bronough Ste. 300

City: Tallahassee State/Zip: FL 32302

Phone Number: 222 9684 Meeting Date: 3/13/17

Committee/Subcommittee: Oversight, Transparency Sub

Presentation/Workshop Topic: []

Registered Lobbyist: YES [checked] NO []

State Employee: YES [] NO []

- I wish to speak [checked]
Appearing in response to an inquiry for information made by member, committee, or staff []
Appearing in response to subpoena []
Appearing at the written request of the chair []
Judge or elected officer appearing in official capacity []
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(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent [] Opponent [checked] Info only []
Amendment: Proponent [] Opponent [] Info only []



COMMITTEE/SUBCOMMITTEE APPEARANCE RECORD

Please fill out the entire form and submit both copies to the Committee Administrative Assistant at the meeting.

Bill Amendment
Bill/PCS/PCB Number:
Amendment Number:

Name: OMAR BLANCO

Representing: METRO-DADE FIREFIGHTERS LOCAL 1403

Title: PRESIDENT

Address: 8000 NW 21 ST.

City: MIAMI State/Zip: FL 33187

Phone Number: 305-593-6100 Meeting Date: 3/13/17

Committee/Subcommittee: OVERSIGHT, TRANSPARENCY & ADMINISTRATION

Presentation/Workshop Topic: HB 143 - FIREFIGHTERS

Registered Lobbyist: YES NO [checked]

State Employee: YES NO [checked]

- I wish to speak [checked]
Appearing in response to an inquiry for information made by member, committee, or staff
Appearing in response to subpoena
Appearing at the written request of the chair
Judge or elected officer appearing in official capacity
Lobbyist Appearance form submitted online

(If you are testifying on an amendment, please also indicate your position as a proponent or opponent on the bill as a whole.)

Bill: Proponent Opponent Info only

Amendment: Proponent Opponent Info only



Florida Professional Firefighters & Paramedics

SB 158(Latvala)/HB 143(Fitzenhagen)-Firefighter Cancer

FPF SUPPORTS THIS LEGISLATION

SB 158/HB 143:

- Limits presumption to 4 diseases:
 - Multiple Myeloma
 - Non-Hodgkin Lymphoma
 - Testicular Cancer
 - Prostate Cancer
- Requires pre-employment physical exams
- Excludes tobacco users
- Excludes firefighters with part-time jobs in other “cancerous” workplaces
- Encourages research/review of other cancers (Breast, Colon, Stomach, Brain, Skin, Throat, etc.):
 - \$1.5 million funded by legislature in 2016
 - \$965,000 funded by Legislature in 2015
 - University of Miami Sylvester Comprehensive Cancer Center
 - The University is partnering with Fire Depts. in Miami-Dade, Palm Beach, and Broward, and several more

Meta-analysis of 32 separate Firefighter Cancer studies shows¹:

- “Elevated” or “probable association” for the 4 included cancers
- “Possible association” for 8 additional cancers

Fiscal Impact to the Florida Retirement System²:

- Cost of the bill, as amended is 0.01% of payroll to the FRS for 2016-2017
 - \$95,000 cost to the State of Florida
 - \$326,000 cost to ALL other participating employers, combined
- No negative impact to Unfunded Liability of the FRS

Statewide Public Opinion Poll³

- 801 registered voters polled throughout Florida
- 74% agree that certain cancers, proven to be more prevalent among firefighters, should be presumed job related
- 88% believe that employers are responsible for providing safer equipment to prevent cancer
- 74% are willing to pay higher taxes to pay for better equipment in order to reduce cancer
- 57% support a new law to give firefighters easier access to worker’s comp benefits
- 28% believe that the burden of proof should fall on the firefighter to prove cancer was job related

References Attached:

¹ LeMasters et al. Cancer Risk Among Firefighters: A Review and Meta-analysis of 32 Studies (JOEM. 2006; 48: 1189-1202)

² Special Actuarial Study of Firefighter ILOD Cancer Presumption, Feb. 11, 2016; Milliman Actuaries for DMS

³ Statewide Public Opinion Poll by Screven Watson & Associates, January 30, 2016

Cancer Risk Among Firefighters: A Review and Meta-analysis of 32 Studies

Grace K. LeMasters, PhD
 Ash M. Genaidy, PhD
 Paul Succop, PhD
 James Deddens, PhD
 Tarek Sobeih, MD, PhD
 Heriberto Barrera-Viruet, PhD
 Kari Dunning, PhD
 James Lockey, MD, MS

Objective: The objective of this study was to review 32 studies on firefighters and to quantitatively and qualitatively determine the cancer risk using a meta-analysis. **Methods:** A comprehensive search of computerized databases and bibliographies from identified articles was performed. Three criteria used to assess the probable, possible, or unlikely risk for 21 cancers included pattern of meta-relative risks, study type, and heterogeneity testing. **Results:** The findings indicated that firefighters had a probable cancer risk for multiple myeloma with a summary risk estimate (SRE) of 1.53 and 95% confidence interval (CI) of 1.21–1.94, non-Hodgkin lymphoma (SRE = 1.51, 95% CI = 1.31–1.73), and prostate (SRE = 1.28; 95% CI = 1.15–1.43). Testicular cancer was upgraded to probable because it had the highest summary risk estimate (SRE = 2.02; 95% CI = 1.30–3.13). Eight additional cancers were listed as having a “possible” association with firefighting. **Conclusions:** Our results confirm previous findings of an elevated metarerelative risk for multiple myeloma among firefighters. In addition, a probable association with non-Hodgkin lymphoma, prostate, and testicular cancer was demonstrated. (J Occup Environ Med. 2006;48:1189–1202)

During the course of their work, firefighters are exposed to harmful substances at the fire scene as well as at the firehouse. At the fire scene, firefighters are potentially exposed to various mixtures of particulates, gases, mists, fumes of an organic and/or inorganic nature, and the resultant pyrolysis products.^{1,2} Specific potential exposures include metals such as lead, antimony, cadmium, uranium, chemical substances, including acrolein, benzene, methylene chloride, polyaromatic hydrocarbons, perchlorethylene, toluene, trichloroethylene, trichlorophenol, xylene, formaldehydes, minerals such as asbestos, crystalline, and noncrystalline silica, silicates, and various gases that may have acute, toxic effects.^{1,2} In some situations, respiratory protection equipment may be inadequate or not felt to be needed resulting in unrecognized exposure.³ At the firehouse where firefighters spend long hours, exposures may occur to complex mixtures that comprise diesel exhaust, particularly if trucks are run in closed houses without adequate outside venting. In light of the World Trade Center disaster, concerns have reemerged and heightened related to building debris particle exposures from pulverized cement and glass, fiberglass, asbestos, silica, heavy metals, soot, and/or organic products of combustion.³

To date, only one meta-analysis conducted by Howe and Burch in 1990 examined the extent of cancer risk among firefighters in 11 mortality studies.⁴ They reported that there was an increased association with the occurrence of brain tumors, malignant melanoma, and multiple myeloma with the evidence in favor of

From Epidemiology and Biostatistics, University of Cincinnati College of Medicine (Dr LeMasters, Dr Succop), Cincinnati, Ohio; Industrial and Manufacturing Engineering and Epidemiology and Biostatistics, University of Cincinnati College of Engineering and College of Medicine (Dr Genaidy), Cincinnati, Ohio; the Department of Mathematical Sciences, University of Cincinnati College of Arts & Sciences (Dr Deddens), Cincinnati, Ohio; the Department of Industrial Medicine and Occupational Diseases, Cairo University Faculty of Medicine (Dr Sobeih), Cairo, Egypt; the Department of Industrial Engineering, Interamerican University of Puerto Rico (Dr Barrera-Viruet), Bayamon, Puerto Rico; the Department of Rehabilitation Sciences, University of Cincinnati Medical Center (Dr Dunning), Cincinnati, Ohio; and Occupational and Environmental Medicine and Pulmonary Medicine, University of Cincinnati College of Medicine (Dr Lockey), Cincinnati, Ohio.

This study was supported in part by a grant from the Ohio Bureau of Workers Compensation.

Address correspondence to: Grace K. LeMasters, PhD, Department of Environmental Health, University of Cincinnati College of Medicine, Cincinnati, OH 45267-0056; E-mail: grace.lemasters@uc.edu.

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DOI: 10.1097/01.jom.0000246229.68697.90

causality somewhat greater for brain tumors and multiple myeloma. Since then, there have been numerous mortality and incidence studies. Hence, the purpose of this study was two-fold. The first purpose was to update the Howe and Burch findings by reviewing the methodologic characteristics of these studies and determining the probability of cancer by assessing the weight of evidence, including the calculated metarisk estimates. The second purpose was to describe a methodology for use in a meta-analysis when diverse investigations are being evaluated and summarized.

Materials and Methods

Search Strategy and Inclusion Criteria

Standardized mortality ratio (SMR), proportional mortality ratio (PMR), relative risk (RR), standardized incidence ratio (SIR), and case-control/mortality odds ratio (OR) studies related to firefighters and cancer risk were evaluated. For publication selection, at least 1 year in service as firefighters was required except for those studies basing employment on death certificates. Publications were retrieved by a search of computerized databases, including Medline (1966–December 2003), Health and Safety Science Abstracts (since 1980–December 2003), Cancerlit (1963–December 2003), NIOSHTIC and NIOSHTIC2 (up to December 2003), BIOSIS Previews (1980–December 2003), and PubMed (up to December 2003) using the following key words: firefighters, fire fighters, cancer. In addition to the computerized search, bibliographies in identified papers were reviewed for additional studies.

The search was restricted to reports published in English; abstracts and reviews were not included. Studies were excluded without basic data (eg, confidence intervals) that are necessary in the derivation of the meta-analysis risk estimate. If there was more than one article with the same or overlapping population, preference was given to the article providing more comprehensive information. The

data were extracted from each article by one reviewer and was verified by another. Discrepancies identified by the second reviewer were resolved in a consensus meeting.

Likelihood of Cancer Risk. Statistically significant increases in cancer risks among firefighters were evaluated as the likelihood for cancer risk given a three-criteria assessment. The three criteria included “pattern of meta-relative risk association,” “study type,” and “consistency” among studies. These criteria were particularly important given the different methodologies used for evaluating cancer risk

(ie, SMR, PMR, RR, SIR, and OR). These criteria were used in a forward approach as illustrated in Figure 1 in which at each stage, a new criterion was applied, and the probability of cancer risk was reassessed. The likelihood for cancer risk was given an assignment of “probable,” “possible,” or “not likely” patterned after the International Agency for Research on Cancer (IARC) risk assessment of human carcinogenicity in terms of weight of the evidence.⁵

The “pattern of metarelative risk associations” was the first criterion and included a two-step evaluation. For the

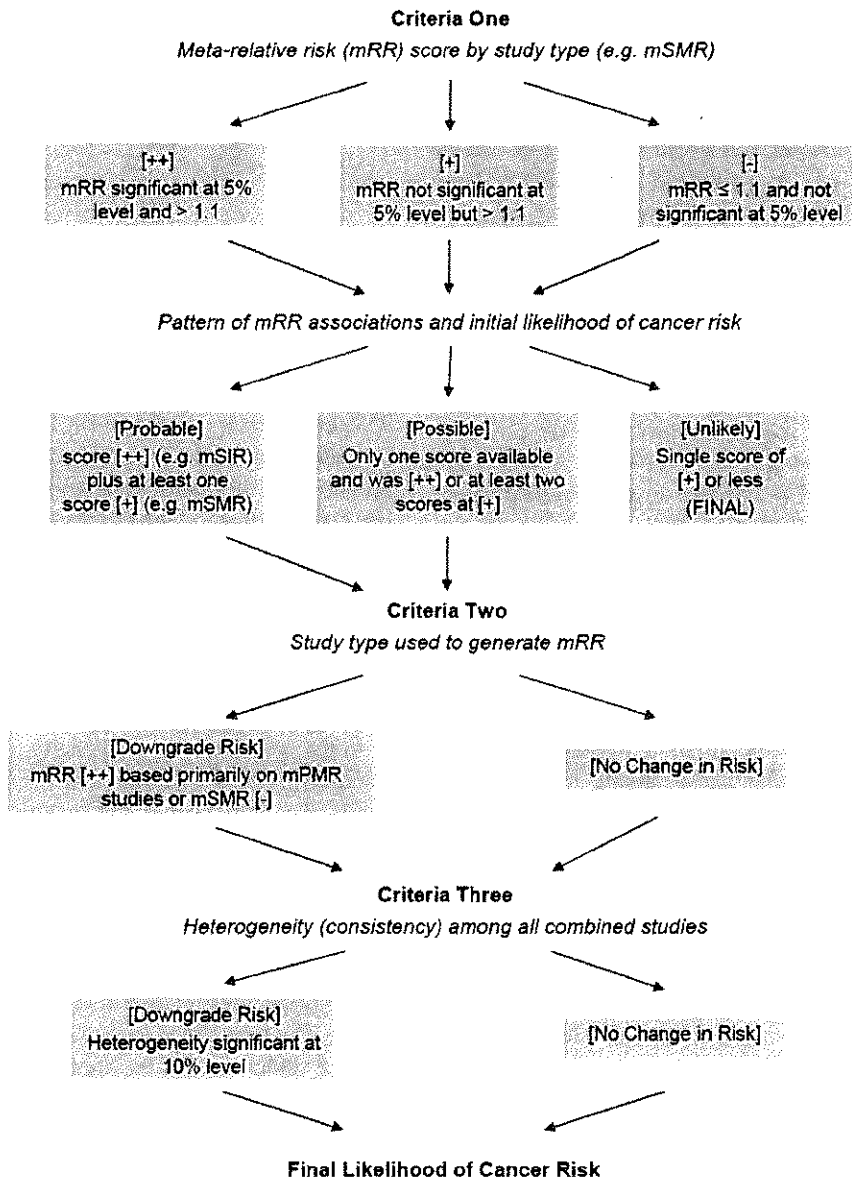


Fig. 1. Likelihood of cancer risk.

first step, the strength of the meta-analysis by each study type (eg, SMR, PMR) was assigned a score. The score of “++” was assigned if the metarelativ risk was statistically significant and greater than 1.1. The score of “+” was assigned if the metarelativ risk was not statistically significant, but the point risk estimate was greater than 1.1. The score of “-” was assigned if the metarelativ risk was not statistically significant, and the point risk estimate was equal to or less than 1.1. At the second step, these scores were used to assign a probable, possible, or unlikely designation for the pattern of metarelativ risk association. A “probable” was assigned to the cancer-specific site if one metarelativ risk (ie, mSMR, mPMR, mSMR and PMR, mRR, mSIR, mOR) was statistically significant (score of ++) and at least another was greater than 1.1 (score of +). A “possible” assignment was given if only one metarelativ risk was available and was statistically significant (score of ++) or if at least two metarelativ risks were greater than 1.1 but were not statistically significant (score of +). “Not likely” was assigned if the cancer-specific site did not meet the probable or possible criteria.

The second criterion examined the “study type” used to generate metarelativ risks. If the metarelativ risk estimate reached statistical significance (score of ++), based primarily on PMR studies, the level was downgraded. PMR studies do not measure the risk of death or death rates but rather the relative frequency of that particular cause among all causes of death. Hence, the limitation of a PMR study is that the estimate may be abnormally low or high based on the overall increase or decrease in mortality and not due to the cause of interest.⁶ Also, if the mSMR point risk estimate was not significant and ≤ 1.1 (-), the level was downgraded. The third criterion used for generating the likelihood of cancer risk was an assessment of “inconsistency” among studies. Heterogeneity testing as described in statistical methods was used to evaluate

inconsistency. The level was downgraded if heterogeneity (inconsistency) testing among all combined studies had an $\alpha \leq 0.10$.

Statistical Methods

For all cancer outcomes having two or more studies, the observed and expected values from each study were summed and a metarelativ risk estimate (mRR) was calculated. An mRR was calculated for each cancer by each study type, eg, SMR studies and as a summary metarelativ risk across all study types. The mRR was defined as the ratio of the total number of observed deaths or incident cases to the total number of expected deaths or incident cases as follows:

$$mRR = \frac{\sum_{i=1}^n O_i}{\sum_{i=1}^n E_i}$$

where O_i denotes observed deaths (cases) in each individual study, E_i denotes expected deaths (cases), and n is the total number of studies.⁷ The 95% confidence interval (CI) of mRR may be computed using the Poisson probability distribution as described by Breslow and Day.⁸ The standard error (SE) for the metarelativ risk is calculated as $SE = \frac{1}{\sqrt{\sum W_i}}$ where W_i is the statistical weight for a given study defined as $1/SE_i^2$ and SE_i is the standard error for a given study.

In the absence of heterogeneity, the fixed-effect model was applied for deriving the metarelativ risk estimate; otherwise, the random-effects model was used. A test for heterogeneity for the fixed-effect approach is given by $Q = \sum_{i=1}^n W_i * \{\log(RR_i) - \log(mRR)\}^2$ where RR_i and mRR are the relative risk and the metarelativ risk, respectively. The hypothesis of homogeneity among studies would be rejected if Q exceeds $\chi_{n-1, \alpha}^2$. Then the random-effects model was used with a different study weight (W_i^*) that further accounts for the interstudy variation in

effect size.⁸ The weighing factor W_i^* in the DerSimonian and Laird random-effects model is

$$W_i^* = \frac{1}{\left[D + \left(\frac{1}{W_i} \right) \right]}$$

where W_i is the statistical weight for a given study for the fixed-effect model and is equal to $1/SE_i^2$ with SE_i being the standard error for a given study according to Chen and Seaton⁹

$$D = \frac{[Q - (n - 1)] * \sum_{i=1}^n W_i}{\left(\sum_{i=1}^n W_i \right)^2 - \sum_{i=1}^n W_i^2}$$

It should be noted that D is set to 0 if $Q < n - 1$. The random-effects model was validated against data provided in Petitti,¹⁰ which after application using our equations gave identical results. For this study, an $\alpha \leq 10\%$ or less for declaring heterogeneity was adopted.¹¹

The SAS software was used to perform the calculations and validated our program for the fixed-effect model using data from different studies compiled by Howe and Burch⁴ on standardized mortality ratios and proportional mortality ratios among firefighters. Where there were no observed deaths or incident cases, the lower confidence interval for an individual study was set at 0.1 as suggested in the method used by Collins and Acquavella.¹² This method was compared with the data excluding studies with a zero relative risk, and the results were similar.

Results

Identification and Characteristics of Studies

The computerized literature search identified 21 U.S. and 14 non-U.S. articles.¹³⁻⁴⁷ It was determined that three studies were not eligible for the meta-analysis because of either insufficient data,⁴¹ data were combined for firefighters and other personnel,⁴² or

the text was not published in English.⁴³ In addition, four studies⁴⁴⁻⁴⁷ were excluded because of overlapping populations with other reports.^{18,30} For example, in 1992, Demers et al¹⁸ reported more observed and expected cancers than in the 1994 article.⁴⁶ Four additional studies⁴⁸⁻⁵¹ were identified in the review by Howe and Burch⁴ and used in the meta-analysis. These latter four studies are not presented in Table 1. Hence, a total of 28 studies received a detailed review as shown in Table 1, which describes the study design characteristics, exposure, and outcome definitions. Sixteen were U.S. studies and 12 were non-U.S. investigations. Five studies had an internal comparison group with the remaining using regional or national comparison groups. Fourteen ascertained exposures from employment records and defined exposure as a dichotomous (yes/no) variable. The majority of the studies relied on death certificates for assessing a cancer diagnosis. Of a total of 32 articles, 26 are included in the meta-analysis as shown in Table 2. The six additional articles are case-control/mortality odds ratio studies and presented in Table 3 with one meta-analysis for non-Hodgkin's lymphoma.

Overview of Meta-analysis

Table 2 summarizes the meta-analysis results by study type. Studies were mostly mortality and were analyzed using SMRs and PMRs. All-cause mortality had an SMR 10% less than general population rates. Mortality from all cancers was similar to the general population using SMR and RR indices, but PMR studies showed a 10% significantly higher rate (Table 2). For individual cancers, there were statistically significant elevated meta-SMR estimates for colon cancer (1.34) and multiple myeloma (1.69). PMR studies demonstrated three significantly elevated meta-PMR values that included skin (1.69), malignant melanoma (2.25), and multiple myeloma (1.42). There was one significantly elevated metarelativity risk for esoph-

ageal cancer (2.03). Incidence studies showed significant meta-SIR for cancers of the stomach (1.58), prostate (1.29), and testis (1.83).

As shown in Table 3, only one cancer type, non-Hodgkin lymphoma, had two mortality OR analyses, and both were significant. The estimated mOR was essentially based on Ma et al¹⁴ due to the much larger sample size of firefighters ($n = 4800$) compared with 23 for Figgs et al.¹⁵ Odds ratios were significantly higher for buccal cavity/pharynx (5.90) and Hodgkin's disease (2.4)¹⁴ as well as the single incidence study related to bladder cancer (2.11) and non-Hodgkin's lymphoma (3.27).²²

The next step was to determine the likelihood of cancer risk based on the three criteria assessment. Cancers receiving "probable" and "possible" designations are shown in Table 4. Based on evaluating the first criterion "pattern of metarelativity risk" for the 20 cancer sites, eight were designated as "probable," four as "possible," and eight as an unlikely risk. Based on the second criteria "study type" stomach, rectum, skin cancer, and malignant melanoma risk were downgraded because of reliance on PMR studies for statistical significance or the mSMR point risk estimate was not significant and ≤ 1.1 .

For the third criterion, "inconsistency" among all studies caused a downgrading for only colon cancer to "possible." This inconsistency may have been related to several factors, including study type and a cohort effect. There were 14 SMR and PMR colon cancer studies with elevated meta-risk estimates of 1.34 and 1.25, respectively (Table 2). Of these 14 studies, there were 11 (78.6%) with firefighters employed on or before 1950. In contrast, there were six mRR and SIR studies with meta-risk estimates of 0.91 and 0.90, respectively, with half employed on or before 1950. It is possible that the older cohorts had higher exposures due to a lack of aware-

ness of the hazards or use of protective equipment.

A final check on the three criteria assessment presented in Table 4 was made by calculating an overall summary of cancer risk across all studies (ie, SMR, PMR, RR, SIR, OR). There was agreement that cancer was unlikely between the criteria assessment and the not significant summary risk estimates for esophagus, liver, pancreas, larynx, lung, bladder, kidney, and Hodgkin's disease and all cancers (Table 5). Differences between the two approaches were found for cancers of the buccal cavity/pharynx and leukemia because these were designated as possible by the criteria assessment but as not significant in the summary risk estimate. The remaining cancers were all rated as probable or possible and all had significant summary risk estimates. Of note, testicular cancer received the highest summary risk estimate (OR = 2.02; 95% CI = 1.30-3.13) related to the SIR studies compared with the "possible" designation by the three criteria assessment.

Discussion

The meta-analysis and criteria assessment designate the likelihood of cancer among firefighters as probable for multiple myeloma and prostate cancer. Thus, the findings related to multiple myeloma are in agreement with Howe and Burch.⁴ The Philadelphia firefighter study¹³ was the largest cohort study reported to date investigating exposure-response relationships. For Philadelphia firefighters, the SMR results for multiple myeloma demonstrated an increasing trend with duration of employment as a firefighter: 0.73 (95% CI = 0.10-5.17) for under 9 years, 1.50 (95% CI = 0.48-4.66) for 10 to 19 years, and 2.31 (95% CI = 1.04-5.16) with six observed deaths for greater than 20 years. Except for race, there are essentially no known risk factors for multiple myeloma other than occupational exposures (eg, paints, herbicides, insecticides,

T1

T2

T3

T5

T4

TABLE 1
 Characteristics of Studies From Electronic Search

Reference	Company Location	Design/Analysis	Study Period	Number of Workers	Comparison Group	Exposure Variable	Exposure Source	Cancer Source	Cofactors
Baris, 2001 ¹³	Philadelphia	Cohort mortality (SMR)	1925–1986	7789	INT/NGP/NED	1, 3, 5	ER	DC	Age
Ma, 1998 ¹⁴	24 US states	Case-control (MOR)	1984–1993	6607	INT	4	DC	DC	Age/race
Figgs, 1995 ¹⁵	24 US states	Case-control (MOR)	1984–1989	23890 (cases) 119,450 (controls)	RGP	4	DC	DC	Age
Burnett, 1994 ¹⁶	27 US states	PMR	1984–1990	5744	INT	4	DC	DC	Age
Demers, 1993 ¹⁷	4 US states	Case-control (OR)	1977–1981	692 (cases) 1683 (controls)	LGP	4	TRV	TRV	Age
Demers, 1992a ¹⁸	Seattle, Tacoma (WA)	Cohort mortality (SMR) Incidence (SIR)	1944–1979	4528	LGP INT/LW/NGP	4	ER	DCN, TRV	Age
Demers, 1992b ¹⁹	Seattle, Tacoma, WA Portland	Cohort mortality (SMR)	1944–1979	4546	INT/LW/NGP	2, 3	ER	DCN	Age
Beaumont, 1991 ²⁰	San Francisco	Cohort mortality (RR)	1940–1970	3066	NGP	3, 6	ER	DCN	Age/yr
Grimes, 1991 ²¹	Honolulu	PMR, RR	1969–1988	205	RGP	3, 4	ER	DC	Race
Sama, 1990 ²²	Massachusetts	Case-control (MOR)	1982–1986	315	LW/RGP	4, 7	TRV	TR	Age/smoke
Vena, 1987 ²³	Buffalo	Cohort mortality (SMR)	1950–1979	1867	NGP	3	ER	DCN	Age/yr
Feuer, 1986 ²⁴	New Jersey	PMR	1974–1980	263	LW/RGP/NGP	3, 8	ER	DCN	Age
Morton, 1984 ²⁵	Portland, Vancouver	Incidence (SIR)	1963–1977	1678	RGP	4	TR	TRV	Age
Dubrow, 1983 ²⁶	British & USA	Cohort mortality (SMR)	1950–1977	—	—	4	AR	DC	None
Musk, 1978 ²⁷	US	Cohort mortality (SMR)	1915–1975	5655	RGP, NGP	4	ER	DC	Age
Berg 1975 ²⁸	US, Great Britain	Cohort mortality (SMR)	1949–1953 and 1959–1963	—	NGP	4	DC	DC	Age
Stang, 2003 ²⁹	Germany	Case-control (OR)	1995–1997	269 (cases) 797 (controls)	RGP	4	ER	MR	Age
Bates, 2001 ³⁰	New Zealand	Cohort mortality (SMR) Incidence (SIR)	1977–1995	4221	NGP	3	AR	DC, TR	Age/yr
Firth, 1996 ³¹	New Zealand	Incidence (SIR)	1972–1984	26207	NED	4	TR	TR	Age
Deschamps 1995 ³²	France	Cohort mortality (SMR)	1977–1991	830	NGP	2	ER	DCN	Age
Delahunt, 1995 ³³	New Zealand	Case-control (RR)	1978–1986	710 (cases) 12,756 (controls)	NGP	4	TR	TR	Age/smoke
Aronson, 1994 ³⁴	Canada	Cohort mortality (SMR)	1950–1989	5414	RGP	3, 6, 7	ER	DCN	Age/yr
Tornling, 1994 ³⁵	Sweden	Cohort mortality (SMR) Incidence (SIR)	1931–1983	1153	LGP	1, 3, 7	ER	DC, TR	Age/yr
Giles, 1993 ³⁶	Australia	Incidence (SIR)	1980–1989	2865	RGP	3, 6, 7	TRV	TR	Age
Guidotti, 1993 ³⁷	Canada	Cohort mortality (SMR)	1927–1987	3328	RGP	2	ER	DCN	Age/yr
Hansen, 1990 ³⁸	Denmark	Cohort mortality (SMR)	1970–1980	886	NED	4	OTH	DC	Age

(Continued)

TABLE 1
Continued

Reference	Company Location	Design/Analysis	Study Period	Number of Workers	Comparison Group	Exposure Variable	Exposure Source	Cancer Source	Cofactors
Eliopoulos, 1984 ³⁹	Australia	Cohort mortality (SMR) PMR	1939-1978	990	RGP	3	ER	DC	Age/yr
Mastromatteo, 1959 ⁴⁰	Canada	Cohort mortality (SMR)	1921-1953	1039	RGP	4	DC	DC	Age
<u>Exposure Variables</u>									
1. Number of firefighter runs	<u>Exposure or Cancer Source</u>								
2. Duration of "active" duty	ER, employment records								
3. Duration of employment overall as a firefighter	MR, medical records								
4. Occupation (based on death certificate or tumor registry)	AR, association records								
5. Company type engine, ladder	DC, death certificate								
6. Time since first employment	DCN, death certificate nosologist								
7. Age-specific	TR, tumor registry with no validation								
8. Employment status	TRV, tumor registry (occupation) with validation from external sources								
	OTH, other								
	<u>Design/Analysis</u>								
	RR, rate ratio								
	SMR, standardized mortality/morbidity ratio								
	MOR, mortality odds ratio								
	OR, odds ratio								
	PMR, proportional mortality ratio								
	SIR, standardized incidence mortality								
	<u>Comparison Group:</u>								
	INT = internal								
	LW = local workers								
	LGP = local general population								
	RGP = regional general population								
	NGP = national general population								
	NED = national employment database								

engine exhausts, and organic solvents).⁵²⁻⁵⁷ Benjamin et al⁵⁸ reported that blacks compared with whites have at least double the risk of being diagnosed with multiple myeloma and twice the mortality rate. Race may be ruled out as a potential factor among firefighters, because cancer risk was investigated primarily for whites.

The analyses for non-Hodgkin's lymphoma were consistent across a diversity of study designs, including SMR, PMR, SIR, and OR incident/mortality studies. All showed elevated meta-risk or point estimates. The overall summary risk estimate was significantly elevated at 1.51 (95% CI = 1.31-1.73). Hence, non-Hodgkin's lymphoma is considered a probable cancer risk for firefighters. Non-Hodgkin's lymphoma is, however, several cancer types with five International Classification of Disease (ICD) codes (200, 202.0, 202.1, 202.8, 202.9). Of importance is how the definition of non-Hodgkin's lymphoma by ICD code may contribute to the variability in study findings. For example, in a study by Demers et al¹⁹ comparing firefighters with police, the mortality incidence density ratio for "lymphosarcoma and reticulosarcoma" (ICD 200) was not elevated (0.81)¹⁹ but was (1.40) for "other lymphatic/hematopoietic" (ICD 202, 203). Subsequent to the time period covered in this review, Ma et al⁵⁹ examined Florida firefighters but evaluated only one of two cancers for ICD code 200, ie, lymphosarcoma but not reticular sarcoma and found nonsignificance (SMR = 0.94). Hence, these studies demonstrate the importance of being cognizant that differences in cancer risk estimates and interpretation of risk may be influenced by outcome definition.

Results showing a probable association for prostate cancer is curious. Prostate cancer is the most common malignancy affecting men and is the second leading cause of cancer.⁶⁰ Risk of developing prostate cancer is associated with advancing age, black

TABLE 2
Metarelative Risk Estimates and Test for Inconsistency for Mortality and Incidence*

Disease	Number of Studies	Reference	Observed	Expected	Metarelative Risk	95% Confidence Interval	P Value Inconsistency
Mortality studies							
Standardized mortality ratio (SMR)							
All causes (001-999)	12	13, 19, 23, 27, 30, 32, 34	8384	9273.8	0.90	0.85-0.97	<0.00
All cancers (140-209)	13	13, 19, 23, 27, 30, 32, 34, 35, 37-40	1801	1799.9	1.00	0.93-1.08	0.02
Buccal cavity and pharynx (140-149)	5	13, 19, 32, 34, 37	34	29.8	1.14	0.79-1.60	0.84
Esophagus (150)	4	13, 19, 23, 34	17	25.1	0.68	0.39-1.08	0.62
Stomach (151)	7	13, 19, 23, 30, 34, 35, 37	75	81.3	0.92	0.73-1.16	0.72
Colon (153)	10	13, 19, 23, 26, 28, 30, 34, 35, 37, 51	252	188.3	1.34	1.01-1.79	<0.00
Rectum (154)	6	13, 19, 23, 30, 34, 35	54	40.7	1.33	1.00-1.73	0.43
Liver/gallbladder (155-156)	5	13, 19, 23, 34, 35	22	21.9	1.00	0.63-1.52	0.92
Pancreas (157)	6	13, 19, 23, 34, 35, 37	63	64.2	0.98	0.75-1.26	0.58
Larynx (161)	3	13, 19, 34	8	13.7	0.58	0.25-1.15	0.82
Lung (162)	8	13, 19, 30, 34, 35, 37, 38, 51	378	359.2	1.05	0.95-1.16	0.50
Skin (173)	3	13, 19, 37	16	15.7	1.02	0.58-1.66	0.68
Malignant melanoma (172)	2	30, 34	4	5.9	0.67	0.18-1.70	0.23
Prostate (185)	6	13, 19, 23, 34, 35, 37	104	91	1.14	0.93-1.39	0.67
Testis (186)	1	34	3	1.2	2.50	0.50-7.30	—
Bladder (188)	6	13, 19, 23, 30, 34, 37	41	33.0	1.24	0.68-2.26	0.03
Kidney (189)	6	13, 19, 23, 34, 35, 37	30	30.9	0.97	0.44-2.13	0.01
Brain and nervous system (191-192)	8	13, 19, 23, 27, 30, 34, 35, 37	64	46.1	1.39	0.94-2.06	0.07
Non-Hodgkin's lymphoma (200, 202)	3	13, 19, 34	30	20.6	1.46	0.98-2.08	0.92
Hodgkin's disease (201)	2	19, 34	4	5.1	0.78	0.21-2.01	0.59
Multiple myeloma (203)	4	13, 26, 34, 51	24	14.2	1.69	1.08-2.51	0.15
Leukemia (204-208)	2	13, 19	30	29.9	1.00	0.68-1.43	0.27
Proportional mortality ratio (PMR)							
All cancers (140-209)	6	16, 24, 39, 48, 49, 50	2443	2215.7	1.10	1.06-1.15	0.64
Buccal cavity and pharynx (140-149)	—	—	—	—	—	—	—
Esophagus (150)	—	—	—	—	—	—	—
Stomach (151)	—	—	—	—	—	—	—
Colon (153)	4	28, 48, 49, 50	99	79.2	1.25	0.90-1.74	0.08
Rectum (154)	1	16	37	25	1.48	1.05-2.05	—
Liver/gallbladder (155-156)	—	—	—	—	—	—	—
Pancreas (157)	—	—	—	—	—	—	—
Larynx (161)	—	—	—	—	—	—	—
Lung (162)	4	16, 48, 49, 50	773	742.1	1.04	0.88-1.23	0.04
Skin (172-173)	2	16, 24	42	24.8	1.69	1.22-2.29	0.41
Malignant melanoma (172)	2	48, 49	9	4	2.25	1.03-4.27	0.49
Prostate (185)	—	—	—	—	—	—	—

(Continued)

TABLE 2
Continued

Disease	Number of Studies	Reference	Observed	Expected	Metarerelative Risk	95% Confidence Interval	P Value Inconsistency
Testis (186)	—	—	—	—	—	—	—
Bladder (188)	1	16	37	37.4	0.99	0.70–1.37	—
Kidney (189)	1	16	53	36.8	1.44	1.08–1.89	—
Brain and nervous system (191–192)	4	16, 48, 49, 50	64	54.9	1.17	0.90–1.49	0.27
Non-Hodgkin's lymphoma (200, 202)	1	16	66	50	1.32	1.02–1.67	—
Hodgkin's disease (201)	—	—	—	—	—	—	—
Multiple myeloma (203)	4	16, 48, 49, 50	46	32.5	1.42	1.04–1.89	0.88
Leukemia (204–208)	2	16, 24	65	53.5	1.21	0.94–1.55	0.47
Relative risk (RR)							
All causes (001–999)	—	—	—	—	—	—	—
All cancers (140–209)	2	20, 21	291	295.6	0.98	0.87–1.10	0.17
Buccal cavity and Pharynx (140–149)	1	20	11	7.7	1.43	0.71–2.57	—
Esophagus (150)	1	20	12	5.9	2.03	1.05–3.57	—
Stomach (151)	2	20, 21	25	20.6	1.21	0.80–1.81	0.55
Colon (153)	2	20, 21	25	27.5	0.91	0.60–1.36	0.92
Rectum (154)	1	20	13	9	1.44	0.77–2.49	—
Liver (155–156)	—	—	—	—	—	—	—
Pancreas (157)	1	20	17	13.6	1.25	0.73–2.00	—
Larynx (161)	1	20	3	3.8	0.79	0.17–2.35	—
Lung (162)	1	20	60	71.4	0.84	0.64–1.08	—
Skin (172–173)	1	20	7	4.1	1.71	0.68–3.49	—
Malignant melanoma (172)	—	—	—	—	—	—	—
Prostate (185)	2	20, 21	19	24.3	0.78	0.13–4.82	<0.00
Testis (186)	—	—	—	—	—	—	—
Bladder (188)	—	—	—	—	—	—	—
Kidney (189)	1	20	4	5.9	0.68	0.19–1.74	—
Brain and nervous system (191–192)	2	20, 21	9	7.1	1.26	0.55–2.34	0.14
Non-Hodgkin's lymphoma (200, 202)	—	—	—	—	—	—	—
Hodgkin's disease (201)	—	—	—	—	—	—	—
Multiple myeloma (203)	—	—	—	—	—	—	—
Leukemia (204–208)	1	20	6	9.8	0.61	0.22–1.33	—
Incidence studies (SIR)							
All cancers (140–209)	3	30, 35, 36	367	366.6	1.00	0.90–1.11	0.61
Buccal cavity and pharynx (140–149)	2	18, 36	25	19.6	1.28	0.83–1.88	0.73
Esophagus (150)	2	18, 30	10	7.6	1.32	0.63–2.42	0.51
Stomach (151)	3	18, 30, 35	38	24.1	1.58	1.12–2.16	0.33
Colon (153)	4	18, 30, 35, 36†	59	65.3	0.9	0.69–1.17	0.37
Rectum (154)	3	18, 30, 35	41	36.1	1.14	0.81–1.54	0.4
Liver (155–156)	1	35	4	4.7	0.85	0.23–2.18	—
Pancreas (157)	4	18, 30, 35, 36	22	18.2	1.21	0.76–1.83	0.83
Larynx (161)	2	18, 31	13	8.3	1.57	0.17–14.51	<0.00
Lung (162)	4	18, 30, 35, 36	111	120.0	0.93	0.76–1.11	0.83
Skin (172–173)	1	35	5	3.3	1.52	0.49–3.54	—
Malignant melanoma (172)	4	18, 30, 35, 36	60	47.9	1.25	0.96–1.61	0.87
Prostate (185)	4	18, 30, 35, 36	147	114.1	1.29	1.09–1.51	0.56

(Continued)

TABLE 2
Continued

Disease	Number of Studies	Reference	Observed	Expected	Metarelativ Risk	95% Confidence Interval	P Value Inconsistency
Testis (186)	2	30, 36	21	11.5	1.83	1.13–2.79	0.15
Bladder (188)	2	18, 30	31	29.9	1.04	0.70–1.47	0.67
Kidney (189)	3	18, 30, 35	11	18	0.61	0.30–1.09	0.69
Brain and nervous system (191–192)	3	18, 30, 35	19	15.4	1.23	0.74–1.93	0.84
Non-Hodgkin's lymphoma (200–202)	1	36	4	2.2	1.82	0.49–4.65	—
Hodgkin's disease (201)	—	—	—	—	—	—	—
Multiple myeloma (203)	—	—	—	—	—	—	—
Leukemia (204–208)	4	18, 25, 30, 36	18	12.9	1.4	0.82–2.21	0.36

Note. Codes of the International Classification of Causes of Death (9th Revision) in parentheses; published data for references 48–50 in Howe and Birch.⁴

*Meta analysis completed only for two or more studies.

†Reference 36 is a combination of colon and rectum cancers.

TABLE 3
Mortality and Incidence Studies for Case–Control/Mortality Odds Ratio Studies

	Outcome	References	Odds Ratio	95% Confidence Interval
All cancers (140–209)	Mortality	14	1.10	1.10–1.20
Buccal cavity and pharynx (140–149)	Mortality	14	5.90	1.90–18.30
Esophagus (150)	Mortality	14	0.90	0.70–1.30
Stomach (151)	Mortality	14	1.20	0.90–1.60
Colon (153)	Mortality	14	1.00	0.90–1.20
	Incidence	22*	1.04	0.59–1.82
Rectum (154)	Mortality	14	1.10	0.80–1.60
	Incidence	22*	0.97	0.50–1.88
Liver/gallbladder (155–156)	Mortality	14	1.20	0.90–1.70
Pancreas (157)	Mortality	14	1.20	1.00–1.50
	Incidence	22*	3.19	0.72–14.15
Larynx (161)	Mortality	14	0.80	0.40–1.30
Lung (162)	Mortality	14	1.10	1.00–1.20
	Incidence	22*	1.30	0.84–2.03
Skin (172–173)	Mortality	14	1.00	0.50–1.90
Malignant melanoma (172)	Mortality	14	1.40	1.00–1.90
	Incidence	22*	1.38	0.60–3.19
Prostate (185)	Mortality	14	1.20	1.00–1.30
Testis (186)	Incidence	29	4.00	0.70–27.40
Bladder (188)	Mortality	14	1.20	0.90–1.60
	Incidence	22*	2.11	1.07–4.14
Kidney (189)	Mortality	14	1.30	1.00–1.70
	Incidence	33	4.89	2.47–8.93
Brain and nervous system (191–192)	Mortality	14	1.00	0.80–1.40
	Incidence	22*	1.52	0.39–5.92
Non-Hodgkin's lymphoma (200, 202)	Mortality	14, 15†	1.41	1.10–1.70
	Incidence	22*	3.27	1.19–8.98
Hodgkin's disease (201)	Mortality	14	2.40	1.40–4.10
Multiple myeloma (203)	Mortality	14	1.10	0.80–1.60
	Incidence	17	1.90	0.50–9.40
Leukemia (204–208)	Mortality	14	1.10	0.80–1.40
	Incidence	22*	2.67	0.62–11.54

*Two control groups available; police rather than state employees selected as most comparable. Significance difference only for malignant melanoma when using state employees odds ratio and 95% confidence interval was 2.92 (1.70–5.03).

†Mortality odds ratio (mOR) calculated only for non-Hodgkin lymphoma as only case–control study with at least two studies. mOR estimated based primarily on larger sample in Ma et al.¹⁴

TABLE 4
Likelihood of Cancer Risk Among Firefighters After Employing Pattern of Metarelative Risk Association, Study Type, and Inconsistency Among Studies

Cancer Site	Pattern of Metarelative Risk Association										Criteria 2			Criteria 3			
	mSMR		mPMR		PMR		mRR		mSIR		mOR		Likelihood of Cancer Risk	Study Type	Likelihood of Cancer Risk	Inconsistency	Likelihood of Cancer Risk
	mSMR	mPMR	mPMR	PMR	PMR	mRR	mSIR	mOR	mRR	mSIR	mOR						
Buccal	+	NA	NA	NC	NC	NC	+	NC	+	+	-	Possible	No change	Possible	No change	Possible	
Stomach	-	NA	NA	NC	NC	+	+	+	+	+	-	Probable	Down one	Possible	No change	Possible	
Colon	+	+	+	++	++	-	-	-	-	-	-	Probable	No change	Probable	Down one	Possible	
Rectum	+	NC	NC	++	++	NC	+	NC	+	+	-	Probable	Down one	Possible	No change	Possible	
Skin	-	++	++	++	++	NC	NC	NC	NC	NC	-	Probable	Down one	Possible	No change	Possible	
Malignant melanoma	-	++	++	-	-	NA	+	NA	+	+	-	Probable	Down one	Possible	No change	Possible	
Prostate	+	NA	NA	NC	NC	NC	-	-	++	++	-	Probable	No change	Probable	No change	Probable	
Testis	NC	NA	NA	NC	NC	NC	NA	NA	++	++	-	Possible	No change	Possible	No change	Possible	
Brain	+	+	+	+	+	+	+	+	+	+	-	Possible	No change	Possible	No change	Possible	
Non-Hodgkin's lymphoma	+	NC	NC	++	++	NA	NA	NA	NC	NC	++	Probable	No change	Probable	No change	Probable	
Multiple myeloma	++	++	++	++	++	++	NA	NA	NA	NA	-	Probable	No change	Probable	No change	Probable	
Leukemia	-	+	+	+	+	NC	NC	NC	+	+	-	Possible	No change	Possible	No change	Possible	

Pattern of meta-relative risk: "+++" meta-relative risk is significant at the 5% level and >1.1; "+" meta-relative risk is not significant at the 5% level but <1.1; "-" meta-relative risk is ≤1.1 and not significant at the 5% level.

NA indicates no available studies; NC, not able to calculate because only one study of that type available.

Study type: down one level, the meta-relative risk (++) is based primarily on mPMR studies and/or negative (-) mSMR studies.

Inconsistency among studies: down one level heterogeneity significant among all combined studies at the 10% level.

ethnicity, a positive family history, and may be influenced by diet. Although the positive association with prostate cancer may be due to some of these factors, it is unlikely that these entirely explain the findings; most studies analyzed white men adjusting for age. The summary risk estimate was 1.28 (95% CI = 1.15–1.43). The mSIR was significantly elevated, and all individual studies showed excess SIR values. Parent and Siemiatycki,⁶¹ in a review article, concluded that there was suggestive epidemiologic evidence for prostate cancer associated with exposure to pesticides and herbicides, metallic dusts, metal working fluids, polycyclic aromatic hydrocarbon, and diesel engine emissions. Certainly firefighters are exposed to these latter two agents. Recently, exposure to complex mixture in the semiconductor industry also has been associated with an increase in prostate cancer.⁶² Thus, it is possible that some of the mixed exposures experienced by firefighters may be prostate carcinogens. Ross and Schottenfeld⁶³ have cautioned, however, against associating occupational exposures with prostate cancer.

Although there were only four studies evaluating testicular cancer, we propose upgrading the likelihood of cancer risk from possible to probable. This upgrade is suggested because testicular cancer had the largest summary point estimate (2.02, 95% CI = 1.30–3.13) as well as consistency among the one SMR study, two incidence studies, and one case-control study showing elevated risk estimates between 1.15 and 4.30. Testicular cancer is the most common malignancy between the ages of 20 and 34. Except for cryptorchism, no risk factor has been clearly demonstrated.⁶⁴ Because testicular cancer occurs among younger men with high survival, mortality studies are less germane. Bates et al³⁰ showed an increase in the incident cases of testicular cancer with firefighter exposure duration as follows: 10 years:

TABLE 5
Summary of Likelihood of Cancer Risk and Summary Risk Estimate (95% CI) Across All Types of Studies for All Cancers

Cancer Site	Likelihood of Cancer Risk by Criteria	Summary Risk Estimate (95% CI)	Comments
Multiple myeloma	Probable	1.53 (1.21–1.94)	Consistent with mSMR and PMR (1.50, 95% CI = 1.17–1.89) Based on 10 analyses Heterogeneity—not significant at the 10% level
Non-Hodgkin lymphoma	Probable	1.51 (1.31–1.73)	Only two SMR and another PMR studies Slightly higher than mSMR and PMR (1.36, 95% CI = 1.10–1.67) Based on eight analyses Heterogeneity—not significant at the 10% level
Prostate	Probable	1.28 (1.15–1.43)	Consistent with mSIR (1.29, 95% CI = 1.09–1.51) Based on 13 analyses Heterogeneity—not significant at the 10% level
Testis	Possible	2.02 (1.30–3.13)	Slightly higher than mSIR (1.83, 95% CI = 1.13–2.79) Based on four analyses Heterogeneity—not significant at the 10% level
Skin	Possible	1.39 (1.10–1.73)	Slightly lower than mSMR and PMR (1.44, 95% CI = 1.10–1.87) – derived on basis of PMR studies Based on eight analyses Heterogeneity—not significant at the 10% level
Malignant melanoma	Possible	1.32 (1.10–1.57)	Slightly higher than mSMR and PMR (1.29, 95% CI = 0.68–2.20) Based on 10 analyses Heterogeneity—not significant at the 10% level
Brain	Possible	1.32 (1.12–1.54)	Slightly higher than mSMR and PMR (1.27, 95% CI = 0.98–1.63) Based on 19 analyses Heterogeneity—not significant at the 10% level; there was heterogeneity among SMR studies
Rectum	Possible	1.29 (1.10–1.51)	Slightly lower than mSMR and PMR (1.39, 95% CI = 1.12–1.70) Based on 13 analyses Heterogeneity—not significant at the 10% level
Buccal cavity and pharynx	Possible	1.23 (0.96–1.55)	Slightly higher than mSMR (1.18, 95% CI = 0.81–1.66) Based on nine analyses Heterogeneity—not significant at the 10% level
Stomach	Possible	1.22 (1.04–1.44)	Lower than mSIR (1.58, 95% CI = 1.12–2.16); Based on 13 analyses Heterogeneity—not significant at the 10% level
Colon	Possible	1.21 (1.03–1.41)	Slightly lower than mSMR and PMR (1.31, 95% CI = 1.08–1.59) Based on 25 analyses Heterogeneity—significant at the 10% level; there were heterogeneity among SMR and PMR studies
Leukemia	Possible	1.14 (0.98–1.31)	Similar to mSMR and PMR (1.14, 95% CI = 0.92–1.39) Based on eight analyses Heterogeneity—not significant at the 10% level
Larynx	Unlikely	1.22 (0.87–1.70)	Higher than mSMR (0.58, 95% CI = 0.25–1.15) Based on seven analyses Heterogeneity—not significant at the 10% level
Bladder	Unlikely	1.20 (0.97–1.48)	Similar to mSMR and PMR (1.24, 95% CI = 0.83,1.49) Based on 11 analyses Heterogeneity—significant at the 10% level; there was heterogeneity among SMR studies
Esophagus	Unlikely	1.16 (0.86–1.57)	Higher than mSMR (0.68, 95% CI = 0.39–1.08) Based on eight analyses Heterogeneity—not significant at the 10% level
Pancreas	Unlikely	1.10 (0.91–1.34)	Slightly higher than mSMR (0.98, 95% CI = 0.75–1.26) Based on 13 analyses Heterogeneity—not significant at the 10% level
Kidney	Unlikely	1.07 (0.78–1.46)	Similar to mSMR and PMR (1.23, 95% CI = 0.94–1.59) Based on 12 analyses Heterogeneity—significant at the 10% level; there was heterogeneity among SMR studies

(Continued)

TABLE 5
Continued

Cancer Site	Likelihood of Cancer Risk by Criteria	Summary Risk Estimate (95% CI)	Comments
Hodgkin's disease	Unlikely	1.07 (0.59–1.92)	Higher than mSMR (0.78, 95% CI = 0.21–2.01) Based on three analyses Heterogeneity—not significant at the 10% level
Liver	Unlikely	1.04 (0.72–1.49)	Similar to mSMR (1.00, 95% CI = 0.63–1.52) Based on seven analyses Heterogeneity—not significant at the 10% level
Lung	Unlikely	1.03 (0.97–1.08)	Similar to mSMR and PMR (1.05, 95% CI = 0.96–1.14) Based on 19 analyses Heterogeneity—not significant at the 10% level; there was heterogeneity among PMR studies
All cancers	Unlikely	1.05 (1.00–1.09)	Similar to mSMR and PMR (1.06, 95% CI = 1.02–1.10) Based on 25 analyses Heterogeneity—significant at the 10% level; there was heterogeneity among SMR studies

CI indicates confidence interval; SMR, standardized mortality ratio; PMR, proportional mortality ratio; SIR, standardized incidence ratio.

SIR = 1.39, 95% CI = 0.2–5.0; 11 to 20 years: SIR = 4.03, 95% CI = 1.3–9.4. In those exposed greater than 20 years, the risk estimate remained elevated but declined (SIR = 2.65, 95% CI = 0.3–9.6), possibly because testicular cancer generally occurs at a younger age. Bates et al³⁰ argued that, although the reason for the excess risk of testicular cancer remained obscure, the possibility that this is a chance finding was low because incident studies are likely the most appropriate methodology for a cancer that can be successfully treated.

The 1990 findings of Howe and Burch⁴ showing a positive association with brain cancer and malignant melanoma are compatible with our results because both had significant summary risk estimates. Brain cancers were initially scored as probable but then downgraded to possible (Table 5). There was inconsistency among the SMR studies, which resulted in the use of the random-effects model, yielding confidence limits that were not significant (SMR = 1.39, 95% CI = 0.94–2.06) (Table 2). This inconsistency primarily resulted from the Baris et al study,¹³ a 61-year follow up of 7789 firefighters demonstrating a marked reduction in brain cancer (SMR = 0.61, 95% CI = 0.31–1.22). As

noted in Table 4, however, there were elevated, but not significant, risk estimates across all studies, ie, mSMR, mPMR, mRR, and mSIR. This consistency is all the more remarkable given the diversity of rare cancers included in the category “brain and nervous system.” Furthermore, there was a 2003 study by Krishnan et al⁶⁵ published after our search that examined adult gliomas in the San Francisco Bay area of men in 35 occupational groups. This study showed that male firefighters (six cases and one control) had the highest risk with an odds ratio of 5.93, although the confidence intervals were wide and not significant. In addition, malignant melanoma was also initially scored as probable but was downgraded to “possible” due to study type. This study downgrade was related to the negative SMR (–) and reliance primarily on a PMR study. Thus, in conclusion, our study supports a probable risk for multiple myeloma, similar to Howe and Burch's⁴ findings, and a possible association with malignant melanoma and brain cancer.

Summary

We implemented a qualitative three-criteria assessment in addition to the quantitative meta-analyses. Based on the more traditional quan-

titative summary risk estimates shown in Table 5, 10 cancers, or half, were significantly associated with firefighting after the three cancers were designated as a probable risk based on the quantitative meta-risk estimates and our three criteria assessment. These cancers included multiple myeloma, non-Hodgkin's lymphoma, and prostate. A recommendation is also made, however, for upgrading testicular cancer to “probable” based on the twofold excess summary risk estimate and the consistency among the studies. Thus, firefighter risk for these four cancers may be related to the direct effect associated with exposures to complex mixtures, the routes of delivery to target organs, and the indirect effects associated with modulation of biochemical or physiologic pathways. In anecdotal conversations with firefighters, they report that their skin, including the groin area, is frequently covered with “black soot.” It is noteworthy that testicular cancer had the highest summary risk estimate (2.02) and skin cancer had a summary risk estimate (1.39) higher than prostate (1.28). Certainly, Edelman et al³ at the World Trade Center, although under extreme conditions, revealed the hazards that firefighters may encounter only because air monitoring was performed.

As noted in Table 1, approximately half of the studies used local, regional, or national general population rates as the comparison group. These general population comparison groups raise concern that the actual risk of cancer may be underestimated due to the healthy worker effect related to the strict physical entry requirements, maintenance of better physical fitness, and good health benefits. The healthy worker bias may be less pronounced, however, for cancer than for conditions such as coronary heart disease. Furthermore, tobacco is unlikely a contributing factor because cancers known to be associated with smoking such as lung, bladder, and larynx were designated as unlikely and corresponding summary risk estimates were not statistically significant.

These findings of an association of firefighting with significant increased risk for specific types of cancer raise red flags and should encourage further development of innovative comfortable protective equipment allowing firefighters to do their jobs without compromising their health. Studies are especially needed that better characterize the type and extent of exposures to firefighters.

Acknowledgments

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February 11, 2016

Via E-Mail

Mr. Dan Drake
State Retirement Director
Division of Retirement
Florida Department of Management Services

Re: Special Actuarial Study of Firefighter ILOD Cancer Presumption

Dear Dan:

This letter provides actuarial analysis related to SB 456 as refined by response to questions received on December 18, 2015. In the concept for analysis, firefighters who are prospectively diagnosed with certain cancers are presumed to have contracted those cancers in-line-of-duty (ILOD) for purposes of determining eligibility for FRS Pension Plan disability or death benefits.

Executive Summary

The proposal provides ILOD disability or death benefits, as applicable for firefighters diagnosed with certain cancers. The firefighters are a subset of the Special Risk Membership Class. The proposal would potentially increase the benefits for these members, as some disabilities and deaths that were previously considered to be non-duty would now be considered ILOD. In addition to the higher benefits that are often payable for ILOD, there is no minimum service requirement, while there is a minimum creditable service requirement¹ for non-duty pension plan death or disability. As such, this proposal will increase the number of people receiving death or disability benefits.

While this benefit will only affect firefighters, it is our understanding that the contribution rate impact will be spread across the entire Special Risk Membership Class. We were asked to analyze the proposed concept under two variations: one covering ten enumerated cancer types and one covering four enumerated cancer types. As summarized in the following table, the increase in the blended proposed statutory contribution rate is 0.02% of Special Risk Membership Class payroll under the ten-cancer variation, and 0.01% of Special Risk Membership Class payroll under the four-cancer variation. Those increases include a 0.01% increase to the disability cost rate for Investment Plan members in Special Risk Class in the ten-cancer variation. There is no Investment Plan death benefit under current statute.

¹ The credible service requirement for non-duty pension plan disability benefits is eight years, regardless of membership tier. To be eligible for non-duty pension plan death benefits, the member must have six years of service for Tier 1 or eight years of service in Tier 2.

Change in Blended Proposed 2016-17 Special Risk Class Statutory Contribution Rate Due to Increase in:			
Number of Cancers Enumerated	Employer Normal Cost Contribution Rate	Pension Plan UAL Cost	Total
Ten	0.02%	0.00%	0.02%
Four	0.01%	0.00%	0.01%

In addition, the modifications made by this proposal affect the composite system average normal cost rate for the pension plan by less than 0.005% of pension plan payroll, and therefore no change is reflected on the composite system contribution rates.

Concept for Analysis

The concept's ILOD presumption would apply to the following ten cancers, with the conditions with an asterisk denoting the cancers analyzed under the four enumerated cancers variation:

- Brain cancer
- Breast cancer
- Colon cancer
- Leukemia
- Malignant melanoma
- Multiple myeloma*
- Non-Hodgkin's lymphoma*
- Prostate cancer*
- Skin cancer
- Testicular cancer*

Special Risk Class members who are firefighters and receive an initial diagnosis subsequent to the concept's effective date would be affected by the concept. An affected member who is diagnosed would be eligible for Pension Plan ILOD disability benefits if the member is totally and permanently disabled. Investment Plan (IP) members who meet the disability criteria could elect to transfer all IP accumulations to the FRS Pension Plan and be eligible for the Pension Plan ILOD disability benefits.

Beneficiaries of affected members who die as a result of one of the specified cancers before retirement would be eligible for FRS Pension Plan ILOD death benefits. Beneficiaries of IP members who die would only be entitled to the account balance in the IP, as an account balance payment is currently the statutory benefit for IP members who die while in active service. Note that there is currently a proposal that would create the potential for additional ILOD death benefits for IP members. If a new IP ILOD death benefit is created, there would be additional benefits for the beneficiaries of affected firefighters. It would have a comparatively small impact and was not studied as part of this concept.

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For cost estimation purposes, the concept was valued as if first effective July 1, 2015, which is the date of the most recently completed actuarial valuation of the Pension Plan. Benefits will be prospective in nature. Based on our understanding of the concept, the benefit is not available for otherwise eligible members with initial cancer diagnoses made prior to the effective date. Our understanding is that the provided benefit would increase annually by COLA if the member is eligible for a COLA.

Exclusions

The analysis is based on our understanding that the exclusions listed below are not included in this concept. They are not covered by the proposed bill in its current form or identified in responses to questions received on December 18, 2015. A change in the exclusions could lead to additional liability for the system. The use of "member" below is intended to refer to a Special Risk Class member who is a firefighter.

- A member who finalizes retirement under either the FRS Pension Plan or the FRS Investment Plan and is later diagnosed with one of the cancers enumerated in this concept
- The surviving spouse of a married member who dies as a result of one of these cancers cannot change retirement type from an ILOD disability benefit payment option or from a single life annuity or a joint-and-survivor benefit payment option to qualify for ILOD death benefits under this concept

Summary of Results

While not all Special Risk Class members are firefighters, it is our understanding this concept would not create a new membership class in FRS. Instead, the cost of the additional benefits would be funded by employer contribution rates on the entire Special Risk Membership Class payroll. The Department of Management Services, Division of Retirement provided us a data file identifying which members would be classified as firefighters.

For the firefighters within the Special Risk Membership Class, the assumed increase in the frequency of ILOD disability and death benefits would increase the Pension Plan normal cost rate for the Special Risk Membership Class. Because this change impacts future ILOD death and disability benefits regardless of a member's hire date, there is an increase in the actuarial present value of benefits (PVB) as of the effective date of the concept. Applying the actuarial cost allocation method that is currently used for determining actuarially calculated contribution rates, the actuarial liability is increased by the upward move in PVB, but decreased by the upward move in the present value of future normal costs (PVFNC). Our analysis indicates that the actuarial liability for Special Risk Class members in total will decrease as a result of the proposed change by an amount less than 0.005% of Special Risk Membership Class payroll. Therefore, we have reflected no change to the UAL Cost rate due to this concept.

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Our analysis quantifies the estimated impact when compared to the current benefit structure for the Special Risk Class pension plan participants:

- Pension plan actuarial liability would decrease by \$2.3 million (\$0.6 million in the four-cancer alternative), as does the unfunded actuarial liability (UAL), as this is just the liability after subtracting assets. That represents an approximately 0.004% of payroll decrease in the UAL Cost rate (0.001% decrease for the four-cancer alternative) for active Special Risk Class pension plan members. It is possible under the ultimate entry age cost method currently used for system funding calculation for the UAL to decrease in response to a benefit increase. This occurred with this concept, but the decrease was very small compared to system liability.
- As noted above, the pension plan's actuarially calculated UAL Cost rate would change by less than 0.005% under both variations of the concept, so no UAL Cost rate change is reflected, when rounding to the nearest 0.01% of payroll, which is the standard convention for representing actuarially calculated contribution rates for FRS.
- The actuarially calculated employer normal cost rate specific to the pension plan for Special Risk Class members would increase by 0.02% of payroll (0.01% for the four-cancer alternative). The calculated disability rates specific to Investment Plan payroll would increase by 0.01% (0.00% for the four-cancer alternative). The change to the estimated blended proposed statutory normal cost rate which is developed annually is 0.02% (0.01% for the four-cancer alternative).
- The combined effects of the above two items on Special Risk Class payroll are a 0.02% of payroll (0.01% for the four-cancer alternative) increase in the pension plan-specific rate, 0.01% for the Investment Plan-specific disability rate (0.00% for the four-cancer alternative), and a 0.02% of payroll (0.01% for the four-cancer alternative) increase in the blended proposed statutory rate.

Note that the normal cost rate for DROP is set equal to the System average normal cost rate. The 0.02% change in the Special Risk Class pension plan normal cost rate (0.01% for the four-cancer alternative) would increase the composite system average pension plan normal cost rate by less than 0.005% under both variations of the concept. As such, the DROP normal cost rate would be unchanged by this concept.

Tables 1A, 1B and 2 show the impact of the ten-cancer variation of this concept. Tables 3A, 3B and 4 give parallel results for the four-cancer variation of this concept.

Tables 1A and 3A show the impact of the change on the pension plan's actuarial valuation results for Special Risk Class members prior to blending with IP cost levels to create proposed blended statutory employer contribution rates. Section A of each table shows the estimated increase to the actuarially calculated employer normal cost rate, the estimated increase to the actuarially calculated UAL Cost rate, and the combined effect of the two changes which result in

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an expected increase to the actuarially calculated employer contribution rate for the pension plan prior to blending. Section B of each table shows the estimated decrease to the pension plan's actuarial liability due to the combined effects of the increase in normal cost rate and the increase in the PVB given the current methodology used to calculate actuarial liability for pension plan funding calculations.

Tables 1B and 3B show the actuarially calculated Investment Plan employer contribution rates due to the proposed ILOD Cancer Presumption concept. The Investment Plan rates shown in this table are prior to blending with the pension plan contribution rates to create proposed blended statutory employer contribution rates.

Tables 2 and 4 show the estimated impact of the change in ILOD death and disability benefits for cancer presumption on the proposed blended statutory rates for Special Risk Class members for the 2016-2017 plan year as if the proposal had taken effect on July 1, 2015. Section A of each table develops the blended employer normal cost contribution rate reflecting the expected impact of the proposal. The pension plan and Investment Plan rates are based on the actuarial analysis in this letter.

Section B of Table 2 and Table 4 develops the proposed blended statutory employer UAL rate as the total employer UAL Cost derived from the pension plan divided by the total projected payroll of the pension plan and Investment Plan for Special Risk Class members. Section C of each table compares the proposed blended statutory rates reflecting the impact of the ILOD Cancer Presumption to those developed in the 2015 Blended Rate Study as part of the July 1, 2015 actuarial valuation. Section D of each table translates the estimated change in proposed blended statutory rates to an estimated increase in employer contributions during the 2016-2017 plan year as if the proposal had taken effect on July 1, 2015.

The payroll for some employee groups is subject to only the Blended UAL Contribution Rate component of the overall employer contribution rate (e.g., participants in the SUSORP, SMSOAP, and SCCORP, and reemployed members not eligible for renewed membership). The payroll for those employee groups is included in the calculation of the Blended UAL Contribution Rate, but is excluded from the calculation of the Blended Normal Cost Contribution Rate.

The contribution rates shown in Tables 2 and 4 exclude the 0.04% contribution rate (proposed to increase to 0.06% for 2016-2017) for Investment Plan administration and education (applied to all membership classes except DROP) and the 1.66% contribution rate for the health plan insurance subsidy (HIS), which applies across the board to the Investment Plan and the Pension Plan.

Analysis-Specific Assumptions and Methodology

In developing this analysis, the mortality rates for active Special Risk Class members during their time of employment were modeled using the *Combined Healthy* analogues to the *Healthy Annuitant* Society of Actuaries RP-2000 mortality tables used in the FRS 2015 Actuarial

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Valuation Report for the Pension Plan. The combined healthy tables were used because in our opinion they will provide an improved estimate of anticipated future mortality experience for active members. Before the modification explained below for cancer, it was assumed that 25% of Special Risk Class deaths would be ILOD.

To conduct adjustments to the mortality rates for cancer, gender-specific mortality rates for each type of cancer were obtained from the National Cancer Institute's SEER (Surveillance, Epidemiology, and End Results) database. Those rates were adjusted based on data available from the National Cancer Institute to reflect mortality rates for each type of cancer in the state of Florida when compared to national averages. Those rates were then further modified to reflect firefighter-specific rates using the 50-year longitudinal study of cancer and mortality incidence for career firefighters as conducted by researchers from NIOSH (National Institute of Occupational Safety and Health) and the UC Davis Department of Health Sciences.

The mortality rates were broken into two categories, one for those below age 50 and another for those above age 50. After obtaining these estimates for the mortality rates attributable to the enumerated types of cancer, those mortality rates were added to the ILOD death probabilities and subtracted off the non-duty death probabilities. The total probability of death at a given age is unchanged from the Society of Actuaries mortality table, however more of the deaths are classified as ILOD.

For adjusting the disability rates, it was necessary to estimate the percentage of members who may become totally and permanently disabled and whose disability would be caused by one of the enumerated types of cancers. A survey of literature from insurance companies indicated that approximately 10% - 15% of long-term disabilities are cancer related. During the time allotted for this analysis, we were not able to find more specificity regarding which cancers cause those disabilities. Firefighters have an elevated risk of cancer diagnosis based on the NIOSH data, among other sources.

After considering these factors, we assumed that 15% of disabilities would be caused by one of the ten specified types of cancer. For the four-cancer alternative, the 15% rate was adjusted by the gender-specific incidence rates for the four enumerated cancers compared to the ten enumerated cancers. Florida-specific incidence rates were developed from the SEER databased, further adjusted by the NIOSH data to be firefighter-specific, in a manner similar to what was done for the mortality rates.

In the FRS 2015 actuarial valuation, age-specific disability rates developed from observed FRS experience were used. For this study, 15% (adjusted downward for the four-cancer alternative) of the sum of the non-duty and ILOD disability rates were added to the ILOD disability rates to reflect the projected effects of the cancer presumption. The same amount was subtracted from the non-duty disability rates. One item to note is that the ILOD disability rates are applied from hire, while the non-duty disability rates are only applied after achieving the eight-year service requirement for vesting of non-duty pension plan disability benefits.

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Other Assumptions and Methods

The calculations are based on census and payroll data as of July 1, 2015 provided to us by the Division of Retirement for development of the FRS 2015 Actuarial Valuation Report and the FRS 2016-2017 Blended Rate Study. We have not audited or verified this data and other information. If the underlying data or information is inaccurate or incomplete, the results of our analysis may likewise be inaccurate or incomplete. The Division provided an additional file used to identify which members would be classified as firefighters.

We performed a limited review of the data used directly in our analysis for reasonableness and consistency and have not found material defects in the data. If there are material defects in the data, it is possible that they would be uncovered by a detailed, systematic review and comparison of the data to search for data values that are questionable or for relationships that are materially inconsistent. Such a review was beyond the scope of our assignment.

Except where otherwise noted in this letter, this analysis is based on the July 1, 2015 actuarial valuation methods and assumptions. The data was based on the July 1, 2015 FRS actuarial valuation database. The results of our study depend on future experience conforming to those actuarial assumptions discussed earlier in this letter. Future actuarial measurements may differ significantly from the current measurements presented in this analysis due to many factors, including: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period) and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. In addition, the cost of the proposed change will depend on the actual legislation.

Milliman's work product was prepared exclusively for the internal business use of Florida Department of Management Services, Division of Retirement. It is a complex technical analysis that assumes a high level of knowledge concerning the Florida Retirement System's operations, and uses Division data, which Milliman has not audited. To the extent that Milliman's work is not subject to disclosure under applicable public record laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

- a. The Division of Retirement may provide a copy of Milliman's work, in its entirety, to the System's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the System.

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Mr. Dan Drake
February 11, 2016
Page 8

- b. The Division of Retirement may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

Milliman consultants are independent of the plan sponsor. We are not aware of any relationship that would impair the objectivity of our work.

The undersigned are consulting actuaries for Milliman, Inc., members of the American Academy of Actuaries, and meet their Qualification Standards to render the actuarial opinion contained herein.

Please let us know of any questions or comments regarding this letter.

Sincerely,



Matt Larrabee, FSA, EA, MAAA
Principal & Consulting Actuary



Daniel Wade, FSA, EA, MAAA
Principal & Consulting Actuary

cc: Garry Green (Division of Retirement), Kathryn Hunter (Milliman)

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FLORIDA RETIREMENT SYSTEM

FISCAL IMPACT ANALYSIS

Effect on July 1, 2015 Defined Benefit Pension Plan Actuarial Valuation Results
Impact of Ten-Cancer Variation of Proposal for Prospective Firefighter ILOD Cancer Presumption effective July 1, 2016
 Please see the attached letter for details regarding data, assumptions, methodology, and plan provisions used

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	Regular	Special Risk	Special Risk Administrative	-----Elected Officers' Class----- Judicial	Leg-Atty-Cab	Local	Senior Management	Composite (excluding DROP)	DROP	Composite (Including DROP)
A. Actuarially Calculated Pension Plan Employer Contribution Rates (prior to blending to create proposed blended statutory contribution rates)										
1. Actuarially Calculated Pension Plan Employer Contribution Rates Developed in July 1, 2015 Valuation ¹										
a. Employer Normal Cost	2.84%	11.17%	3.19%	11.75%	6.58%	8.47%	4.18%	4.17%	4.17%	4.17%
b. UAL Cost	<u>3.37%</u>	<u>10.54%</u>	<u>32.30%</u>	<u>25.42%</u>	<u>44.61%</u>	<u>44.52%</u>	<u>21.00%</u>	<u>4.87%</u>	<u>7.10%</u>	<u>5.06%</u>
c. Total Employer Cost	6.21%	21.71%	35.49%	37.17%	51.19%	52.99%	25.18%	9.04%	11.27%	9.23%
2. Actuarially Calculated Pension Plan Employer Contribution Rates Reflecting Proposed Change										
a. Employer Normal Cost	2.84%	11.19%	3.19%	11.75%	6.58%	8.47%	4.18%	4.17%	4.17%	4.17%
b. UAL Cost	<u>3.37%</u>	<u>10.54%</u>	<u>32.30%</u>	<u>25.42%</u>	<u>44.61%</u>	<u>44.52%</u>	<u>21.00%</u>	<u>4.87%</u>	<u>7.10%</u>	<u>5.06%</u>
c. Total Employer Cost	6.21%	21.73%	35.49%	37.17%	51.19%	52.99%	25.18%	9.04%	11.27%	9.23%
3. Change in Actuarially Calculated Pension Plan Employer Contribution Rates due to Proposed Change										
a. Normal Cost	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
b. UAL Cost	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
c. Total Cost	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B. Unfunded Actuarial Liability (UAL) and Present Value of Projected Benefits (Dollars in Thousands)										
1. July 1, 2015 Actuarial Valuation UAL ²	\$11,808,459	\$5,668,445	\$11,715	\$408,376	\$45,622	\$297,389	\$1,675,489	\$19,915,495	\$2,437,902	\$22,353,397
2. July 1, 2015 UAL Reflecting Proposed Change	<u>11,808,459</u>	<u>5,666,104</u>	<u>11,715</u>	<u>408,376</u>	<u>45,622</u>	<u>297,389</u>	<u>1,675,489</u>	<u>19,913,154</u>	<u>2,437,902</u>	<u>22,351,056</u>
3. Increase in UAL due to Proposed Change	\$0	(\$2,341)	\$0	\$0	\$0	\$0	\$0	(\$2,341)	\$0	(\$2,341)
4. Increase in Present Value of Future Normal Costs	\$0	\$7,168	\$0	\$0	\$0	\$0	\$0	\$7,168	\$0	\$7,168
5. Increase in Present Value of Projected Benefits (3. + 4.)	\$0	\$4,827	\$0	\$0	\$0	\$0	\$0	\$4,827	\$0	\$4,827

¹ As reported in the July 1, 2015 valuation - Table 4-11

² As reported in the July 1, 2015 valuation - Table 3-2

FLORIDA RETIREMENT SYSTEM
FISCAL IMPACT ANALYSIS

Effect on Investment Plan Employer Contribution Rates
Impact of Ten-Cancer Variation of Proposal for Prospective Firefighter ILOD Cancer Presumption effective July 1, 2016
Please see the attached letter for details regarding data, assumptions, methodology, and plan provisions used

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	Regular	Special Risk	Special Risk Administrative	Judicial	-----Elected Officers' Class----- Leg-Atty-Cab	Local	Senior Management	Composite
A. Actuarially Calculated Investment Plan Employer Contribution Rates (prior to blending to create proposed blended statutory contribution rates)								
1. Employer Rates effective since July 1, 2012 (Sec 121.72 and 121.73) ¹								
a. Employer Cost (excludes member contributions)	3.55%	12.33%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%
b. UAL Cost	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
c. Total Employer Cost	3.55%	12.33%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%
2. Actuarially Calculated Investment Plan Employer Contribution Rates Reflecting Proposed Change to Increase Investment Plan Disability Benefit (there is no IP death benefit under current statute)								
a. Employer Cost (excludes member contributions)	3.55%	12.34%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%
b. UAL Cost	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
c. Total Employer Cost	3.55%	12.34%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%
3. Change in Actuarially Calculated Investment Plan Employer Contribution Rates due to Proposed ILOD Cancer Presumption								
a. Employer Cost	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
b. UAL Cost	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
c. Total Employer Cost	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

¹ As reported in the 2016-2017 Blended Rates Study dated December 2, 2015.

FLORIDA RETIREMENT SYSTEM
FISCAL IMPACT ANALYSIS

Effect on Proposed Blended Statutory Employer Contribution Rates for 2016-2017 Plan Year
Impact of Ten-Cancer Variation of Proposal for Prospective Firefighter ILOD Cancer Presumption effective July 1, 2016
Assumes 3.25% Annual Growth in Total Payroll

Please see the attached letter for details regarding data, assumptions, methodology, and plan provisions used

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	Regular	Special Risk	Special Risk Administrative	Judicial	-----Elected Officers' Class----		Senior Management	Composite (excluding DROP)	DRQP	Composite (Including DROP)
					Leg-Atty-Cab	Local				
A. Proposed Blended Statutory Normal Cost Contribution Rates Reflecting the Proposed Change (Dollars in Thousands)										
1. Actuarially Calculated Defined Benefit Pension Plan Normal Cost										
a. Employer Pension Plan Normal Cost Rate	2.84%	11.19%	3.19%	11.75%	6.58%	8.47%	4.18%	4.17%	4.17%	4.17%
b. Projected Pension Plan Normal Cost Payroll	\$19,242,767	\$3,557,412	\$2,715	\$106,095	\$6,354	\$42,341	\$510,388	\$23,468,072	\$2,320,464	\$25,788,536
c. Total Employer Pension Plan Normal Cost [(1a) x (1b)]	\$546,495	\$398,059	\$87	\$12,466	\$418	\$3,586	\$21,334	\$982,445	\$96,731	\$1,079,176
2. Investment Plan Employer Cost										
a. Employer Rates effective July 1, 2012 (Sec 121.72-73)	3.55%	12.33%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%	0.00%	4.76%
b. Additional Contribution to Provide ILOD Cancer Presumption	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
c. Total Employer Contribution Rate effective July 1, 2016	3.55%	12.34%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%	0.00%	4.76%
d. Projected Investment Plan Payroll	\$4,226,371	\$653,267	\$1,188	\$9,771	\$2,192	\$17,279	\$182,231	\$5,092,299	\$0	\$5,092,299
e. Total Employer Investment Plan Cost [(2c) x (2d)]	\$150,036	\$80,613	\$64	\$1,071	\$149	\$1,512	\$8,984	\$242,429	\$0	\$242,429
3. Proposed Blended Statutory Employer Normal Cost Rate (Pension Plan + Investment Plan)										
a. Total Employer Normal Cost Contribution [(1c) + (2e)]	\$696,531	\$478,672	\$151	\$13,537	\$567	\$5,098	\$30,318	\$1,224,874	\$96,731	\$1,321,605
b. Total System Projected Payroll [(1b) + (2d)]	\$23,469,138	\$4,210,679	\$3,903	\$115,866	\$8,546	\$59,620	\$692,619	\$28,560,371	\$2,320,464	\$30,880,835
c. Proposed Blended Statutory Employer Normal Cost Contribution Rate ¹ As a Percentage of Total Payroll [(3a) / (3b)]	2.97%	11.37%	3.87%	11.68%	6.63%	8.55%	4.38%	4.29%	4.17%	4.28%
B. Proposed Blended Statutory Unfunded Actuarial Liability (UAL) Cost Contribution Rates Reflecting the Proposed Change (Dollars in Thousands)										
1. Actuarially Calculated Defined Benefit Pension Plan UAL Cost										
a. Pension Plan UAL Cost Rate	3.37%	10.54%	32.30%	25.42%	44.61%	44.52%	21.00%	4.87%	7.10%	5.06%
b. Projected Pension Plan UAL Cost Payroll	\$22,083,499	\$3,595,469	\$2,715	\$107,248	\$6,820	\$45,169	\$535,948	\$26,376,868	\$2,320,464	\$28,697,332
c. Total Employer UAL Cost [(1a) x (1b)]	\$744,214	\$378,819	\$877	\$27,262	\$3,042	\$20,109	\$112,549	\$1,286,872	\$164,753	\$1,451,625
2. Investment Plan Projected Payroll										
	\$4,226,371	\$653,267	\$1,188	\$9,771	\$2,192	\$17,279	\$182,231	\$5,092,299	\$0	\$5,092,299
3. Proposed Blended Statutory Employer UAL Contribution Rate (Pension Plan + Investment Plan)										
a. Total Employer UAL Cost [(1c)]	\$744,214	\$378,819	\$877	\$27,262	\$3,042	\$20,109	\$112,549	\$1,286,872	\$164,753	\$1,451,625
b. Total System Projected Payroll [(1b) + (2)]	\$26,309,870	\$4,248,736	\$3,903	\$117,019	\$9,012	\$62,448	\$718,179	\$31,469,167	\$2,320,464	\$33,789,631
c. Proposed Blended Statutory Employer UAL Contribution Rate ¹ As a Percentage of Total Payroll [(3a) / (3b)]	2.83%	8.92%	22.47%	23.30%	33.75%	32.20%	15.67%	4.09%	7.10%	4.30%

¹ Rates shown do not include the HIS contribution rate or IP administrative fees.

FLORIDA RETIREMENT SYSTEM
FISCAL IMPACT ANALYSIS

Effect on Proposed Blended Statutory Employer Contribution Rates for 2016-2017 Plan Year
Impact of Ten-Cancer Variation of Proposal for Prospective Firefighter ILDD Cancer Presumption effective July 1, 2016
Assumes 3.25% Annual Growth In Total Payroll
Please see the attached letter for details regarding data, assumptions, methodology, and plan provisions used

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	Regular	Special Risk	Special Risk Administrative	Judicial	-----Elected Officers' Class----- Leg-Atty-Cab	Local	Senior Management	Composite (excluding DROP)	DROP	Composite (including DROP)
C. Proposed Blended Statutory Employer Contribution Rates Reflecting the Proposed Change										
1. Proposed Blended Statutory Employer Contribution Rates Based on July 1, 2015 Valuation ²										
a. Employer Normal Cost Contribution Rate	2.97%	11.35%	3.87%	11.68%	6.63%	8.55%	4.38%	4.29%	4.17%	4.28%
b. Employer UAL Contribution Rate	<u>2.83%</u>	<u>8.92%</u>	<u>22.47%</u>	<u>23.30%</u>	<u>33.75%</u>	<u>32.20%</u>	<u>15.67%</u>	<u>4.09%</u>	<u>7.10%</u>	<u>4.30%</u>
c. Total Employer Contribution Rate [(C1a) + (C1b)]	5.80%	20.27%	26.34%	34.98%	40.38%	40.75%	20.05%	8.38%	11.27%	8.58%
2. Proposed Blended Statutory Employer Contribution Rates Reflecting Proposed Change ¹										
a. Employer Normal Cost Contribution Rate [(A3c)]	2.97%	11.37%	3.87%	11.68%	6.63%	8.55%	4.38%	4.29%	4.17%	4.28%
b. Employer UAL Contribution Rate [(B3c)] ³	<u>2.83%</u>	<u>8.92%</u>	<u>22.47%</u>	<u>23.30%</u>	<u>33.75%</u>	<u>32.20%</u>	<u>15.67%</u>	<u>4.09%</u>	<u>7.10%</u>	<u>4.30%</u>
c. Total Employer Contribution Rate [(C2a) + (C2b)]	5.80%	20.29%	26.34%	34.98%	40.38%	40.75%	20.05%	8.38%	11.27%	8.58%
3. Change in Proposed Blended Statutory Employer Contribution Rates due to Proposed Change										
a. Employer Normal Cost Contribution Rate [(C2a) - (C1a)]	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
b. Employer UAL Contribution Rate [(C2b) - (C1b)]	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
c. Total Employer Contribution Rate [(C3a) + (C3b)]	0.00%	0.02%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
D. Additional/(Reduced) Proposed Statutory Employer Contributions for the 2016-2017 Plan Year Due to Proposed Change (Dollars in Thousands)										
1. State	\$0	\$191	\$0	\$0	\$0	\$0	\$0	\$191	\$0	\$191
2. School Boards	\$0	\$6	\$0	\$0	\$0	\$0	\$0	\$6	\$0	\$6
3. State Universities	\$0	\$6	\$0	\$0	\$0	\$0	\$0	\$6	\$0	\$6
4. Community Colleges	\$0	\$1	\$0	\$0	\$0	\$0	\$0	\$1	\$0	\$1
5. Counties	\$0	\$593	\$0	\$0	\$0	\$0	\$0	\$593	\$0	\$593
6. Other	<u>\$0</u>	<u>\$45</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$45</u>	<u>\$0</u>	<u>\$45</u>
7. Total	\$0	\$842	\$0	\$0	\$0	\$0	\$0	\$842	\$0	\$842

¹ Rates shown do not include the HIS contribution rate or IP administrative fees.

² As reported in the 2016-2017 Blended Rates Study dated December 2, 2015.

³ Employers of employee groups subject to only the UAL contribution rate would pay the rates shown in line (C.2.b.).

FLORIDA RETIREMENT SYSTEM
FISCAL IMPACT ANALYSIS

Effect on July 1, 2015 Defined Benefit Pension Plan Actuarial Valuation Results
Impact of Four-Cancer Variation of Proposal for Prospective Firefighter ILOD Cancer Presumption effective July 1, 2016
Please see the attached letter for details regarding data, assumptions, methodology, and plan provisions used

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	Regular	Special Risk	Special Risk Administrative	-----Elected Officers' Class----- Judicial	Leg-Atty-Cab	Local	Senior Management	Composite (excluding DROP)	DROP	Composite (including DROP)
A. Actuarially Calculated Pension Plan Employer Contribution Rates (prior to blending to create proposed blended statutory contribution rates)										
1. Actuarially Calculated Pension Plan Employer Contribution Rates Developed in July 1, 2015 Valuation ¹										
a. Employer Normal Cost	2.84%	11.17%	3.19%	11.75%	6.58%	8.47%	4.18%	4.17%	4.17%	4.17%
b. UAL Cost	<u>3.37%</u>	<u>10.54%</u>	<u>32.30%</u>	<u>25.42%</u>	<u>44.61%</u>	<u>44.52%</u>	<u>21.00%</u>	<u>4.87%</u>	<u>7.10%</u>	<u>5.06%</u>
c. Total Employer Cost	6.21%	21.71%	35.49%	37.17%	51.19%	52.99%	25.18%	9.04%	11.27%	9.23%
2. Actuarially Calculated Pension Plan Employer Contribution Rates Reflecting Proposed Change										
a. Employer Normal Cost	2.84%	11.18%	3.19%	11.75%	6.58%	8.47%	4.18%	4.17%	4.17%	4.17%
b. UAL Cost	<u>3.37%</u>	<u>10.54%</u>	<u>32.30%</u>	<u>25.42%</u>	<u>44.61%</u>	<u>44.52%</u>	<u>21.00%</u>	<u>4.87%</u>	<u>7.10%</u>	<u>5.06%</u>
c. Total Employer Cost	6.21%	21.71%	35.49%	37.17%	51.19%	52.99%	25.18%	9.04%	11.27%	9.23%
3. Change in Actuarially Calculated Pension Plan Employer Contribution Rates due to Proposed Change										
a. Normal Cost	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
b. UAL Cost	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
c. Total Cost	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
B. Unfunded Actuarial Liability (UAL) and Present Value of Projected Benefits (Dollars in Thousands)										
1. July 1, 2015 Actuarial Valuation UAL ²	\$11,808,459	\$5,668,445	\$11,715	\$408,376	\$45,622	\$297,389	\$1,675,489	\$19,915,495	\$2,437,902	\$22,353,397
2. July 1, 2015 UAL Reflecting Proposed Change	<u>11,808,459</u>	<u>5,667,840</u>	<u>11,715</u>	<u>408,376</u>	<u>45,622</u>	<u>297,389</u>	<u>1,675,489</u>	<u>19,914,890</u>	<u>2,437,902</u>	<u>22,352,792</u>
3. Increase in UAL due to Proposed Change	\$0	(\$605)	\$0	\$0	\$0	\$0	\$0	(\$605)	\$0	(\$605)
4. Increase in Present Value of Future Normal Costs	\$0	<u>\$2,003</u>	\$0	\$0	\$0	\$0	\$0	<u>\$2,003</u>	\$0	<u>\$2,003</u>
5. Increase in Present Value of Projected Benefits (3. + 4.)	\$0	\$1,399	\$0	\$0	\$0	\$0	\$0	\$1,399	\$0	\$1,399

¹ As reported in the July 1, 2015 valuation - Table 4-11

² As reported in the July 1, 2015 valuation - Table 3-2

FLORIDA RETIREMENT SYSTEM
FISCAL IMPACT ANALYSIS

Effect on Investment Plan Employer Contribution Rates
Impact of Four-Cancer Variation of Proposal for Prospective Firefighter ILOD Cancer Presumption effective July 1, 2016
Please see the attached letter for details regarding data, assumptions, methodology, and plan provisions used

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	Regular	Special Risk	Special Risk Administrative	Judicial	-----Elected Officers' Class----- Leg-Atty-Cab	Local	Senior Management	Composite
A. Actuarially Calculated Investment Plan Employer Contribution Rates (prior to blending to create proposed blended statutory contribution rates)								
1. Employer Rates effective since July 1, 2012 (Sec 121.72 and 121.73) ¹								
a. Employer Cost (excludes member contributions)	3.55%	12.33%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%
b. UAL Cost	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
c. Total Employer Cost	3.55%	12.33%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%
2. Actuarially Calculated Investment Plan Employer Contribution Rates Reflecting Proposed Change to Increase Investment Plan Disability Benefit (there is no IP death benefit under current statute)								
a. Employer Cost (excludes member contributions)	3.55%	12.33%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%
b. UAL Cost	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
c. Total Employer Cost	3.55%	12.33%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%
3. Change in Actuarially Calculated Investment Plan Employer Contribution Rates due to Proposed ILOD Cancer Presumption								
a. Employer Cost	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
b. UAL Cost	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
c. Total Employer Cost	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%

¹ As reported in the 2016-2017 Blended Rates Study dated December 2, 2015.

FLORIDA RETIREMENT SYSTEM
FISCAL IMPACT ANALYSIS

Effect on Proposed Blended Statutory Employer Contribution Rates for 2016-2017 Plan Year
Impact of Four-Cancer Variation of Proposal for Prospective Firefighter ILOD Cancer Presumption effective July 1, 2016
Assumes 3.25% Annual Growth in Total Payroll

Please see the attached letter for details regarding data, assumptions, methodology, and plan provisions used

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	Regular	Special Risk	Special Risk Administrative	Judicial	-----Elected Officers' Class----- Leg-Atty-Cab Local			Senior Management	Composite (excluding DROP)	DROP	Composite (Including DROP)
A. Proposed Blended Statutory Normal Cost Contribution Rates Reflecting the Proposed Change (Dollars in Thousands)											
1. Actuarially Calculated Defined Benefit Pension Plan Normal Cost											
a. Employer Pension Plan Normal Cost Rate	2.84%	11.18%	3.19%	11.75%	6.58%	8.47%	4.18%	4.17%	4.17%	4.17%	4.17%
b. Projected Pension Plan Normal Cost Payroll	\$19,242,767	\$3,557,412	\$2,715	\$106,095	\$6,354	\$42,341	\$510,388	\$23,468,072	\$2,320,464	\$25,788,536	\$25,788,536
c. Total Employer Pension Plan Normal Cost [(1a) x (1b)]	\$546,495	\$397,575	\$87	\$12,466	\$418	\$3,586	\$21,334	\$981,961	\$96,683	\$1,078,644	\$1,078,644
2. Investment Plan Employer Cost											
a. Employer Rates effective July 1, 2012 (Sec 121.72-73)	3.55%	12.33%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%	0.00%	4.76%	4.76%
b. Additional Contribution to Provide ILOD Cancer Presumption	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
c. Total Employer Contribution Rate effective July 1, 2016	3.55%	12.33%	5.40%	10.96%	6.79%	8.75%	4.93%	4.76%	0.00%	4.76%	4.76%
d. Projected Investment Plan Payroll	\$4,226,371	\$653,267	\$1,188	\$9,771	\$2,192	\$17,279	\$182,231	\$5,092,299	\$0	\$5,092,299	\$5,092,299
e. Total Employer Investment Plan Cost [(2c) x (2d)]	\$150,036	\$80,548	\$64	\$1,071	\$149	\$1,512	\$8,984	\$242,364	\$0	\$242,364	\$242,364
3. Proposed Blended Statutory Employer Normal Cost Rate (Pension Plan + Investment Plan)											
a. Total Employer Normal Cost Contribution [(1c) + (2e)]	\$696,531	\$478,123	\$151	\$13,537	\$567	\$5,098	\$30,318	\$1,224,325	\$96,683	\$1,321,008	\$1,321,008
b. Total System Projected Payroll [(1b) + (2d)]	\$23,469,138	\$4,210,679	\$3,903	\$115,866	\$8,546	\$59,620	\$692,619	\$28,560,371	\$2,320,464	\$30,880,835	\$30,880,835
c. Proposed Blended Statutory Employer Normal Cost Contribution Rate ¹ As a Percentage of Total Payroll [(3a) / (3b)]	2.97%	11.36%	3.87%	11.68%	6.63%	8.55%	4.38%	4.29%	4.17%	4.28%	4.28%
B. Proposed Blended Statutory Unfunded Actuarial Liability (UAL) Cost Contribution Rates Reflecting the Proposed Change (Dollars in Thousands)											
1. Actuarially Calculated Defined Benefit Pension Plan UAL Cost											
a. Pension Plan UAL Cost Rate	3.37%	10.54%	32.30%	25.42%	44.61%	44.52%	21.00%	4.87%	7.10%	5.06%	5.06%
b. Projected Pension Plan UAL Cost Payroll	\$22,083,499	\$3,595,469	\$2,715	\$107,248	\$6,820	\$45,169	\$535,948	\$26,376,868	\$2,320,464	\$28,697,332	\$28,697,332
c. Total Employer UAL Cost [(1a) x (1b)]	\$744,214	\$378,926	\$877	\$27,262	\$3,042	\$20,109	\$112,549	\$1,286,979	\$164,753	\$1,451,732	\$1,451,732
2. Investment Plan Projected Payroll											
	\$4,226,371	\$653,267	\$1,188	\$9,771	\$2,192	\$17,279	\$182,231	\$5,092,299	\$0	\$5,092,299	\$5,092,299
3. Proposed Blended Statutory Employer UAL Contribution Rate (Pension Plan + Investment Plan)											
a. Total Employer UAL Cost [(1c)]	\$744,214	\$378,926	\$877	\$27,262	\$3,042	\$20,109	\$112,549	\$1,286,979	\$164,753	\$1,451,732	\$1,451,732
b. Total System Projected Payroll [(1b) + (2)]	\$26,309,870	\$4,248,736	\$3,903	\$117,019	\$9,012	\$62,448	\$718,179	\$31,469,167	\$2,320,464	\$33,789,631	\$33,789,631
c. Proposed Blended Statutory Employer UAL Contribution Rate ¹ As a Percentage of Total Payroll [(3a) / (3b)]	2.83%	8.92%	22.47%	23.30%	33.75%	32.20%	15.67%	4.09%	7.10%	4.30%	4.30%

¹ Rates shown do not include the HIS contribution rate or IP administrative fees.

FLORIDA RETIREMENT SYSTEM
FISCAL IMPACT ANALYSIS

Effect on Proposed Blended Statutory Employer Contribution Rates for 2016-2017 Plan Year
Impact of Four-Cancer Variation of Proposal for Prospective Firefighter JLOD Cancer Presumption effective July 1, 2016
Assumes 3.25% Annual Growth In Total Payroll
Please see the attached letter for details regarding data, assumptions, methodology, and plan provisions used

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	Regular	Special Risk	Special Risk Administrative	Judicial	-----Elected Officers' Class----- Leg-Atty-Cab Local		Senior Management	Composite (excluding DROP)	DROP	Composite (Including DROP)
C. Proposed Blended Statutory Employer Contribution Rates Reflecting the Proposed Change										
1. Proposed Blended Statutory Employer Contribution Rates Based on July 1, 2015 Valuation ²										
a. Employer Normal Cost Contribution Rate	2.97%	11.35%	3.87%	11.68%	6.63%	8.55%	4.38%	4.29%	4.17%	4.28%
b. Employer UAL Contribution Rate	<u>2.83%</u>	<u>8.92%</u>	<u>22.47%</u>	<u>23.30%</u>	<u>33.75%</u>	<u>32.20%</u>	<u>15.67%</u>	<u>4.09%</u>	<u>7.10%</u>	<u>4.30%</u>
c. Total Employer Contribution Rate [(C1a) + (C1b)]	5.80%	20.27%	26.34%	34.98%	40.38%	40.75%	20.05%	8.38%	11.27%	8.58%
2. Proposed Blended Statutory Employer Contribution Rates Reflecting Proposed Change ¹										
a. Employer Normal Cost Contribution Rate [(A3c)]	2.97%	11.36%	3.87%	11.68%	6.63%	8.55%	4.38%	4.29%	4.17%	4.28%
b. Employer UAL Contribution Rate [(B3c)] ³	<u>2.83%</u>	<u>8.92%</u>	<u>22.47%</u>	<u>23.30%</u>	<u>33.75%</u>	<u>32.20%</u>	<u>15.67%</u>	<u>4.09%</u>	<u>7.10%</u>	<u>4.30%</u>
c. Total Employer Contribution Rate [(C2a) + (C2b)]	5.80%	20.28%	26.34%	34.98%	40.38%	40.75%	20.05%	8.38%	11.27%	8.58%
3. Change in Proposed Blended Statutory Employer Contribution Rates due to Proposed Change										
a. Employer Normal Cost Contribution Rate [(C2a) - (C1a)]	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
b. Employer UAL Contribution Rate [(C2b) - (C1b)]	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>	<u>0.00%</u>
c. Total Employer Contribution Rate [(C3a) + (C3b)]	0.00%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
D. Additional/(Reduced) Proposed Statutory Employer Contributions for the 2016-2017 Plan Year Due to Proposed Change (Dollars in Thousands)										
1. State	\$0	\$95	\$0	\$0	\$0	\$0	\$0	\$95	\$0	\$95
2. School Boards	\$0	\$3	\$0	\$0	\$0	\$0	\$0	\$3	\$0	\$3
3. State Universities	\$0	\$3	\$0	\$0	\$0	\$0	\$0	\$3	\$0	\$3
4. Community Colleges	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
5. Counties	\$0	\$297	\$0	\$0	\$0	\$0	\$0	\$297	\$0	\$297
6. Other	\$0	\$23	\$0	\$0	\$0	\$0	\$0	\$23	\$0	\$23
7. Total	\$0	\$421	\$0	\$0	\$0	\$0	\$0	\$421	\$0	\$421

¹ Rates shown do not include the HIS contribution rate or IP administrative fees.

² As reported in the 2016-2017 Blended Rates Study dated December 2, 2015.

³ Employers of employee groups subject to only the UAL contribution rate would pay the rates shown in line (C.2.b.).



SCREVEN WATSON & ASSOCIATES

CANCER PRESUMPTION POLL

Prepared by: Screven H. Watson

January 30, 2016

OVERALL RESULTS:

Q1. Do you feel things in the State of Florida are headed in the right direction, or do you feel things in the State have gotten off on the wrong track?

Right direction	39%
Wrong track	41%
Unsure/refused	20%

Q2. Do you feel things in your local community are headed in the right direction, or do you feel things in the community have gotten off on the wrong track?

Right direction	60%
Wrong track	29%
Unsure/refused	11%

Next, I would like to ask your opinion of some groups and people who have been in the news recently. For each, please tell me if your opinion is favorable or unfavorable. (After favorable/unfavorable response, ask for intensity "Is that very or somewhat favorable/unfavorable") The first is:

Q3. Governor Rick Scott

Very favorable	17%
Somewhat favorable	27%
Somewhat unfavorable	14%
Very unfavorable	32%
Don't Know/Refused	10%
Favorable	44%
Unfavorable	46%



Q4. Agriculture Commissioner Adam Putnam

Very favorable	10%
Somewhat favorable	20%
Somewhat unfavorable	6%
Very unfavorable	3%
Don't Know/Refused	60%
Favorable	31%
Unfavorable	9%

Q5. The Florida Legislature

Very favorable	6%
Somewhat favorable	33%
Somewhat unfavorable	20%
Very unfavorable	18%
Don't Know/Refused	22%
Favorable	40%
Unfavorable	38%

Q6. Local firefighters

Very favorable	77%
Somewhat favorable	16%
Somewhat unfavorable	1%
Very unfavorable	1%
Don't Know/Refused	5%
Favorable	94%
Unfavorable	2%



Q7. Local police officers

Very favorable	57%
Somewhat favorable	29%
Somewhat unfavorable	6%
Very unfavorable	3%
Don't Know/Refused	4%
Favorable	86%
Unfavorable	9%

Q8. When it comes to your local firefighters, do you think:

They are paid too little	47%
They are paid about right, or	18%
They are paid too much	4%
Unsure/don't know	31%

Q9. How dangerous of a job is being a firefighter?

Very dangerous	76%
Somewhat dangerous, or	23%
Not at all dangerous	1%
Unsure/don't know	1%



Q10. Some say firefighters face secondary dangers different from the inherent dangers of firefighting, such as heart-and-lung conditions, and a higher risk of job related cancers. Do you believe that firefighters should be covered by insurance, by their employers, for these potential future health risks?

Yes	82%
No	11%
Unsure/refused	7%

Next I am going to read you a list of statements about firefighters, their jobs and getting injured or sick. For each statement, please tell me if you agree or disagree with each. (After agree/disagree response, ask for intensity: "Is that strongly or somewhat agree/disagree")

Q11. When firefighters are hurt or injured on the job they should be given added protections or pay to compensate them.

Strongly agree	69%
Somewhat agree	20%
Somewhat disagree	5%
Strongly disagree	2%
Unsure/refused	4%
Agree	89%
Disagree	7%



Q12. I believe firefighters are already paid well, and if they are hurt on the job, the current system already takes good care of them.

Strongly agree	11%
Somewhat agree	14%
Somewhat disagree	20%
Strongly disagree	27%
Unsure/refused	28%
Agree	25%
Disagree	47%

Q13. The safety of fighting fires has improved over the years and we really don't need to treat firefighters any differently than we treat other professions.

Strongly agree	12%
Somewhat agree	10%
Somewhat disagree	23%
Strongly disagree	47%
Unsure/refused	7%
Agree	22%
Disagree	71%



Q14. If a firefighter develops certain types of cancer, which have been proven to be more prevalent among firefighters, we should presume that the cancer was job-related.

Strongly agree	48%
Somewhat agree	26%
Somewhat disagree	12%
Strongly disagree	7%
Unsure/refused	7%
Agree	74%
Disagree	18%

Q15. I support our local firefighters, but worry that continuing to add protections for them will increase my taxes.

Strongly agree	20%
Somewhat agree	26%
Somewhat disagree	22%
Strongly disagree	23%
Unsure/refused	8%
Agree	46%
Disagree	45%



Q16. Firefighters are underpaid for doing a dangerous job, and offering them added protections or pay when they are sick is the least we can do.

Strongly agree	54%
Somewhat agree	20%
Somewhat disagree	8%
Strongly disagree	5%
Unsure/refused	12%
Agree	74%
Disagree	13%

Q17. Firefighters often enter burning buildings and inhale or are exposed to toxic chemicals that can lead to cancer.

Strongly agree	63%
Somewhat agree	22%
Somewhat disagree	3%
Strongly disagree	3%
Unsure/refused	8%
Agree	85%
Disagree	7%

Q18. Providing safer equipment that prevents future cancer-type illnesses for firefighter's is the responsibility of their employers.

Strongly agree	70%
Somewhat agree	18%
Somewhat disagree	4%
Strongly disagree	3%
Unsure/refused	5%
Agree	88%
Disagree	7%



Q19. If local governments provide better safety equipment, we will not need to extend worker's compensation to firefighters.

Strongly agree	18%
Somewhat agree	15%
Somewhat disagree	23%
Strongly disagree	36%
Unsure/refused	8%
Agree	33%
Disagree	59%

In the coming session, the association representing our state's professional firefighters will be pushing for a new law that says if a firefighter contracts certain types of cancer, then it shall automatically be presumed that the cancer was related to being a fire fighter. I am going to read you a list of statements, but this time about this proposed new law. For each statement, please tell me if you agree or disagree with each. (After each agree/disagree response, ask for intensity: "is that strongly or somewhat agree/disagree") (Unsure/refused – non-verbal)

Q20. Fighting fires is a dangerous job and new laws like this help us ensure that we take care of those firefighters who protect us.

Strongly agree	67%
Somewhat agree	22%
Somewhat disagree	4%
Strongly disagree	3%
Unsure/refused	4%
Agree	89%
Disagree	7%



Q21. Firefighters' exposure to toxins in their workplace puts them at greater risk for cancer.

Strongly agree	60%
Somewhat agree	24%
Somewhat disagree	6%
Strongly disagree	4%
Unsure/refused	6%
Agree	83%
Disagree	10%

Q22. Many forms of cancer come from smoking and other bad behaviors. If a firefighter smoked cigarettes, then we should not presume he or she contracted cancer on the job.

Strongly agree	35%
Somewhat agree	26%
Somewhat disagree	16%
Strongly disagree	15%
Unsure/refused	8%
Agree	61%
Disagree	31%



Q23. If a firefighter gets cancer at an earlier age than medical studies show is normal, then I presume they got that cancer because of job related exposures

Strongly agree	34%
Somewhat agree	29%
Somewhat disagree	13%
Strongly disagree	13%
Unsure/refused	10%
Agree	64%
Disagree	26%

Q24. I am willing to pay higher taxes to help pay for better equipment for local firefighters to reduce the number of firefighters who contract cancer.

Strongly agree	41%
Somewhat agree	32%
Somewhat disagree	7%
Strongly disagree	14%
Unsure/refused	5%
Agree	73%
Disagree	21%



Q25. After hearing both sides about this issue, which of the following comes closest to your opinion?

Firefighters are exposed to many toxins and chemicals in the workplace, and I support a new law to give them easier access to workers compensation benefits. 57%

Firefighters should have to prove their cancer was obtained in the workplace, like everyone else. 37%

Unsure/refused 5%

Q26. If a firefighter is diagnosed with cancer, who should the burden of proof fall on to prove the cancer was job related:

The firefighter, or 28%

The employer 56%

Unsure/refused 16%



The next two questions are about firefighters who work fighting forest fires. For each statement, please tell me if you agree or disagree with each. (After each agree/disagree response, ask for intensity: “is that strongly or somewhat agree/disagree”)

Q27. Fighting forest fires for a living is a very dangerous job, and firefighters who fight forest fires should be given annual pay raises.

Strongly agree	56%
Somewhat agree	24%
Somewhat disagree	7%
Strongly disagree	6%
Unsure/refused	7%
Agree	80%
Disagree	13%

Q28. Our state’s forestry firefighters average \$27,000 a year in salary and they deserve a pay raise.

Strongly agree	71%
Somewhat agree	17%
Somewhat disagree	4%
Strongly disagree	2%
Unsure/refused	6%
Agree	88%
Disagree	6%



DEMOGRAPHIC/STATISTICAL QUESTIONS:

I would like to ask you a few final questions just for statistical purposes to be sure we have included a good cross section of people in our survey. First...

D1. How are you registered to vote?

As a Democrat,	40%
As a Republican, or	39%
As something else?	21%
Unsure/Refused	--%

D2. How old are you?

18-34	15%
35-49	20%
50-64	30%
65 or older	35%
Unsure/Refused	--%

D3. And how would you describe your ethnicity?

White/Caucasian	70%
Black/African-American	13%
Hispanic, Cuban	5%
Hispanic, not Cuban	7%
Other/Unsure/Refused	5%



D4. How do you describe your overall political views?

Very conservative,	12%
Conservative,	31%
Moderate, or	31%
Liberal?	20%
Unsure/Refused	6%

CODED QUESTIONS:

Gender: (BY OBSERVATION)

Male	45%
Female	55%

Call taken by: (TAKEN FROM VOTER FILE)

Land line	80%
Cell phone	20%

Region: (TAKEN FROM VOTER FILE)

Dade / Broward	18%
Palm Beach / Treasure Coast	11%
Southwest	6%
East Central	25%
West Central	21%
North / Panhandle	19%
Number of voters polled	801



PRESUMPTIVE LAW COVERAGE BY DISEASE

State	Cancer Language
Alabama	exposed to a known carcinogen which is reasonably linked to the disabling cancer
Alaska	brain, malignant melanoma, leukemia, non-Hodgkin's lymphoma, bladder, ureter, kidney
Arizona	brain, bladder, rectal, colon, lymphoma, leukemia, adenocarcinoma or mesothelioma
Arkansas	leukemia, lymphoma, mesothelioma, and multiple myeloma and cancer of the brain, digestive tract, urinary tract, liver, skin, breast, cervical, thyroid, prostate, testicle, or a cancer that has been found by research and statistics to show higher instances of occurrence in firefighters
California	demonstrate he or she was exposed to a known carcinogen as defined by the IARC
Colorado	cancer of the brain, skin, digestive system, hematological system, or genitourinary system
Connecticut	Kahler's Disease, non-Hodgkin's lymphoma, and prostate or testicular cancer
Idaho	Brain, Bladder, Kidney, Colorectal, Non-Hodgkin's lymphoma, Leukemia, Mesothelioma, Testicular, Breast, Esophageal, Multiple myeloma
Illinois	cancer involved must be a type which may be caused by exposure to heat, radiation or a known carcinogen as defined by the IARC
Indiana	cancer that is caused by a known carcinogen to which an individual is at risk for occupational exposure
Iowa	prostate cancer, primary brain cancer, breast cancer, ovarian cancer, cervical cancer, uterine cancer, malignant melanoma, leukemia, non-Hodgkin's lymphoma, bladder cancer, colorectal cancer, multiple myeloma, testicular cancer, and kidney cancer
Kansas	type of cancer which may, in general, result from exposure to heat, radiation or a known carcinogen
Louisiana	bladder, brain, colon, liver, pancreas, skin, kidney, gastrointestinal tract, leukemia, lymphoma, multiple myeloma
Maine	kidney, prostate, breast, non-Hodgkin's lymphoma, testicular, colon, brain, bladder, leukemia or multiply myeloma
Maryland	leukemia or prostate, rectal, throat, multiple myeloma, non-Hodgkin's lymphoma, brain, testicular, or breast cancer that is caused by contact with a toxic substance
Massachusetts	cancer affecting the skin or the central nervous, lymphatic, digestive, hematological, urinary, skeletal, oral or prostate systems, lung or respiratory tract
Michigan	respiratory tract, bladder, skin, brain, kidney, blood, thyroid, testicular, prostate, or lymphatic cancer
Minnesota	cancer of a type caused by exposure to heat, radiation, or a known or suspected carcinogen, as defined by the IARC
Missouri	cancer affecting the skin or the central nervous, lymphatic, digestive, hematological, urinary, skeletal, oral, breast, testicular, genitourinary, liver or prostate systems, or cancer which may result from exposure to heat or radiation or to a known or suspected carcinogen as determined by the IARC
Nebraska	cancer affecting the skin or the central nervous, lymphatic, digestive, hematological, urinary, skeletal, oral, or prostate systems
Nevada	exposed to a known carcinogen as defined by the IARC
New Hampshire	cancer involved must be a type which may be caused by exposure to heat, radiation, or a known or suspected carcinogen as defined by the IARC
New Mexico	brain, bladder, kidney, colorectal, non-hodgkins lymphoma, leukemia, ureter, testicular, breast, esophageal, multiple myeloma

New York	cancer affecting the lymphatic, digestive, hematological, urinary, neurological, breast, reproductive, or prostate systems
North Dakota	cancer is one which arises due to exposure to smoke, fumes, or carcinogenic, poisonous, toxic, or chemical substances
Oklahoma	existence of any cancer which was not revealed by the physical examination passed by the member upon entry into the department
Oregon	brain cancer, colon cancer, stomach cancer, testicular cancer, prostate cancer, multiple myeloma, non-Hodgkin's lymphoma, cancer of the throat or mouth, rectal cancer, breast cancer or leukemia
Pennsylvania	cancer suffered by a firefighter... who can establish direct exposure to a carcinogen
Rhode Island	disabling occupational cancer which develops as a result of the inhalation of noxious fumes or poisonous gases
South Dakota	impairment of health caused by cancer
Tennessee	any impairment of health of such fire fighter caused by disease or cancer resulting in hospitalization, medical treatment or any disability
Texas	cancer that may be caused by exposure to heat, smoke, radiation, or a known or suspected carcinogen as determined by the IARC
Utah	cancer of the pharynx, esophagus, lung and mesothelioma
Vermont	cancer limited to leukemia, lymphoma, or multiple myeloma, and cancers originating in the bladder, brain, colon, gastrointestinal tract, kidney, liver, pancreas, skin, or testicles.
Virginia	Leukemia or pancreatic, prostate, rectal, throat, ovarian or breast
Washington	brain cancer, malignant melanoma, leukemia, non-Hodgkin's lymphoma, bladder cancer, ureter cancer, and kidney cancer
Wisconsin	skin, breasts, central nervous system or lymphatic, digestive, hematological, urinary, skeletal, oral or reproductive systems
Alberta	Leukemia, brain, bladder, lung, ureter, kidney, colorectal, non-Hodgkins Lymphoma
British Columbia	Leukemia, non-Hodgkins lymphoma, bladder, brain, colorectal, kidney, lung, testicular, ureter
Manitoba	Leukemia, brain, bladder, lung, ureter, kidney, colorectal, non-Hodgkins Lymphoma, testicular, esophageal
New Brunswick	brain, bladder, colorectal, esophageal, kidney, testicular and ureter cancer, in addition to leukemia, non-Hodgkins lymphoma and lung cancer
Northwest Territory	multiple myeloma, leukemia, non-Hodgkin's lymphoma, brain cancer, colo-rectal cancer, lung cancer, prostate cancer, skin cancer, testicular cancer
Nova Scotiaa cancer or other disease that is prescribed by the Governor in Council by regulation
Nunavut	multiple myeloma, leukemia, non-Hodgkin's lymphoma, brain, colorectal, lung, prostate, skin, testicular
Ontario	Leukemia, brain, bladder, ureter, kidney, colorectal, non-Hodgkins Lymphoma, esophageal, breast, multiple myeloma, testicular, prostate, lung, skin
Saskatchewan	Leukemia, brain, bladder, lung, ureter, kidney, colorectal, non-Hodgkins Lymphoma, testicular
Yukon Territory	leukemia, non-Hodgkin's lymphoma, bladder cancer, brain cancer, colo-rectal cancer, esophageal cancer, kidney cancer, lung cancer, testicular cancer, ureter cancer, or any prescribed form of cancer;

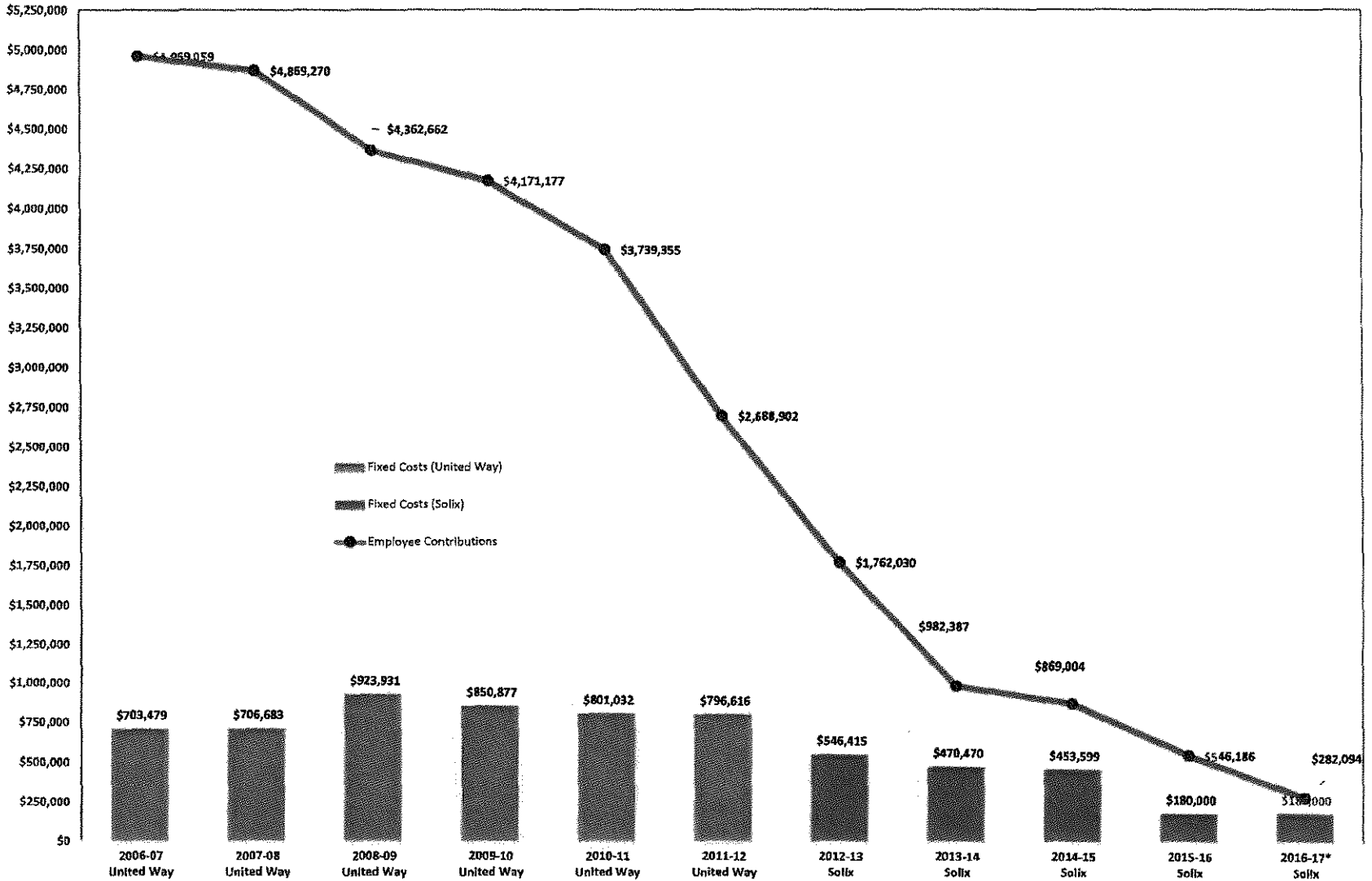
NEW: Ohio Firefighter Cancer Presumption

Executive Briefing

Division of Human Resource Management Florida State Employees' Charitable Campaign (FSECC)

Statutory Authority:	
<p>Section 110.181, F.S., directs the Department of Management Services (DMS) to establish and maintain an annual FSECC. The statute directs DMS to select a fiscal agent through a competitive selection process to receive, account for, and distribute charitable contributions among participating charitable organizations.</p>	
Issue Summary:	
<p>Since 2006, the FSECC has experienced an ongoing and significant decline in employee contributions made to campaign charities. This reduction in contributions, despite DMS steps to reduce administrative costs associated with the campaign, has resulted in an expense to donation ratio which makes the FSECC difficult to financially sustain.</p>	
Background:	Relevant Data:
<p>The FSECC is the only authorized charitable fundraising drive directed toward state employees within work areas during work hours, and for which the state will provide payroll deduction. Designated agency employees are required to coordinate FSECC activities at their respective agencies.</p> <p>In 2006, employee contributions to the FSECC started to decline. Since 2008, DMS has taken steps to reduce overhead costs and has reduced fiscal agent and other administrative campaign costs by 80 percent. However, during this same time period, amounts pledged in the campaign have declined 93 percent from \$4.3 million to \$282,094.</p> <p>If the current downward trend in voluntary employee contributions continues, the expense to donation ratio will continue to grow and ultimately will reach a point where costs to administer the campaign exceed voluntary contributions.</p> <p>Since the campaign's creation in 1980, technology has changed the way donors can access information about charities and how they can donate to charities.</p> <p>In today's information age, giving directly to charities is more streamlined than ever and therefore, we believe the state's role as middle man is no longer necessary.</p> <p>DMS proposes to eliminate the statute creating the FSECC and replace it with language that prohibits solicitations of state employees through any means for fundraising within work areas during work hours.</p>	<ul style="list-style-type: none"> • In 2016, DMS renegotiated the fiscal agent contract and reduced fiscal agent fees to from \$389,296 to \$180,000, by temporarily absorbing internally a number of administrative duties previously performed by the fiscal agent. This resulted in an expense to donation ratio of 33 percent in 2015-16. (Based on \$546,186 in donations in 2015-16). • Based on pledges of \$282,094 in 2016-17, the expense to donation ratio was scheduled to be 63.8 percent. The fiscal agent was unable to reduce fees further to a reasonable cost, which resulted in the termination of the contract. As a result, pledges for 2016-17 were not processed.
Policy Options:	Timeline:
<p>Amend section 110.181, Florida Statutes (F.S.) to remove the language authorizing the FSECC and replace it with language prohibiting solicitation of state employees through any means for fundraising or business purposes within work areas during work hours. Employees would still be free to donate directly to charities through multiple methods during non-work hours.</p>	<ul style="list-style-type: none"> • Effective date of July 1, 2017. • Repeal rule Chapter 60L-39, F.A.C. – Chapter 60L-39, F.A.C.

Florida State Employees' Charitable Campaign (FSECC) History Amounts Raised and Amounts Withheld by Fiscal Agent (FA)



*2016-17 includes pledged dollars and scheduled fees for contract year 2017. Fiscal agent contract for contract year 2017 has been terminated and pledges will not be processed.