Most Departments' Spans of Control and Number of Organizational Layers Do Not Meet Recommended Levels

Final Report to the Joint Legislative Program Evaluation Oversight Committee

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December 12, 2016

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North Carolina General Assembly
Legislative Building
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Raleigh, NC 27601

Honorable Co-Chairs:

The Joint Legislative Program Evaluation Oversight Committee's 2015–17 Work Plan directed the Program Evaluation Division to study the spans of control and organizational layers of state department executive offices.

I am pleased to report that the Office of State Human Resources and the Office of State Budget and Management cooperated with us fully and were at all times courteous to our evaluators during the evaluation.

Sincerely,

John W. Turcotte
Director

PROGRAM EVALUATION DIVISION
NORTH CAROLINA GENERAL ASSEMBLY

December 2016 Report No. 2016-12

Most Departments' Spans of Control and Number of Organizational Layers Do Not Meet Recommended Levels

Summary

The Joint Legislative Program Evaluation Oversight Committee directed the Program Evaluation Division to examine the efficiency and effectiveness of spans of control and organizational layers in state government executive offices. Spans of control refer to the number of positions a supervisor oversees; organizational layers refer to the number of levels in an organization. To justify the added costs of management positions, each manager should oversee a sufficient number of subordinates. In the 1990s, the Office of State Budget and Management (OSBM) recommended an overall statewide minimum span of control ratio of 1:8 and a maximum of seven organizational layers. This evaluation is the first study of state department spans of control and organizational layers in nearly 20 years.

At present, the average span of control ratio across the 21 departments examined is 1:6.3, and only one state department meets the statewide recommended ratio of 1:8. On average, supervisors are overseeing slightly more positions compared to the 1990s; however, 33% of all supervisors have narrow spans of control, defined as overseeing three or fewer positions.

The average number of organizational layers is 8.1, and ten departments have more than the recommended seven layers. This average represents an increase since the 1990s.

The executive offices of the 21 state departments consist of 235 positions, which are in the first five layers of departments and on average supervise approximately six positions. Departments vary in how they assign positions to their executive offices. Thirty-nine percent of executive office members have narrow spans of control. The average salary of executive office members is $111,000. Salaries are higher for executive office members who are supervisors and increase as the number of subordinates increases.

OSBM and the Office of State Human Resources (OSHR) provide limited guidance on how to most efficiently and effectively structure departments. Currently, OSBM and OSHR provide ad hoc guidance on spans of control and organizational layers at the request of state departments. There is no independent oversight of spans and layers.

Based on these findings, the General Assembly should (1) direct OSHR to monitor spans of control and organizational layers on an ongoing basis and (2) direct OSBM to conduct studies of these topics every five years. The General Assembly could use these studies as the basis for requiring departments to justify deviations from statewide benchmarks.

Purpose and Scope

The 2015–2017 Program Evaluation Division Work Plan directed the Division to study the spans of control and organizational layers of state department executive offices. This study addresses three research questions:

1. What factors guide how state department executive offices are structured?
2. What is the composition of organizational layers in executive offices, and what is each manager's span of control?
3. How does the structure and span of control of each department's executive office compare with other departments and with best practices?

The Program Evaluation Division collected data from several sources:

- a survey of state employees identified as members of departments' executive offices;
- interviews with and queries of the Office of State Human Resources (OSHR) and Office of State Budget and Management (OSBM);
- review of academic and practitioner literature on spans of control and organizational layers;
- review of four OSBM reports from 1996 to 1998 on spans of control and organizational layers;
- review of other states that have passed legislation related to span of control; and
- review of statewide data including salaries and supervisory relationships from BEACON as of June 2, 2016.[1]

The Program Evaluation Division included 21 state departments defined and designated as principal administrative departments by the North Carolina State Constitution and General Statutes. Exhibit 1 provides descriptive information about each of the 21 departments, including the acronym by which they will be referred to hereafter in this report and their designation as either a

- Council of State department, with an elected department head (n = 10 departments),
- Cabinet department, with a department head appointed by the Governor (n = 10 departments), or
- Other department, with a department head appointed by another entity (n = 1 department).

[1] BEACON (Building Enterprise Access for North Carolina's Core Operation Needs) is the State's human resources and payroll infrastructure system. The data accessed for this study did not include Temporary Solutions staff, which some departments rely heavily upon, because these staff are not always assigned to their respective departments in BEACON. Data from the Department of Revenue was accessed on June 16, 2016 because of pending organizational changes.

Exhibit 1: State Law Designates 21 Departments as Principal Departments

Department (arranged from largest to smallest)	Acronym	Department Type	Total Number of Positions	Total Salary Expenditures (in millions)
Public Safety	DPS	Cabinet	26,042	$912.7
Health and Human Services	DHHS	Cabinet	18,055	696.1
Transportation	DOT	Cabinet	13,723	489.4
Natural and Cultural Resources	DNCR	Cabinet	3,221	67.4
Agriculture and Consumer Services	DACS	Council	2,656	81.7
Commerce	DOC	Cabinet	2,583	88.0
Revenue	DOR	Cabinet	1,919	67.5
Environmental Quality	DEQ	Cabinet	1,694	81.4
Public Instruction	DPI	Council	1,176	60.9
Justice	DOJ	Council	847	47.9
Administration	DOA	Cabinet	651	22.4
Information Technology	DIT	Cabinet	607	40.5
State Treasurer	DST	Council	442	26.0
Insurance	DOI	Council	430	24.2
Labor	DOL	Council	386	18.0
Community College System	CCS	Other	197	12.6
Secretary of State	SOS	Council	197	8.0
State Auditor	OSA	Council	166	10.1
Military and Veterans Affairs	DMVA	Cabinet	105	3.4
Office of the Governor	Gov	Council	67	4.0
Office of the Lieutenant Governor	Lt Gov	Council	6	0.5
Total			**75,170**	**$2,762.8**

Notes: The president of the Community College System is appointed by the State Board of Community Colleges. Total salary expenditures are from all funding sources and do not include fringe benefits associated with these positions.

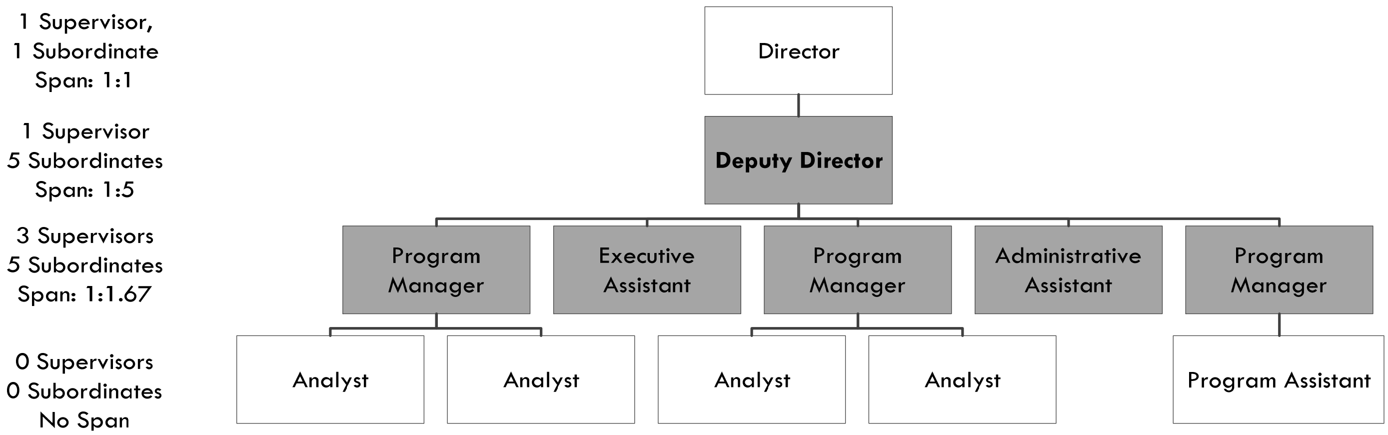
Source: Program Evaluation Division based of the State Constitution, General Statutes, and BEACON data as of June 2016.

Background

Two concepts related to organizational design—span of control and organizational layers—can affect an organization's efficiency and effectiveness. Low spans of control and high numbers of organizational layers increase the operating costs of departments, especially when these inefficiencies occur in executive offices, because of the higher salaries associated with executive office employees.

Span of control refers to the number of employees a supervisor oversees and can be expressed as a ratio. Exhibit 2 shows a hypothetical organization where the deputy director is a supervisor who directly oversees five employees and therefore has a span of control of 1:5. Knowing this ratio allows managers to compare spans across an organization and across sectors for similar work. Supervisors can have low (sometimes called small or narrow) or high (sometimes called large or broad) spans of control depending on the relative number of employees they oversee. Ideally, a supervisor has a span of control that provides the level of supervision employees need to perform the work of an organization efficiently and effectively.

Exhibit 2: Sample Deputy Director with Span of Control of 1:5



Source: Program Evaluation Division.

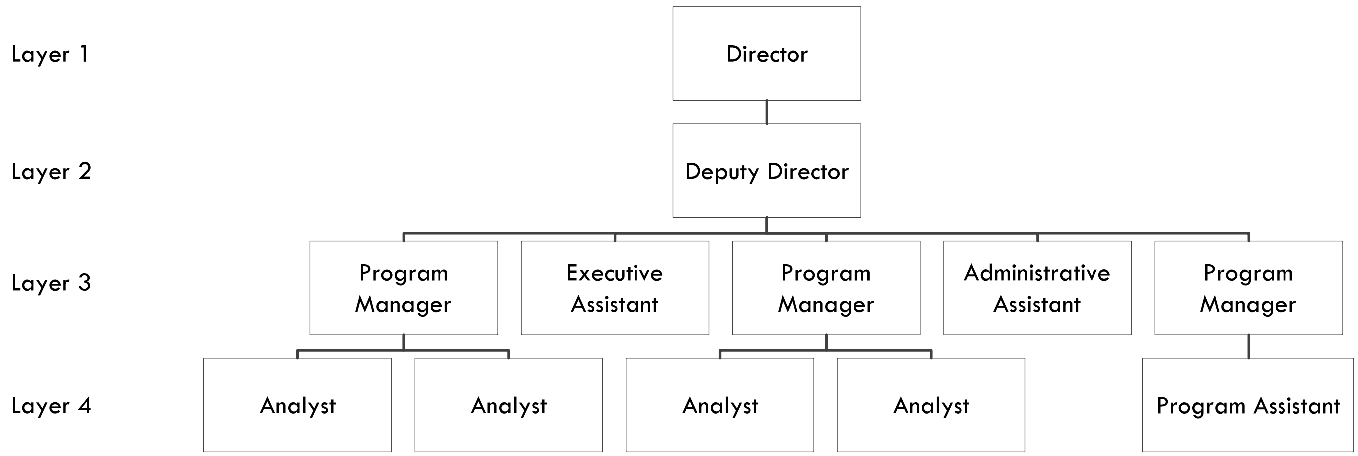
A variety of factors influence the determination of a supervisor's ideal span of control:

- clarity of organizational objectives,
- complexity of subordinates' work,
- degree of public scrutiny,
- degree of task certainty,
- degree to which employees are cross-trained,
- degree to which supervisor coordinates subordinates,
- geographic location of subordinates,
- liability or risk to the organization,
- number of temporary staff,
- qualifications and experience of subordinates,
- similarity of subordinates' activities,
- supervisor's burden of non-supervisory duties, and
- supervisor's skill in managing staff.

The relative weight of each factor differs depending on the type of work being done by supervisors and their subordinates. For example, a department may require more managers with lower spans of control for highly technical work needing closer supervision. In contrast, a department may require fewer managers with higher spans of control when the work of subordinates is routine and highly similar, thereby requiring less direct supervision.

Organizational layers refer to the number of levels in an organization's hierarchy, from the highest to lowest position. Exhibit 3 illustrates a hypothetical organization with four organizational layers. The supervisor to whom an employee reports would be considered part of the layer above, whereas the employees a supervisor oversees would be considered part of the layer below. Ideally, an organization has the number of organizational layers that best allows communication to flow freely, efficiently, and effectively.

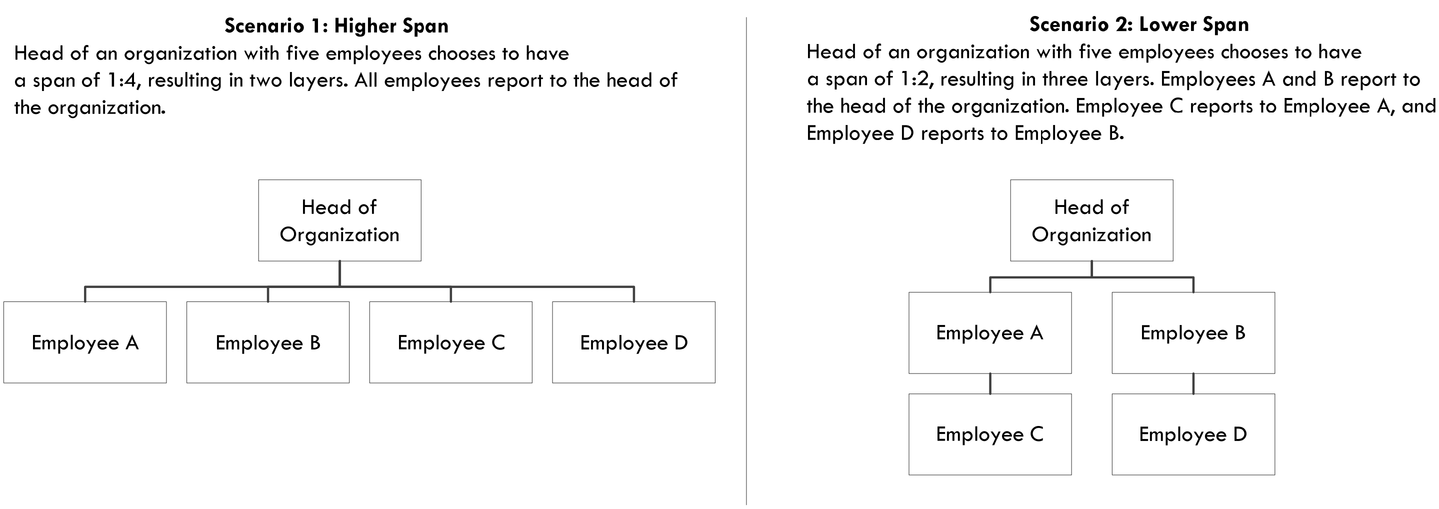
Exhibit 3: Sample Organization with Four Layers



Source: Program Evaluation Division.

Issues surrounding span of control and organizational layers often intertwine. Low spans of control can lead to a higher number of organizational layers. Exhibit 4 shows an example of how spans of control and organizational layers interact. The head of the organization has a higher span of control in Scenario 1 (1:4) than in Scenario 2 (1:2) and consequently the organization has fewer layers.

Exhibit 4: Low Span of Control Can Lead to Additional Organizational Layers



Source: Program Evaluation Division.

According to academic and practitioner literature on the subjects, there is no "one size fits all" standard when it comes to the number of subordinates or organizational layers. Nevertheless, as Exhibit 5 illustrates, low spans of control and high numbers of organizational layers trigger common concerns.[2] Because the organizational structure literature is largely anecdotal, authors who have recommended a single ideal number for

[2] The academic and practitioner literature cautions against excessively high spans of control as well because of the associated increase in the number of relationships supervisors must maintain.

either span of control or organizational layers or have implemented a mandated number in their own organizations have done so seemingly based on their own individual preferences.

Exhibit 5

Potential Consequences Related to Low Spans of Control and High Numbers of Organizational Layers

Potential Consequences of Low Spans of Control	Potential Consequences of High Numbers of Organizational Layers
• Superiors have more time to become too involved in subordinates' work • Less responsibility given to subordinates • Decreased morale due to micromanagement • Increase in number of organizational layers	• Slowed approval due to unnecessary layers and authority • Lack of accountability when decisions must go through various channels • Communication becomes slow and cumbersome • General morale and performance may decrease

Source: Program Evaluation Division based on review of academic and practitioner literature.

North Carolina state government has not formally evaluated spans of control and organizational layers in nearly 20 years. A series of studies in the 1990s explored these topics.

- **1993 GPAC Study.** The General Assembly Government Performance Audit Committee (GPAC) produced a report focusing on excessively narrow spans of control, excessive layers of management, one-on-one reporting relationships, and numerous units with small numbers of staff.
- **1996 OSBM Study.** The Office of State Budget and Management (OSBM) studied span of control within state departments, excluding the Community College System and University of North Carolina (UNC) system. OSBM recommended a minimum statewide span of control ratio of 1:8, recognizing that each department would have a different span based on benchmarks proposed for individual job classifications. OSBM also recommended a maximum of seven organizational layers per department.
- **1997 UNC Study.** UNC General Administration requested that OSBM analyze the UNC system's span of control. OSBM's report recommended the UNC system establish campus-wide spans of control and a benchmark of seven organizational layers.
- **1998 OSBM Study.** OSBM performed a follow-up study, this time including the UNC and Community College systems. The study found that excessively narrow spans of control and high numbers of organizational layers continued to be issues for state departments.

In addition to recommending a statewide minimum span of control and maximum number of organizational layers, OSBM recommended an alternative compensation model that rewarded technical leadership and expertise in addition to the traditional notion of rewarding employees with supervisory responsibilities.

Tracking average spans of control across a department can lead to deeper analysis of structural efficiency. Organizations in which supervisors are asked to oversee more employees typically show a corresponding decrease in the number of layers, thereby reducing the distance from an organization's leadership to its front-line employees. The Joint Legislative Program Evaluation Oversight Committee's 2015–17 Work Plan directed the Program Evaluation Division to evaluate the spans of control and organizational layers in the executive offices of state departments. This evaluation differs from the prior studies cited above because it includes both a statewide perspective on spans of control and organizational layers as well as an examination of these concepts in state department executive offices, defined as positions identified as such by department human resources representatives.

Findings

Finding 1. Of 21 state government departments, all but one have lower supervisor-to-employee ratios, on average, than the recommended statewide minimum ratio of 1:8.

To summarize the finding below, spans of control vary across departments. Currently, the average span of control across departments is 1:6.3, a slight improvement from 1995 when it was 1:5.4. Only one state department met the statewide span of control goal of 1:8 in 2016, and a majority of state departments have spans of control below 1:6. Further, several departments have high percentages of supervisors with narrow spans of control, potentially increasing the number of organizational layers.

Span of control reflects the number of employees each supervisor oversees, a definition that includes approving employee timesheets and conducting employee performance evaluations. A supervisor who performs these tasks for five employees would have a span of control ratio of 1:5. Individual spans of control for supervisors contribute to two additional measures of this concept within state government. First, a department-specific span of control captures the average number of positions that a supervisor in the department supervises. Second, statewide span of control describes the average number of positions that supervisors across all departments supervise. See Appendix A for a description of the methodologies for computing these respective measures.

Absent a better standard, the Program Evaluation Division applied OSBM's 1996 minimum statewide span of control ratio of 1:8. OSBM's 1996 report used a data-driven approach to develop a state-specific span of control standard for North Carolina state departments.[3] To arrive at the standard, OSBM first identified its population of supervisors by eliminating individuals supervising fewer than 3 or more than 30 individuals.[4] Following this step, OSBM computed average spans of control using position classification categories and then only included averages by classification categories that were greater than or equal to the average span of control during this time. This exercise resulted in a state-specific

[3] Although OSBM primarily relied on data to establish the 1:8 statewide benchmark, its review of literature and other states reinforced the standard.
[4] OSBM notes individuals with spans greater than 30 were eliminated because they were considered aberrations and impossible to emulate.

recommendation for supervisors to oversee eight or more positions on average. Unfortunately, the Program Evaluation Division could not replicate OSBM's approach with current information because the State's classification categories will be modified significantly in February 2017. Thus, a similar data-driven standard created at this time would not provide meaningful information for state departments moving forward.

As a result, the Program Evaluation Division looked to the literature and other states to determine if a more current and generally-accepted benchmark exists. The academic and practitioner literature lacks consensus on a recommended standard for span of control for either public or private organizations. In the public sector, the federal government's 1994 National Performance Review contained a plan to raise the government's average span of control from 1:7 to 1:14 but did not provide an explanation for why these ratios were chosen. Three states require state departments to adhere to department-wide span of control standards, and the ratios for these states, while informed by literature, do not appear to be data-driven.

- **Texas.** In 1997, the Texas legislature modified state law to require state departments to develop procedures to achieve management-to-staff ratios of 1:11.[5]
- **Iowa.** Since 1992, the Iowa General Assembly has mandated span of control standards for departments, and more recent legislation has required the Department of Management to develop a policy for state departments to calculate their spans of control.[6] [7] In 2015, only 11 of 70 (15%) Iowa state agencies subject to the law met their required target ratio of 1:15. Across state departments, Iowa's average span of control ratio was 1:11.2, which did not meet the state's target ratio.
- **Oregon.** Since 2011, the Oregon legislature has required the Oregon Department of Administrative Services to develop a plan for state departments with more than 100 employees to attain specific spans of control, which are to be used in the legislative budget process.[8] Departments not meeting the mandated statewide span of control ratio (1:11) are not allowed to fill supervisory positions unless granted an exception. State departments on average have increased their spans of control since 2011. As of 2016, 19 of 29 (66%) departments met their respective target span of control ratio.

[5] Texas Government Code, Chapter 651, Section 651.004. Since the time of OSBM's 1996 study, the Texas legislature revised this law and instituted a requirement that departments with more than 100 full-time equivalent employees may not employ more than one full-time equivalent management employee per 11 non-managerial staff positions. This requirement excludes certain types of employees within three Texas state departments: the Department of Family and Protective Services, Parks and Wildlife Department, and Texas Historical Commission. State departments in Texas that believe the minimum 1:11 ratio is inappropriate for their department may appeal to the Texas Legislative Budget Board for an exemption to this requirement.
[6] Iowa General Assembly, Retirement Incentives and Efficiency in Government Act, House File 2454, Chapter 1220.
[7] Iowa General Assembly, State Government Reorganization Act, Senate File 2088, Chapter 1031. This legislation also established a waiver process for executive branch department heads who believed they would not be able to reach target ratios; a five-member review board grants waivers.
[8] Oregon General Assembly, HB2020.

Each of these states' mandated ratios is greater than OSBM's 1996 recommendation. To be conservative, the Program Evaluation Division decided to apply OSBM's dated but more lenient 1:8 statewide benchmark to assess individual state departments' spans of control in the current study.

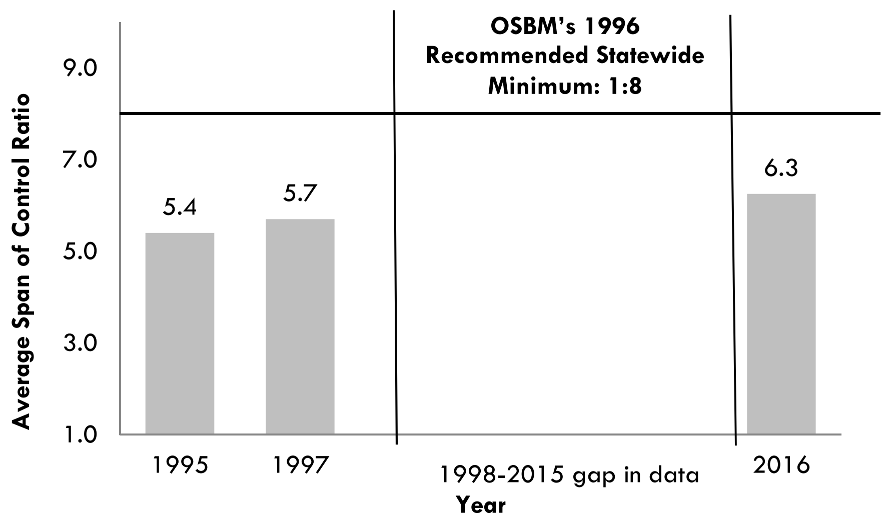
Today, the statewide span of control in North Carolina across 21 departments is 1:6.3. As Exhibit 6 shows, in 1996 OSBM found the statewide span of control was one supervisor to 5.4 employees (using 1995 data). After that report, departments undertook efforts to reduce the number of positions with narrow spans of control, defined as supervising three or fewer individuals, thereby increasing span of control averages. Two years later, OSBM issued a report using 1997 data that demonstrated the statewide span of control had improved to 5.7; however, this slight increase still fell short of the 1:8 statewide goal.

Departments were successful at reducing the number of supervisors with low spans of control between 1995 and 1997, producing a 40% reduction in their 1:1 spans and a 16% overall reduction in narrow spans. Departments generated $14.7 million in statewide savings due to span of control or layer improvements from eliminating positions.

In 2016, supervisors in state departments, on average, supervise six positions. Thus, supervisors are supervising slightly more positions compared to the 1990s.

Exhibit 6

The Recommended Statewide Span of Control Has Not Been Met



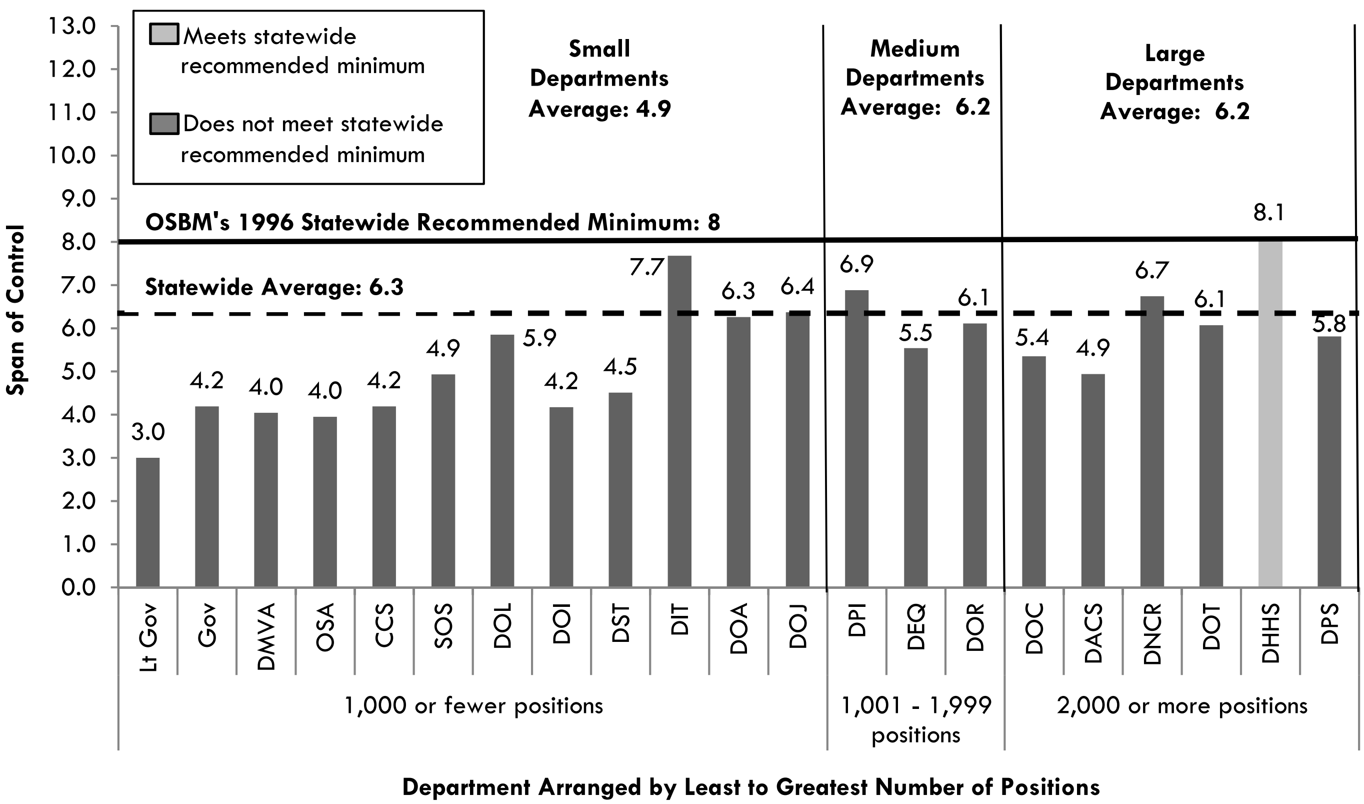
Notes: The years in the table show the respective years of supervisory data used, not necessarily the year in which a report was produced. The Program Evaluation Division attempted to analyze historical data but too many positions were missing or were transferred to other departments to generate reliable comparisons.

Source: Program Evaluation Division based on OSBM's 1996 and 1998 reports and BEACON data as of June 2016.

Only one state department has a span of control of 1:8. Although the statewide span of control has improved, 20 of the 21 principal state departments still have department-wide spans of control that are less than the statewide goal of 1:8. The Program Evaluation Division calculated the span of control for each state department using 2016 BEACON data based on the total number of supervisors and the total number of positions within departments. Appendix B shows each of the 21 departments' spans of control by organizational layer.

Exhibit 7 presents the spans of control of the 21 principal departments as of 2016 grouped by the total size of the department (based on the number of positions) and compares these to the recommended statewide benchmark of 1:8. As the solid line in the exhibit shows, only the Department of Health and Human Services (DHHS) has a span of control that meets the recommended statewide ratio of 1:8.[9] Overall, state departments' spans of control ranged from 1:3 to 1:8, with a statewide average of 1:6.3, shown by the dotted line in the exhibit. Six of the 21 state departments (DHHS, DNCR, DPI, DOJ, DOA, and DIT) meet or exceed the statewide average. Across all 21 departments, only 30% of supervisors oversee the recommended 8 positions or more.

Exhibit 7: Only One Department Meets the Recommended Statewide Span of Control Ratio of 1:8



Source: Program Evaluation Division based on BEACON data as of June 2016.

Because of significant size differences between departments, comparisons across all 21 departments may not be as meaningful as comparisons among departments with similar sizes. As the exhibit shows, variation exists among departments even within their size categories:

[9] The Program Evaluation Division sought to understand potential reasons for DHHS's higher-than-average span of control but department representatives stated there was no formal effort to increase spans. DHHS's department-wide span of control could be influenced by high spans in state-owned health facilities.

- Five (Lt Gov, Gov, DMVA, OSA, CCS, DOI, DST) of the 12 smaller departments have spans of control above the average span of control for their size classification (1:4.9);
- One (DPI) of the three medium-size departments has an average span of control above its size classification's average (1:6.2); and
- Two (DNCR and DHHS) of the six larger departments are above the size average for that classification (1:6.2).

Overall, the Lieutenant Governor's Office (the smallest state department) has the lowest span of control (1:3) and the Department of Health and Human Services (the second largest department) has the highest span of control (1:8.1).

A third of supervisors across state departments have narrow spans of control. OSBM's 1996 report defined narrow spans of control as supervisors overseeing three or fewer employees. As discussed in the Background, narrow spans likely increase the number of layers in an organization. Exhibit 8 shows the percentage of each department's supervisors having spans of control of 1:1, 1:2, or 1:3. In total, 33% of supervisors across the 21 departments have spans of control of 1:3 or less.

Exhibit 8

A Third of All Supervisors Oversee Three or Fewer Positions

Department Size Classification	Department	Percentage of Department Supervisors with Spans of Control of			
		1:1	1:2	1:3	Total 1:3 or Fewer
Large departments (2,000 or more positions)	DACS	19%	17%	15%	51%
	DNCR	20%	16%	10%	46%
	DOC	18%	14%	11%	43%
	DPS	12%	11%	10%	33%
	DOT	7%	10%	14%	30%
	DHHS	9%	9%	8%	26%
Medium departments (1,001 to 1,999 positions)	DOR	7%	11%	15%	32%
	DEQ	10%	11%	9%	29%
	DPI	13%	7%	8%	28%
Small departments (1,000 or fewer positions)	DMVA	15%	15%	23%	54%
	Lt Gov	50%	0%	0%	50%
	OSA	17%	12%	19%	48%
	DOI	15%	19%	14%	48%
	DST	11%	16%	18%	46%
	CCS	17%	11%	17%	45%
	Gov	6%	25%	13%	44%
	SOS	20%	10%	13%	43%
	DOA	13%	15%	11%	38%
	DOJ	11%	11%	6%	28%
	DOL	3%	11%	9%	23%
	DIT	6%	8%	5%	19%
Total across state departments		**11%**	**11%**	**11%**	**33%**

Notes: Percentage of total department supervisors is calculated using the supervisor with the respective span (1:1, 1:2, 1:3) as the numerator and the total number of department supervisors (defined as positions supervising at least one position) as the denominator. Total across state departments is based on the total number of supervisors with the respective spans of control, not the averages of the percentages across departments.

Source: Program Evaluation Division based on BEACON data as of June 2016.

As the exhibit shows, 13 of the 21 state departments have higher percentages of supervisors with spans of control of 1:3 than the statewide rate; 10 of these 13 departments are small departments and 3 are large departments. The Department of Information Technology has the fewest supervisors with narrow spans (19%) and the Department of Military and Veterans Affairs has the most supervisors with narrow spans (54%).

Finding 2. Of 21 state government departments, 10 exceed the recommended maximum of 7 organizational layers.

To summarize the finding below, the number of organizational layers varies across state departments. The average number of layers across departments is 8.1, an increase since 1996. Ten departments exceeded the maximum seven-layer benchmark in 2016, eight of which employ more than 1,000 positions. The remaining two departments exceeding the recommended maximum employ fewer than 1,000 positions.

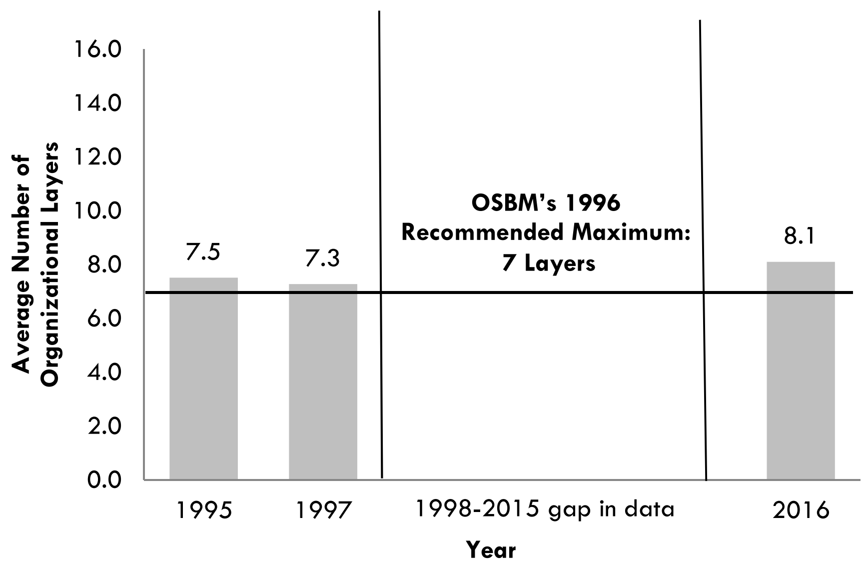
Organizational layers describe the distance of an organization from the top of the organization to the bottom. The supervisor to whom an employee reports would be considered part of the layer above, whereas the employees a supervisor oversees would be considered part of the layer below.

Absent a better standard, the Program Evaluation Division applied OSBM's 1996 benchmark of a maximum of seven organizational layers. As discussed in the Background, OSBM conducted a series of studies in the 1990s. At that time, OSBM established a statewide benchmark for the number of organizational layers of seven or fewer based on literature and efforts of other states. Similar to the benchmark for spans of control discussed in Finding 1, the Program Evaluation Division relied on the 1996 recommendation because of a lack of consensus in the literature and little evidence from other states on this topic. An example of organizational layer mandates in the private sector is the Kodak Company, which set and met a limit of five organizational layers without a loss of production.[10] In the public sector, all departments in Iowa and one department in the state of Washington underwent efforts to consolidate organizational layers, but specific numbers of layers were not mandated.

Today, the average number of organizational layers across state departments is 8.1. As Exhibit 9 shows, departments currently have more layers, on average, since OSBM's 1996 report found an average of 7.5 using 1995 data.

Exhibit 9

Average Number of Layers in State Departments Has Increased Since the 1990s



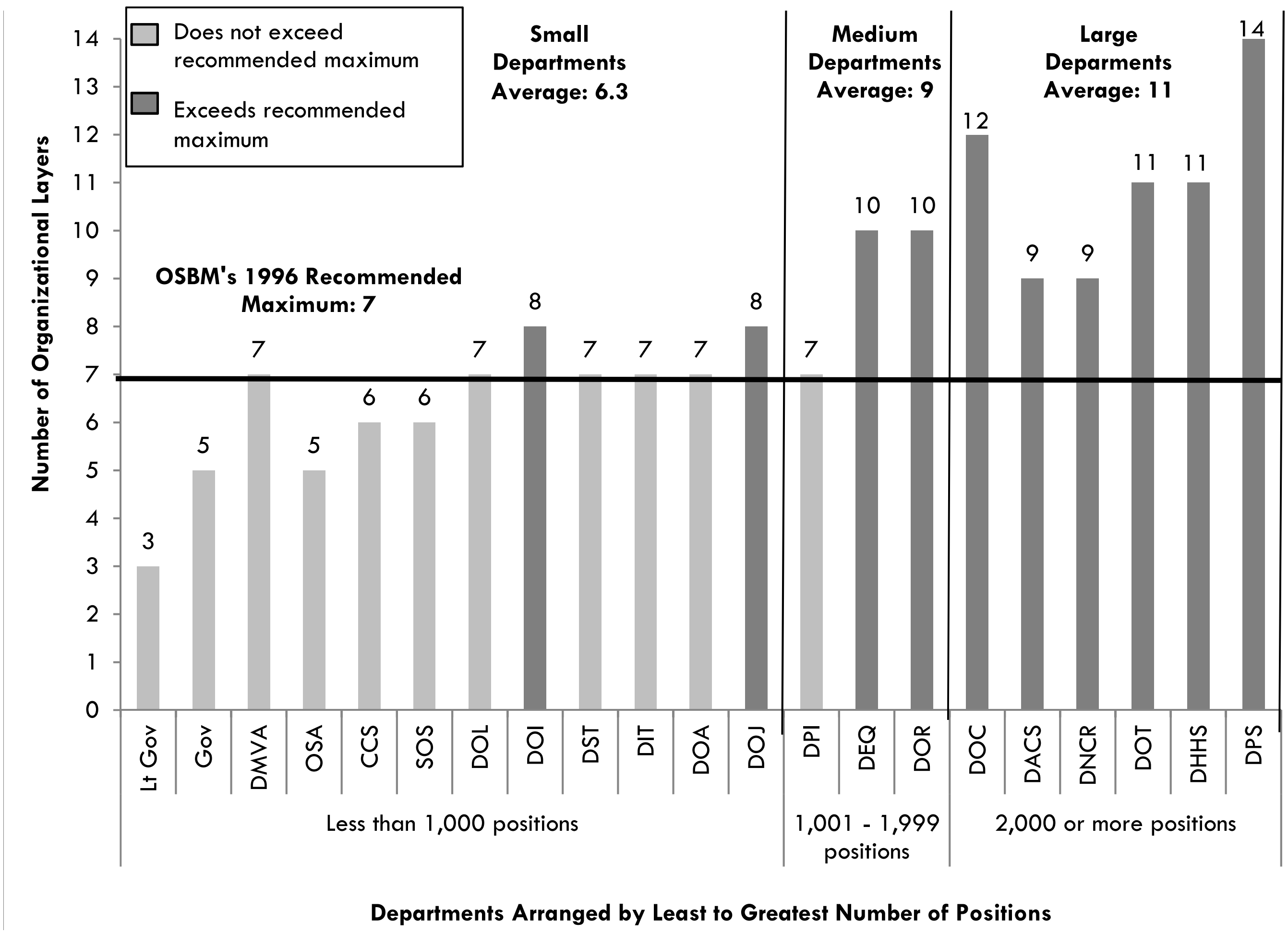
Notes: The statewide average number of organizational layers for each year is based on the number of state departments at the given time. Because of the reorganization and merger of departments, it was not possible to examine historical trends in the number of layers within each department in a valid manner.

Source: Program Evaluation Division based on OSBM's 1996 and 1998 reports and BEACON data as of June 2016.

[10] Hattrup, G. & Kleiner, B. (1993). How to establish the proper span of control for managers. *Industrial Management,* 35(6), 28-29.

Ten departments have more than the recommended seven layers. Exhibit 10 groups departments by size and compares the number of layers across the 21 principal departments. Of the ten departments exceeding the recommended maximum of seven organizational layers, two departments (DOI and DOJ) have 1,000 or fewer positions and eight departments have more than 1,000 positions (DEQ, DOR, DOC, DACS, DNCR, DOT, DHHS, and DPS). Only one department (DPI) with 1,000 or more positions does not exceed the maximum recommended number of layers.

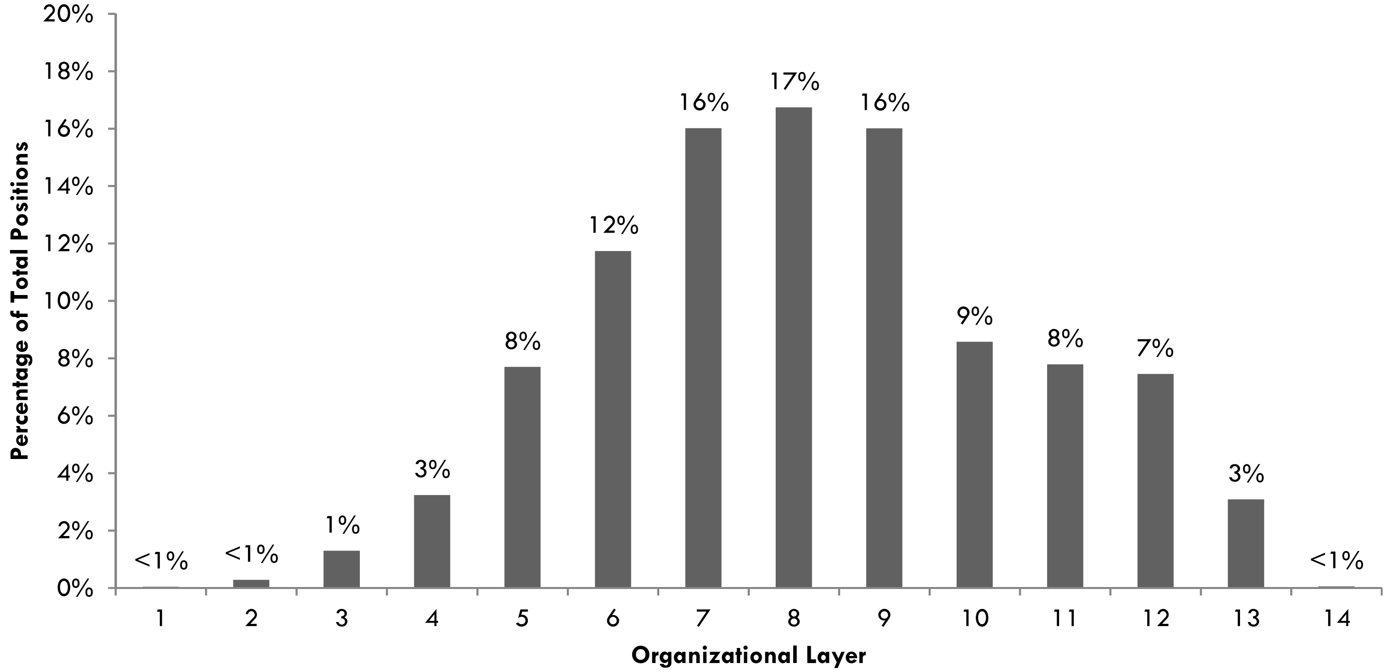
Exhibit 10: Ten Departments Have More than the Recommended Maximum Seven Layers



Source: Program Evaluation Division based on BEACON data as of June 2016.

The highest percentages of state government employees are in the seventh, eighth, and ninth layers of departments. Exhibit 11 shows the most populous layers across all departments. Forty-nine percent of state government positions are in layers seven, eight, and nine of departments, with the highest percentage (17%) in the eighth layer. More than 60% of positions are in layers beyond the recommended seventh layer.

Exhibit 11: The Highest Percentages of State Government Positions Are in Layers 7, 8, and 9



Source: Program Evaluation Division based on BEACON data as of June 2016.

Finding 3. Executive offices of state government departments vary in terms of their spans of control, number of layers, and salaries.

To summarize the finding below, North Carolina state departments self-identify 235 positions as members of executive offices. All executive office members are found in the first five layers of state departments, with most occupying the second layer of their respective organizations. On average, executive office members supervise six positions, but many (39%) supervise three or fewer positions. Executive office staff earn approximately $111,000 per year on average. The Program Evaluation Division found support for the idea that the primary way for state employees to earn more money is by assuming supervisory responsibilities; however, this incentive system may not promote maximizing spans of control and minimizing organizational layers.

Executive office members can be characterized as those employees performing high-level activities. In the absence of an agreed-upon definition in the literature or from other states, the Program Evaluation Division solicited information from departments on who they consider to be members of their executive offices. The Division provided representatives from each of the 21 principal departments with a list of all positions within its first five organizational layers and asked the department to identify executive office members.[11] Exhibit 12 shows departments self-identified 235 positions as executive office members, or .003% of all state

[11] Five organizational layers was chosen as the cut-off because a review of online organization charts revealed division directors appeared only as low as the fourth organizational layer. Department representatives had the opportunity to identify positions outside the first five layers as members of their executive offices.

employees in these 21 departments. There is variation in the number and types of positions serving in departments' executive offices, and the meaningfulness of comparisons across departments may be further limited because the positions were self-identified in the absence of a standard definition. Appendix D shows organization charts and spans of control for each department-identified executive office member.

Exhibit 12

State Department Executive Offices Consist of 235 Positions

Department Size Categorization	Department	Total Number of Executive Office Members	Percentage of Total Positions in Department
Large departments (2,000 or more positions)	DACS	10	<1%
	DNCR	7	<1%
	DHHS	20	<1%
	DOC	15	<1%
	DOT	19	<1%
	DPS	11	<1%
Medium departments (1,001 to 1,999 positions)	DEQ	7	<1%
	DPI	9	<1%
	DOR	14	<1%
Small departments (1,000 or fewer positions)	DIT	7	1%
	DMVA	5	5%
	DOA	7	1%
	DOI	10	2%
	DOJ	17	2%
	DOL	30	8%
	Gov	10	15%
	Lt Gov	2	33%
	CCS	4	2%
	OSA	7	4%
	SOS	9	5%
	DST	15	3%
Total		**235**	

Source: Program Evaluation Division based on BEACON data as of June 2016 and department responses.

The average span of control for executive office members is 1:5.6, which is below the recommended statewide goal of 1:8 and the overall statewide ratio of 1:6.3. The 235 positions designated as members of executive offices range from elected or appointed department heads to administrative assistants.

As discussed earlier, OSBM established a statewide recommended minimum span of control ratio of one supervisor to eight employees in the late 1990s. On average, state department executive office members supervise approximately six positions. Exhibit 13 shows the average spans of control for executive office members by organizational layer. Most large departments have higher average spans of control than medium or smaller-size departments. Executive office members' spans of control range from 0 positions (found in 14 departments) up to 55 positions (found in 1 department, the Department of Public Safety).

The department executive office with the highest average span of control is the Department of Information Technology (1:11), and the department with the lowest is the Office of the Lieutenant Governor (1:2.5).[12] Average spans of control of department heads are generally broader than those of their subordinates. In fact, 12 of the 21 department heads have spans of control exceeding the statewide recommended benchmark of a minimum of eight employees reporting to a supervisor.

Exhibit 13: Department Executive Office Staff Supervise Fewer than Six Positions on Average

Department Size Categorization	Department	Executive Office Member Average Span of Control (1 to)					Department Executive Office Span of Control (1 to)		
		Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Average	Department Minimum	Department Maximum
Large departments (2,000 or more positions)	DACS	9.0	6.6	1.0			4.6	0.0	10.0
	DNCR	7.0	11.3				10.7	3.0	19.0
	DHHS	20.0	5.6	21.0			7.1	0.0	21.0
	DOC	17.0	4.4				5.3	0.0	17.0
	DOT	11.0	6.0	9.0	10.0		7.9	0.0	21.0
	DPS	11.0	10.5				10.5	1.0	55.0
Medium departments (1,001 to 1,999 positions)	DEQ	8.0	5.8				6.1	1.0	10.0
	DPI	16.0	5.8				6.9	1.0	16.0
	DOR	9.0	3.9	4.2			4.4	0.0	9.0
Small departments (1,000 or fewer positions)	DIT	17.0	10.0				11.0	3.0	26.0
	DMVA	5.0	1.0	14.0			4.4	0.0	14.0
	DOA	11.0	3.3				4.4	0.0	11.0
	DOI	7.0	3.8	6.5			5.2	0.0	9.0
	DOJ	4.0	6.0	2.5	1.3		3.1	0.0	10.0
	DOL	4.0	2.8	2.3	3.3	7.3	3.4	0.0	8.0
	Gov	2.0	5.0	2.8	2.0		3.3	0.0	8.0
	Lt Gov	1.0	4.0				2.5	1.0	4.0
	CCS	10.0	3.0				4.0	0.0	10.0
	OSA	6.0	4.4	5.0			4.7	1.0	9.0
	SOS	5.0	3.7	3.6			3.8	0.0	9.0
	DST	9.0	5.6	3.7			5.1	0.0	13.0
Statewide							**5.6**		

Notes: The executive office member average span of control is based on the number of executive office members in each layer divided by the number of employees they oversee. The department executive office span of control is the average of all executive office members' spans of control. The statewide span of control is the sum of all executive office supervisors divided by the total number of positions reporting to an executive office member.

Source: Program Evaluation Division based on BEACON data as of June 2016 and department responses.

Ninety-two executive office members have narrow spans of control, supervising three or fewer positions. As Exhibit 14 shows, 39% (n = 92) of executive office members supervise three or fewer positions. Thirty-eight (16%) executive office members do not supervise any positions. Only 66

[12] The Office of the Lieutenant Governor's low department span of control is due to its small size (two supervisory positions and six total positions).

(28%) of the 235 executive office positions supervise the recommended eight or more positions.

Exhibit 14

Only 28% of Executive Office Members Supervise the Recommended Eight or More Positions

Executive Office Members	Span of Control					
	1:0	1:1	1:2	1:3	1:4 to 1:7	1:8 or More
Number of Executive Office Members	38	22	14	18	77	66
Percentage	16%	9%	6%	8%	32%	28%

Source: Program Evaluation Division based on BEACON data as of June 2016 and department responses.

More than one-fourth of executive office members believe they could supervise more employees without their performance being affected. The Program Evaluation Division surveyed state employees who were identified as members of their departments' executive offices.[13] The survey found 28% of supervisors (n = 45) believe they could supervise more positions, but a majority (n = 104 or 66%) think they supervise about the right number of positions. On average, supervisors believe they spend nearly a quarter of their time (24%) on supervisory responsibilities.[14] This figure suggests that many supervisors are what OSBM's 1996 report referred to as "working supervisors," employees who have programmatic or technical responsibilities in addition to supervisory responsibilities.

The majority (57%) of executive office members are in the second layer of their organizations. As shown in Exhibit 15, the number of executive office members by layer varies among departments. More than half of all executive office members (n = 133 or 57%) report directly to the department head. Although every department has executive office members in the second organizational layer, nine departments have executive members in their third organizational layer and three departments have executive office members in their fourth layer. Only the Department of Labor, which has the highest number of executive office members (n = 30), of any state department, has executive office members in the fifth organizational layer.

Most executive office members believe their organizations have "about the right number of layers." The Program Evaluation Division's survey of executive office members found 90% (n = 142) of executive office members believe their department has about the right number of layers, 9% (n = 14) believe their department has too many layers, and only 1% (n = 2) believe their department has too few layers to ensure the efficient achievement of the department's goals. In addition, 92% (n = 132) of executive office members believe the organizational layer above them is effective.

[13] In response to a query from the Program Evaluation Division, department human resources representatives from each of the 21 principal departments identified members of their department's executive office (n = 235). Of the 235 self-identified executive office members, 158 members (67%) responded to the Division's survey and supervised at least one position. See Appendix C for individual response rates by principal departments.

[14] In its 1996 report, OSBM estimated supervisors spent 10% to 25% of their time on supervisory responsibilities.

Exhibit 15

Number of Executive Office Members by Layer Varies Among Departments

Department Size Categorization	Department	Number of Executive Office Members in Layer					
		1	2	3	4	5	Total
Large departments (2,000 or more positions)	DACS	1	5	4			10
	DNCR	1	6				7
	DHHS	1	18	1			20
	DOC	1	14				15
	DOT	1	8	9	1		19
	DPS	1	10				11
Medium departments (1,001 to 1,999 positions)	DEQ	1	6				7
	DPI	1	8				9
	DOR	1	8	5			14
Small departments (1,000 or fewer positions)	DIT	1	6				7
	DMVA	1	3	1			5
	DOA	1	6				7
	DOI	1	5	4			10
	DOJ	1	4	8	4		17
	DOL	1	4	9	13	3	30
	Gov	1	3	5	1		10
	Lt Gov	1	1				2
	CCS	1	2	1			4
	OSA	1	5	1			7
	SOS	1	3	5			9
	DST	1	8	6			15
Total		**21**	**133**	**59**	**19**	**3**	**235**

Source: Program Evaluation Division based on BEACON data as of June 2016 and department responses.

The average salary for the 235 executive office members is approximately $111,000, with salaries totaling $26.1 million annually. Salaries for the 235 self-identified executive office members range from $33,365 to $380,375. As shown in Exhibit 16, executive office members in the Department of Information Technology have the highest average salary ($147,465), and those in the Department of Military and Veterans Affairs have the lowest average salary ($71,223).[15]

OSBM's study in the 1990s of span of control, organizational layers, and employee salaries stated that a primary way for state employees to increase their salaries is to become supervisors. As a result, the Program Evaluation Division explored the salaries of executive office members who are in the highest levels of state departments and who are therefore more likely to supervise other positions.[16]

[15] The Department of Labor has the most executive office members (n = 30) and its total salary expenditures for these staff is the second highest ($2.3 million). The Department of Health and Human Services has the second most executive office members (n = 20), and its total salary expenditures for these staff is highest ($2.8 million).

[16] Because of data validity concerns, the Program Evaluation Division explored the following concepts using executive office span of control data validated by each of the 21 departments.

Exhibit 16: Annual Salaries of Department Executive Office Members Total $26.1 Million and Average $111,000

Size	Department	Number of Positions	Average Salary	Minimum Salary	Maximum Salary	Total Salary Expenditures
Large departments (2,000 or more positions)	DHHS	20	$140,207	$47,000	$211,050	$2,804,133
	DOT	19	119,587	80,000	162,080	2,272,151
	DPS	11	115,057	97,283	136,000	1,265,622
	DNCR	7	113,733	88,660	136,000	796,133
	DOC	15	106,484	60,000	136,000	1,597,264
	DACS	10	94,707	51,250	125,676	947,072
Medium departments (1,001 to 1,999 positions)	DPI	9	122,374	84,757	154,824	1,101,364
	DEQ	7	116,365	64,263	139,000	814,558
	DOR	14	106,336	51,000	179,000	1,488,704
Small departments (1,000 or fewer positions)	DIT	7	147,465	127,765	170,000	1,032,254
	DST	15	143,897	82,434	380,375	2,158,457
	CCS	4	140,696	45,000	286,954	562,783
	Gov	10	126,077	88,500	152,000	1,260,765
	Lt Gov	2	122,838	120,000	125,676	245,676
	OSA	7	120,421	92,500	131,559	842,946
	DOI	10	110,743	50,585	132,134	1,107,428
	DOA	7	105,111	72,600	129,000	735,779
	SOS	9	99,258	65,188	125,676	893,323
	DOJ	17	90,381	33,365	161,914	1,536,483
	DOL	30	76,468	38,052	125,676	2,294,051
	DMVA	5	71,223	46,000	101,000	356,114
State Total		**235**				**$26,113,060**

Notes: Salaries include all sources of funding, not only state appropriations.

Source: *Program Evaluation Division based on BEACON data as of June 2016 and department responses.*

Analyses of executive office members' spans of control and salaries supports the idea that the primary way for state employees to increase their salaries is to become supervisors. In its 1996 study, OSBM noted that a primary way for state employees to increase their salaries is to become supervisors, and found empirical support for the idea.[17] The Program Evaluation Division sought to test three hypotheses related to the impact of span of control and organizational layers on employee salaries.

- The first hypothesis was that supervisors have higher salaries than non-supervisors. The Program Evaluation Division found support for this hypothesis as supervisors in executive offices on average earn nearly $46,000 more than non-supervisors in executive offices.[18]

[17] OSBM found a supervisor's span of control was one of four significant variables in determining his or her salary; the other significant variables included his or her years of service in state government, education level, and professional classification. Unfortunately, the Program Evaluation Division could not replicate OSBM's analysis because position classification categories are set to change significantly in February 2017. During this evaluation, the Program Evaluation Division confirmed with OSBM and OSHR that they still believe becoming a supervisor is a popular way to increase one's earnings because it is one of a limited number of ways to increase current employees' earnings.

[18] Executive office members identified as supervisors in BEACON on average earn $118,412, whereas non-supervisors earn $73,312; this difference is statistically significant ($p < .05$). Excluding administrative and executive assistants, supervisors on average earn $118,412, whereas non-supervisors earn $84,226; this difference is also statistically significant ($p < .05$).

- The second hypothesis was that an employee's salary increases as the number of employees he or she supervises increases. The Program Evaluation Division found some support for this hypothesis—as an executive office member's span of control increases by one position, the executive office member's salary increases by $2,887.[19]
- The third hypothesis was that an employee's salary increases as the employee moves to a higher organizational layer. As state employees supervise more staff, they often move up the organization's hierarchy to the next organizational layer. The Program Evaluation Division found some support for this hypothesis—executive office members earn $18,628 more for each layer they move up in an organization.[20]

The State's compensation system could be discouraging departments from maximizing spans of control and minimizing organizational layers. The findings above provide support for the idea that employees have a monetary incentive to become supervisors, oversee more employees, and move up organizational layers within their departments. Consequently, departments may be designating more supervisors than necessary in order to monetarily reward their employees, which could introduce lower spans of control and higher numbers of organizational layers than necessary.

Recognizing the monetary incentive for employees to become supervisors, OSBM's 1998 report recommended an alternative method of rewarding employees. The report recommends the State reward employees for developing technical leadership expertise for their particular function or tasks. This alternative would likely address concerns with giving employees supervisory responsibilities primarily to increase their salaries and hopefully retain them.

Finding 4. State departments have broad discretion to determine their organizational structures and receive limited guidance.

Earlier findings in this evaluation show significant variation in the spans of control and number of organizational layers across departments. To summarize the finding below, departments have broad discretion to determine their organizational structures. OSBM and OSHR are the state agencies in the best position to provide guidance to promote greater consistency. Currently, OSBM and OSHR conduct a number of activities related to spans of control and organizational layers but only provide ad hoc guidance or assistance to departments on these topics and have no statutory authority regarding these concepts.

The North Carolina State Constitution and General Statutes provide state departments with broad discretion in structuring their organizations. The guidance that these sources do provide focuses on the efficient administration of state departments with no mention of department spans of control or organizational layers. Because "efficient administration" is not

[19] This finding is statistically significant ($p < .05$).
[20] This finding is statistically significant ($p < .05$).

defined in statute, state departments are permitted to structure and manage themselves as they see fit.

- **North Carolina State Constitution.** According to the State Constitution, "The General Assembly shall prescribe the functions, powers, and duties of the administrative departments and departments of the State and may alter them from time to time, but the Governor may make such changes in the allocation of offices and departments and in the allocation of those functions, powers, and duties as he considers necessary for efficient administration."[21] Thus, although the General Assembly has the authority to set the direction and duties of state departments, the day-to-day administration and organizational structures within state departments are left to the Governor's discretion.

- **Executive Organization Act of 1973.** This act grants department heads broad power to achieve efficient functioning of their respective state departments, including the power to

  - establish or abolish any division or unit to achieve economy and efficiency with the approval of the Governor and notification of the General Assembly within 30 days of such action,
  - establish or abolish positions,
  - transfer employees between positions, and
  - change the duties, titles, and pay of existing positions.[22]

  This act also establishes the nomenclature for department structure but does not go further than five layers of management (see Exhibit 17).[23]

Exhibit 17

State Law Only Provides Nomenclature for Five Layers of Management

Layer of Management	Statutory Nomenclature
1	Agency Agency Head
2	Division Division Director
3	Division Section Section Chief
4	Division Section Branch Branch Head
5	Division Section Branch Unit Unit Supervisor

Source: Program Evaluation Division based on N.C. Gen. Stat. §143B-11.

[21] Article III, Section 5.
[22] N.C. Gen. Stat. Chp. 143-B.
[23] N.C. Ge. Stat. § 143B-11.

- **Human Resources Act.** This act limits the number of positions within each Cabinet and Council of State department that can be designated as exempt from this act, thereby increasing a department head's flexibility regarding personnel actions.[24] In addition to the specific positions that state law designates as exempt, department heads have the following discretion to make additional positions exempt.
  - For Cabinet departments, the Governor may designate a total of 1,500 exempt positions. Within Cabinet departments, 734 positions were exempt positions as of June 2016.
  - For Council of State departments, department heads may designate as exempt the greater of 40 positions or 2% of the department's total full-time positions.[25] Within Council of State departments, 321 positions were exempt positions as of June 2016.
- **Various statutes.** Certain statutes require departments to employ specific positions, but this information is not collected systematically. For example, state law requires the Department of Health and Human Services to employ a State Health Director. The Program Evaluation Division attempted to determine whether or not each of the 235 executive office member positions was statutorily required using information provided by departments and BEACON. Unfortunately, even for these select positions, the two sources did not provide an accurate and exhaustive list of statutorily required positions such that the Division could publish the information absent significant department involvement for verification.

Absent statutory direction, state departments have broad discretion to determine their organizational structures. Two state entities—OSBM and OSHR—are in a position to provide departments with standards and perform centralized activities related to span of control and organizational layers. These two entities also could provide periodic reports to the General Assembly and the Governor on these topics, but currently they are not doing so.

Currently, OSBM and OSHR only provide ad hoc guidance on span of control and organizational layers at the request of state departments. As discussed earlier, state law only refers to the efficient management of state departments as being the responsibility of the Governor or respective department heads. Thus, the two entities whose charge it is to coordinate and facilitate budgetary and personnel matters lack specific legal direction and authority to develop standards and require departments to justify any decreases in their spans of control and increases in their organizational layers. Despite having no specific statutory requirement to do so, OSBM and OSHR perform several activities related to these matters.

[24] N.C. Gen. Stat. Chp. 126.
[25] N.C. Gen. Stat. §126-5(D)(2) specifies that Council of State department heads may designate the greater of 20 positions or 1% of the department's total full-time positions as exempt policy-making and the greater of 20 positions or 1% of the department's total full-time positions as exempt managerial.

Appendix E shows the various activities each entity performs related to spans of control and organizational layers.

However, none of these activities considers spans of control or organizational layers within an entire department or compares departments based on these elements. Instead, the various activities and analyses OSBM and OSHR conduct focus on specific positions, classifications of positions, or budgetary matters. These ad hoc efforts, while helpful to specific departments, do not provide systematic guidance to departments on spans of control or organizational layers, which could promote consistent and efficient organizational structures across state government. As Exhibit 18 shows, state departments lack the kinds of guidelines and requirements that would promote accountability and the active management of organizational structures. Such guidelines could enable departments to better understand their organization's spans of control, identify supervisors with excessively low spans, or identify supervisors with the potential to supervise more individuals.

Exhibit 18: Neither OSHR or OSBM Provide Consistent Guidance or Require Department Action on Important Elements of Organizational Structure

Entity	Timely Updating and Public Display of Department Organization Charts by State Departments		Timely Submission of BEACON Supervisory Relationship Changes by State Departments		Monitoring and Reporting of Spans of Control and Organizational Layers in Comparison to Benchmarks by State Departments	
	Statewide Guidance Provided	Statewide Requirements Provided	Statewide Guidance Provided	Statewide Requirements Provided	Statewide Guidance Provided	Statewide Requirements Provided
OSBM	✘	✘	✘	✘	✘	✘
OSHR	✓	✘	✘	✘	✘	✘

Source: Program Evaluation Division based on information from OSHR and OSBM.

The lack of the following requirements to provide data that informs analysis of spans of control and organizational layers hampers the ability of state central offices to compare the efficiency of departments.

- **No requirement for departments to update and publish organization charts online.** Making organization charts available to both department employees and the public provides a mechanism for determining the activities and accountability structures of a department. However, neither OSBM nor OSHR formally requires departments to update or publicly display their organization charts at a regular interval. OSBM officials state that although there is no formal requirement, department organization charts are requested on an ad hoc basis for specific studies or analyses or for department reorganizations proposed during the budgetary process. OSHR officials state that they ask departments to update their organization charts monthly and ask for copies for certain ad hoc studies they perform, but they do not require departments to update these charts or make them publicly available online.[26] The Program Evaluation Division determined that 8 of the 21 principal departments display high-level organization charts on their websites.[27]

- **No requirement for departments to submit supervisory relationship changes to BEACON in a timely manner.** The Office of the State Controller (OSC) maintains and processes department-submitted changes affecting state personnel in BEACON, including position reporting relationships. Currently, there is no timeframe requirement from OSBM or OSHR for departmental human resources representatives to submit BEACON change requests relating to structural changes. A requirement for the timely submission of change requests relating to organizational structure would provide up-to-date information on a department's span of control and organizational layers. Up-to-date supervisory relationship data would allow the department itself, OSBM, and OSHR to use this data to perform organizational structure analyses.
- **No requirement for departments to examine spans of control and organizational layers periodically.** Organizations that periodically examine their spans of control and layers gain insight into the efficiency and effectiveness of their organizational structure. No central office within the State has examined these topics across departments since the late 1990s. OSBM's prior reports recommended departments monitor their spans of control and organizational layers. Neither OSBM nor OSHR require departments to conduct these activities at any given time interval. Requiring departments to monitor their spans of control and organizational layers would facilitate department comparisons and could potentially increase the efficiency of departments' structures.

These findings demonstrate that most state departments have not met statewide recommendations regarding minimum spans of control or maximum number of organizational layers and are unlikely to meet these standards in the future unless a review and justification process is developed. As Finding 1 discussed, all but one state department has lower supervisor-to-employee ratios, on average, than the recommended statewide minimum span of control ratio of 1:8. Finding 2 showed that 10 of the 21 departments, on average, exceed the recommended seven organizational layers. As Finding 3 discussed, the executive offices of state departments vary in terms of spans of control, number of layers, and salaries of employees occupying these offices. Finally, Finding 4 showed state agencies have broad discretion in determining their organizational structures and receive limited guidance.

[26] OSHR staff state they have developed a policy which would require departments to publish their organization charts, for consideration by the State Human Resources Commission. The Program Evaluation Division reviewed the draft policy and determined it does not require departments to publish organization charts in a uniform format.

[27] The Program Evaluation Division conducted an online search for each of the 21 principal departments' executive office organization charts on May 19, 2016. The eight departments displaying organization charts online are the departments of Administration, Agriculture and Consumer Services, Environmental Quality, Information Technology, Public Instruction, Public Safety, Transportation, and the State Treasurer.

Recommendations

Recommendation 1. The General Assembly should direct the Office of State Human Resources to take steps to proactively monitor state department spans of control and organizational layers.

As discussed in Finding 4, state departments have broad discretion in structuring their organizations. In addition, neither the Office of State Budget and Management (OSBM) nor the Office of State Human Resources (OSHR) issues standards or have requirements for departments to monitor and evaluate their spans of control and organizational layers. As Finding 1 and Finding 2 discussed, there are wide variations in the structuring of state departments, both in terms of spans of control and the number of organizational layers. The General Assembly should direct OSHR to take the following actions.

- **Develop standards for departments that promote a consistent nomenclature of positions within executive offices and ensure BEACON data is updated in a timely manner.** Executive office members within departments have a variety of position titles, many of which are not equivalent by organizational layer across departments. For example, a Deputy Secretary may be the equivalent of an Assistant Secretary in another department, and the two positions could be at different layers in the two departments. To address this issue, the General Assembly should direct OSHR to develop a standard organizational layer nomenclature, building on the nomenclature specified in N.C. Gen. Stat. §143B-11, which would promote consistency and clarity of responsibilities across departments.

  The State's human resources management system (BEACON) contains the information for each position's supervisor and is the basis for any analyses of organizational structure. The primary incentive for departmental human resources staff to update BEACON is to ensure the correct supervisor approves the timesheets of those employees occupying positions they oversee. This evaluation found the supervisors of several positions were not correctly identified in BEACON. For example, BEACON erroneously listed four staff within the Governor's office reporting to one position when they actually report to another. To address this issue, the General Assembly should direct OSHR to develop a policy requiring department human resources representatives to submit any changes in supervisory reporting structures to the Office of the State Controller within five days of the effective date of the change.

- **Develop a formalized organization chart format across state government departments and require state departments to regularly update and publish their organization charts online.** Some departments use the BEACON-provided organization chart functionality, whereas others simply download the data into another software program to produce organization charts. A consistent approach for producing organization charts at a regular interval would promote comparisons across departments. To address this issue, the General Assembly should direct OSHR to develop a standard organization chart format for departmental executive offices.

Publicly displaying a department's organization chart would provide citizens, department staff, and staff in other state departments with an overview of how the functions and duties of each department are organized. To address this issue, the General Assembly should direct OSHR to require departments to publish the standardized organization charts of their executive offices on their respective websites and update them quarterly. The General Assembly should also direct OSHR to develop a process for departments to submit their executive office organization charts at least semi-annually to be compiled in a single location on the OSHR website for convenient public inspection.

- **Establish formal policies and procedures for staffing and position analyses to include the components of spans of control and organizational layers.** As discussed in Finding 4, OSHR conducts a variety of analyses related to state government personnel; however, none of these analyses requires consideration of a position's span of control or a department's number of organizational layers. As a result, there may be little consideration of the effect of OSHR actions (approving positions, reclassifying positions, approving job duties, etc.) on a department's overall supervisory relationships, the spans of control for positions within the same job classification across departments, or a department's number of layers. Furthermore, as Finding 3 discussed, nearly a quarter of executive office members believe they could supervise more positions without their job responsibilities being negatively affected.

  The General Assembly should require OSHR to incorporate spans of control and organizational layers as a component of analyses, which would inform its determinations of whether supervisory work could be performed by existing staff. OSHR's analyses and activities should document circumstances in which OSHR approves actions that would allow a position to not meet the minimum span of control ratio for the position's job classification (as established by OSBM in Recommendation 2), including a justification for the deviation.

  In addition, the General Assembly should require OSHR to develop criteria-based technical leadership tracks as an alternative way to reward and retain valuable employees, instead of making them supervisors. OSHR should provide an implementation plan to the General Assembly, including proposed legislation to implement the plan, by June 30, 2017.

Recommendation 2. The General Assembly should direct OSBM to report every five years on each state department's span of control and organizational layers.

As discussed in the Background and Finding 4, no state entity has reported on the spans of control and organizational layers of all executive branch state departments since the 1990s when OSBM recommended a minimum average span of control of 1:8 across departments and a maximum of seven organizational layers. Finding 1 demonstrated there has been improvement in the statewide average span of control (from 5.4 in 1995 to 6.3 in 2016), but only one state department currently meets the statewide goal. Prior to the current Program Evaluation Division study, the General Assembly has not been provided updated data on these topics. Whereas Recommendation 1 would provide systematic approaches for OSHR in using span of control and organizational layer information to inform studies of department staffing, this recommendation would assign OSBM the task of producing statewide data and reporting it to the General Assembly.

To address this issue, the General Assembly should direct OSBM to report by December 1, 2017 and every five years thereafter to the Joint Legislative Commission on Governmental Operations and the Fiscal Research Division on principal departments' spans of control and organizational layers. At a minimum, the required report should include the following components:

- each department's span of control and number of organizational layers
- each department's span of control by organizational layer, and
- the number and percentage of each department's supervisors with narrow spans of control (defined as ratios of 1:3 or fewer).

In the course of producing this report every five years, OSBM should conduct historical analyses and revise its statewide span of control ratio as appropriate based on forthcoming changes to the State's position classification categories. Furthermore, the General Assembly should require OSBM to establish span of control benchmarks for each job classification similar to its 1996 report, based on the upcoming reclassification process to be completed by February 2017. This report would provide historical information to the General Assembly on how the number of supervisors, spans of control, and organizational layers across departments have changed because of Recommendation 1's implementation. This report would also provide information on the spans of control of positions within each of the new job classifications and would provide department leaders with information to benchmark their own performance against other departments' performances. For example, the Department of Labor, a small department, has the most executive office members (n = 30), and those members occupy the most organizational layers (n = 5). In this report, OSBM should note departments whose overall span of control ratio decreases, departments whose overall number of layers increases, and departments with positions that do not meet the minimum span of control ratio for their respective job classifications. Having this information would give the General Assembly the opportunity to request further information justifying deviations from benchmarks for these specific positions and departments.

Appendices

Appendix A: Definitions and Methodologies for Calculating Spans of Control

Appendix B: Span of Control by Organizational Layer in State Departments

Appendix C: Executive Office Member Survey Response Rates

Appendix D: Organization Charts for Department-Identified Executive Office Members (Arranged from Largest to Smallest Department)

Appendix E: OSBM and OSHR Activities Relating to Spans of Control and Organizational Layers

Agency Responses

A draft of this report was submitted to the Office of State Budget and Management and Office of State Human Resources to review. Their joint response is provided following the report.

Program Evaluation Division Contact and Acknowledgments

For more information on this report, please contact the lead evaluator, Brent Lucas, at brent.lucas@ncleg.net.

Staff members who made key contributions to this report include Pat Madej and Kiernan McGorty. John W. Turcotte is the director of the Program Evaluation Division.

Appendix A: Definitions and Methodologies for Calculating Spans of Control

The Program Evaluation Division calculated two primary measures related to span of control—a department-specific total span of control and a statewide total span of control—for comparability with prior studies by the Office of State Budget and Management.

Department-specific total span of control. A department's total span of control is the total number of positions within the organization divided by the total number of supervisors. This organization-wide total span of control measure shows on average how many positions a supervisor supervises.

The table below shows an example of calculations for a department's span of control. Example Department A with 2,000 employees, of which 100 are supervisors, has a department-specific total span of control of 1:20. In comparison, Example Department B with the same number of total employees (2,000), of which 300 are supervisors, has a lower department-specific total span of control (1:6.7).

Type of Span Measure	Entity	Total Number Employees	Total Number of Supervisors	Method to Determine Total Span of Control	Span of Control Ratio
Department-Specific Total Span of Control	Example Department A	2,000	100	2,000 / 100	1:20
	Example Department B	2,000	300	2,000 / 300	1:6.7
Statewide Total Span of Control	Example Departments A and B	4,000	400	$\frac{2{,}000 + 2{,}000}{100 + 300}$	1:10

Notes: The total number of employees includes both supervisors and those they oversee. An alternative approach to calculating span of control uses a numerator that excludes supervisors in the total number of employees. For example, Example Department A would have 1,900 non-supervisory employees and 100 supervisors, and its span of control would be calculated by dividing 1,900 by 100, thereby producing a span of 1:19.

Source: Program Evaluation Division.

Statewide total span of control. The statewide total span of control reflects the total number of employees in departments divided by the total number of supervisors in departments. In the table above, assuming state government consisted of only these two departments, Departments A and B have 4,000 total employees, of which 400 are supervisors, producing a statewide total span of control of 1:10.

Appendix B: Span of Control by Organizational Layer in State Departments

Department Size Categorization	Department	Span of Control 1:													Total Positions	Department Span of Control
		Layer 1	Layer 2	Layer 3	Layer 4	Layer 5	Layer 6	Layer 7	Layer 8	Layer 9	Layer 10	Layer 11	Layer 12	Layer 13		
Large departments (2,000 or more positions)	DPS	2.9	8.1	4.9	4.3	5.0	5.7	5.3	6.0	5.1	5.1	7.6	7.1	3.7	26,042	5.81
	DHHS	20.0	6.3	5.4	6.2	6.0	7.1	8.2	10.4	9.3	7.3				18,055	8.08
	DOT	11.0	7.9	5.9	6.9	5.4	6.0	6.9	5.2	5.6	8.7				13,723	6.07
	DNCR	7.0	9.9	5.0	5.1	5.6	10.4	4.3	5.5						3,221	6.74
	DACS	5.5	4.9	5.9	5.5	5.9	3.7	6.1	4.4						2,656	4.94
	DOC	6.8	4.8	4.9	7.6	5.2	4.0	4.6	12.5	8.3	4.0	2.0			2,583	5.35
Medium departments (1,001 to 1,999 positions)	DOR	9.0	4.9	4.5	5.8	6.7	4.4	7.0	11.9	13.8					1,919	6.11
	DEQ	8.0	5.1	4.5	4.6	5.5	6.5	5.8	3.7	5.3					1,694	5.54
	DPI	16.0	4.6	7.0	7.1	7.0	5.8								1,176	6.88
Small departments (1,000 or fewer positions)	DOJ	4.0	8.0	5.8	8.6	4.4	7.1	5.0							847	6.37
	DOA	11.0	5.0	4.7	9.6	4.1	4.6								651	6.26
	DIT	17.0	7.3	6.4	9.5	8.4	3.3								607	7.68
	DST	9.0	5.1	3.8	3.4	3.7	9.3								442	4.51
	DOI	7.0	4.8	3.7	4.4	4.1	4.3	1.7							430	4.17
	DOL	4.0	3.7	4.0	4.4	5.6	7.7								386	5.85
	CCS	10.0	5.3	3.1	4.2	4.1									197	4.19
	SOS	5.0	3.7	5.3	3.4	7.5									197	4.93
	OSA	6.0	4.4	4.1	3.6										166	3.95
	DMVA	3.0	2.3	6.3	5.8	4.2	2.1								105	4.04
	Gov	2.0	5.0	4.2	4.1										67	4.19
	Lt Gov	1.0	4.0												6	3.00

Notes: Span of Control by Layer is calculated by dividing the total number of supervisors in each layer by the total number of positions in each layer. The order of departments is based on the total number of positions within the department, which may include boards and commissions administratively located within the departments.

Source: Program Evaluation Division based on BEACON data as of June 2016.

Appendix C: Executive Office Member Survey Response Rates

The Program Evaluation Division surveyed department-identified executive office staff in the summer of 2016. Of the 235 department-identified executive office positions, 228 were filled at the time of the survey. The Program Evaluation Division obtained the preferred email addresses of these individuals from BEACON. Of the 228 email addresses, 223 were valid.

The Program Evaluation Division sent an Internet-based survey on spans of control and organizational layers to these 223 email addresses. To ensure adequate representation from various departments, executive office members and human resources staff within the 21 departments were informed that each department's survey response rate would be included in this report.

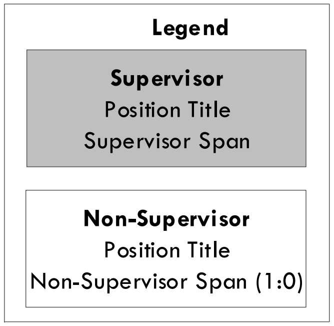
Of the 223 executive office members with valid email addresses, 194 individuals completed the survey in its entirety, producing an overall response rate of 87%. As Finding 3 discusses, 158 of these individuals supervise at least one individual. The table below provides the response rate by department.

Principal Department	Percentage of Executive Office Members Completing Survey
Community College System Office	100%
Department of Information Technology	100%
Department of the Secretary of State	100%
Office of the State Auditor	100%
Department of Insurance	100%
Department of Public Instruction	100%
Department of Administration	100%
Office of the Lieutenant Governor	100%
Department of Commerce	100%
Department of the State Treasurer	100%
Department of Justice	100%
Department of Agriculture and Consumer Services	90%
Department of Health and Human Services	88%
Department of Revenue	86%
Department of Natural and Cultural Resources	86%
Department of Labor	83%
Office of the Governor	80%
Department of Public Safety	73%
Department of Transportation	68%
Department of Environmental Quality	57%
Department of Military and Veterans Affairs	20%
Overall completion rate	**87%**

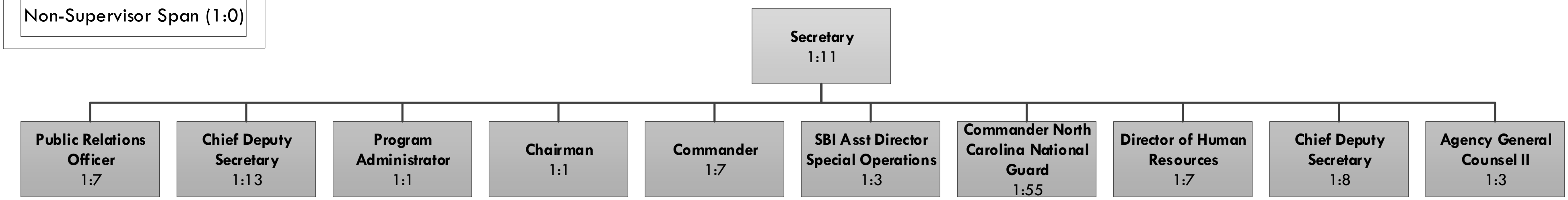
Source: Program Evaluation Division.

Appendix D: Organization Charts for Department-Identified Executive Office Members (Arranged from Largest to Smallest Department)

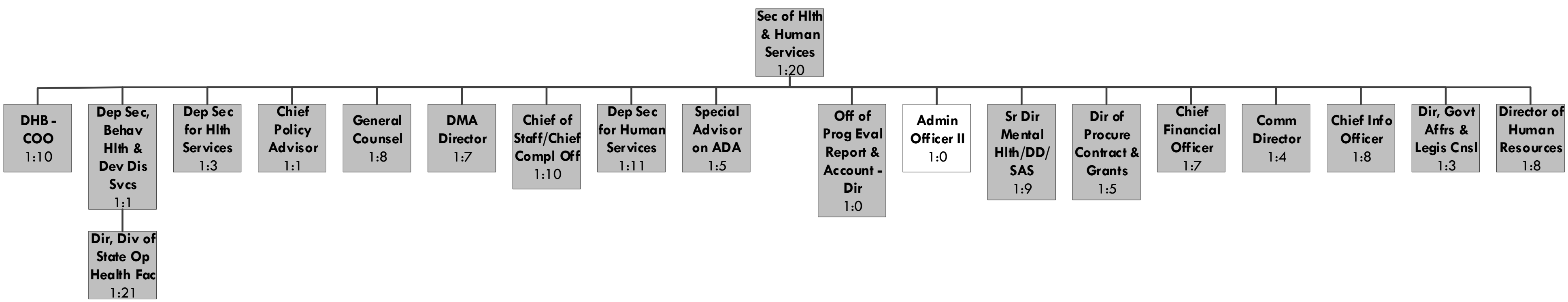
Large Departments (2,000 or More Positions)



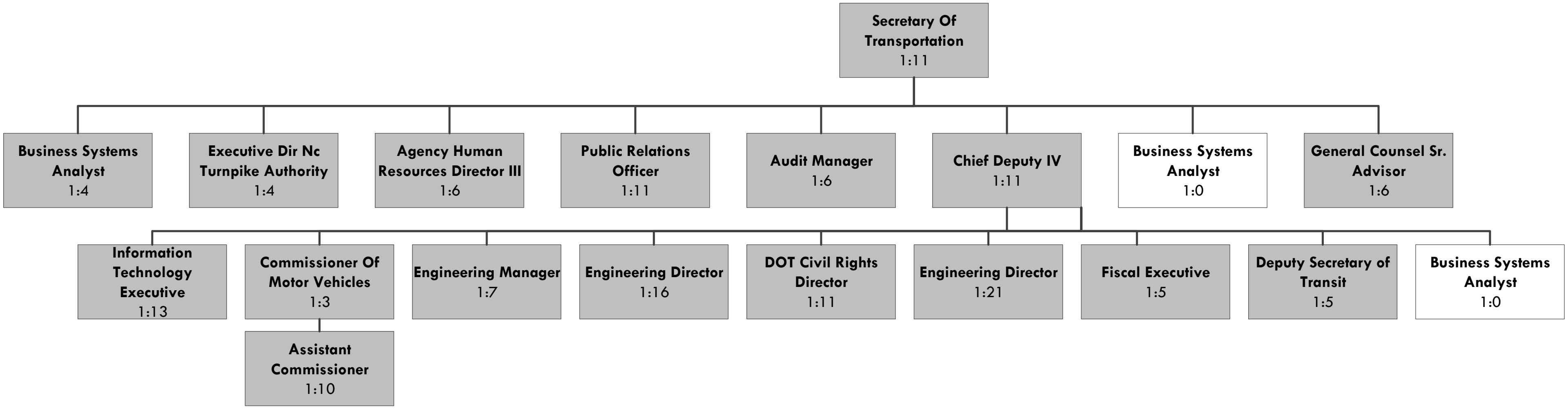
Department of Public Safety



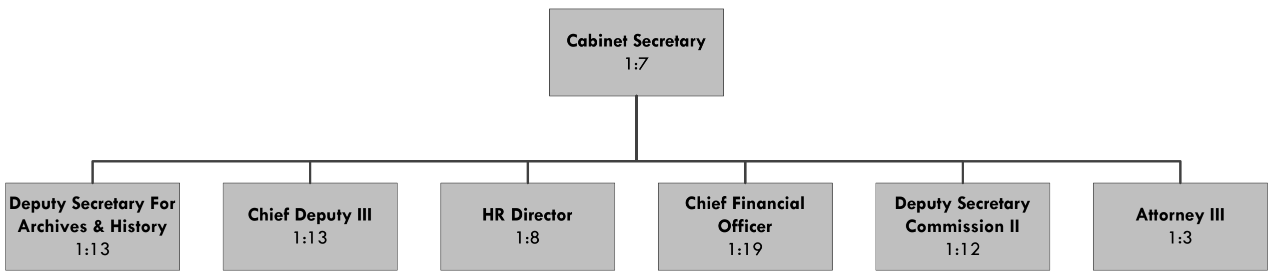
Department of Health and Human Services



Department of Transportation



Department of Natural and Cultural Resources



Department of Agriculture and Consumer Services

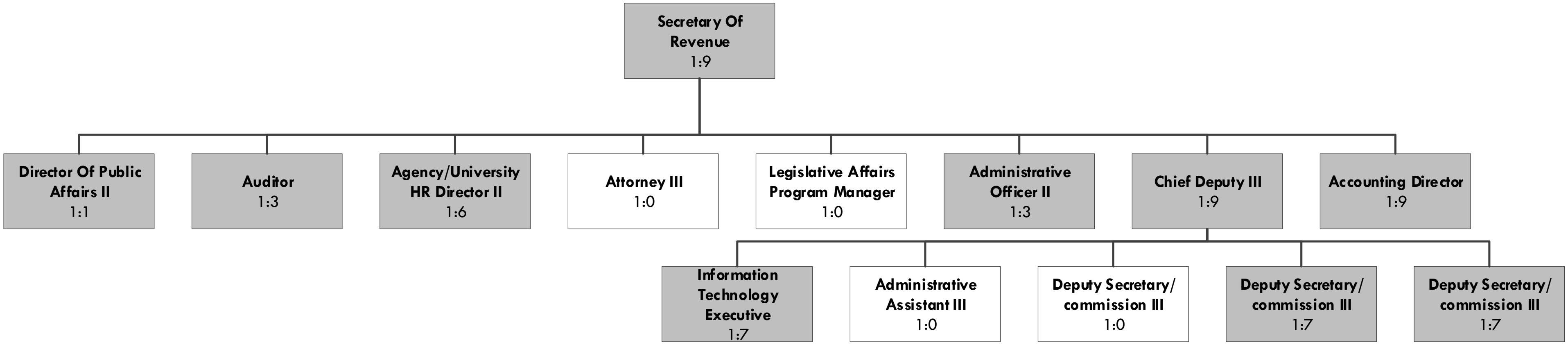
- **Commissioner Of Agriculture** 1:9
  - **Deputy Secretary/ commission III** 1:10
    - **Agricultural Program Specialist** 1:0
  - **Chief Deputy III** 1:10
    - **Agency/univ Hr Director II** 1:4
    - **Agricultural Programs Administrator** 1:0
  - **Exec Legal Specialist- agricultu** 1:3
  - **Special Assistant to Commissioner of Agr** 1:2
  - **Deputy Secretary/ commission III** 1:8
    - **Agricultural Program Specialist** 1:0

Department of Commerce

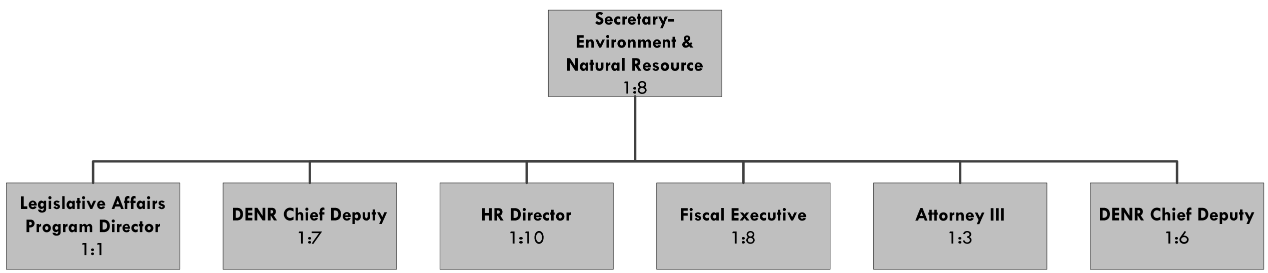
- **Secretary Of The NC Department Of Commerce** 1:17
  - **Asst Sec. Policy Res. & Strat** 1:4
  - **Executive Director** 1:2
  - **Human Resources Director** 1:6
  - **Community Relations Manager** 1:1
  - **Director** 1:8
  - **Asst Sec Rural Eco. Dev. Div** 1:7
  - **Chairman- Employ. Sec. Comm.** 1:16
  - **Chief of Staff** 1:3
  - **CFO** 1:8
  - **General Counsel** 1:1
  - **Director of Industrial Recruiting** 1:0
  - **Executive Director** 1:4
  - **Exec. Assist. to the Sec.** 1:0
  - **Deputy Sec./ comm II** 1:2

Medium Departments (1,000 – 1,999 Positions)

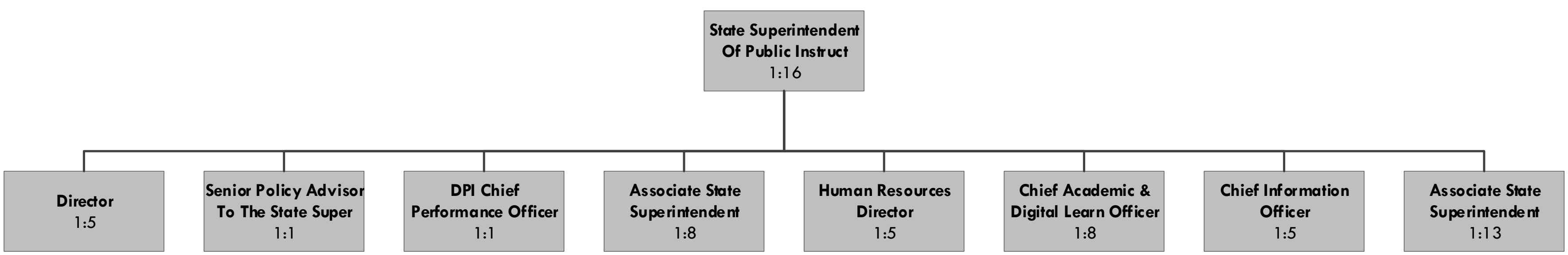
Department of Revenue



Department of Environmental Quality

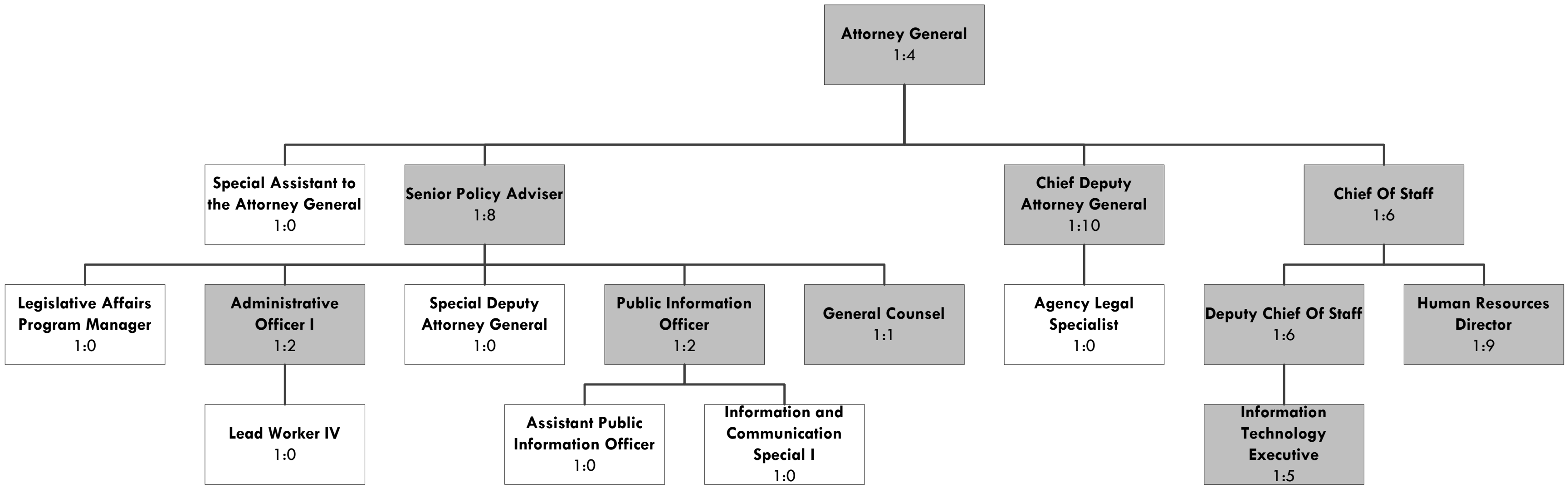


Department of Public Instruction

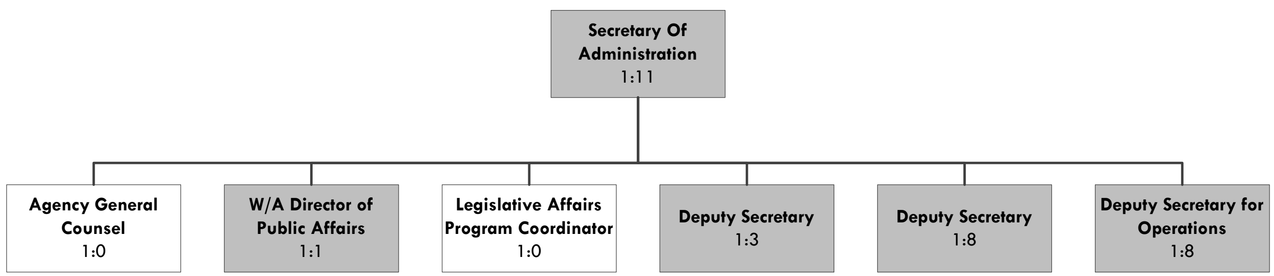


Small Departments (1,000 or Fewer Positions)

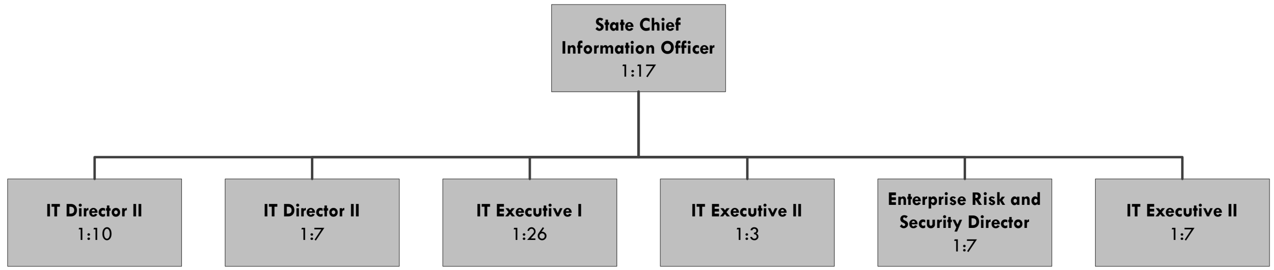
Department of Justice



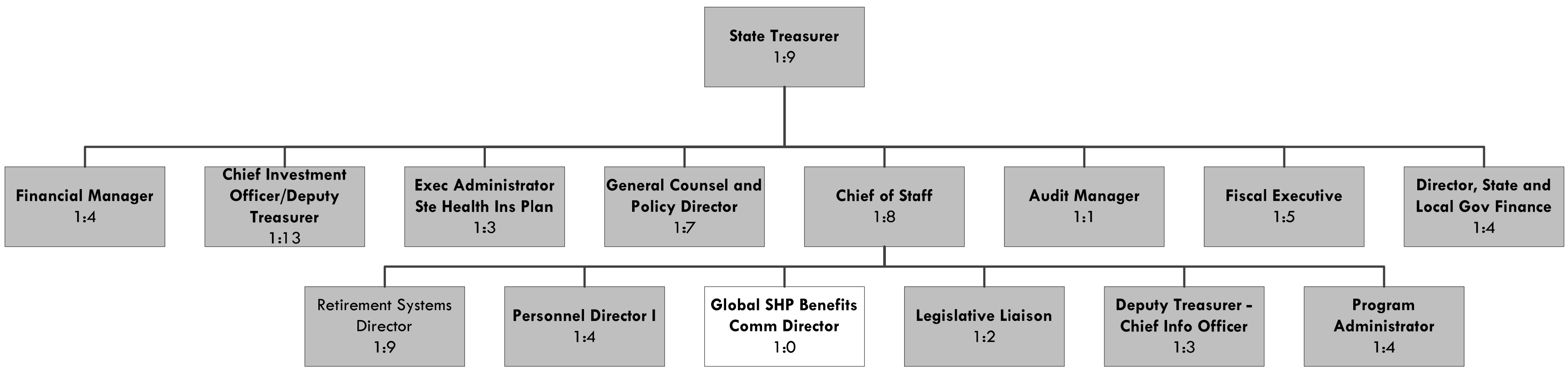
Department of Administration



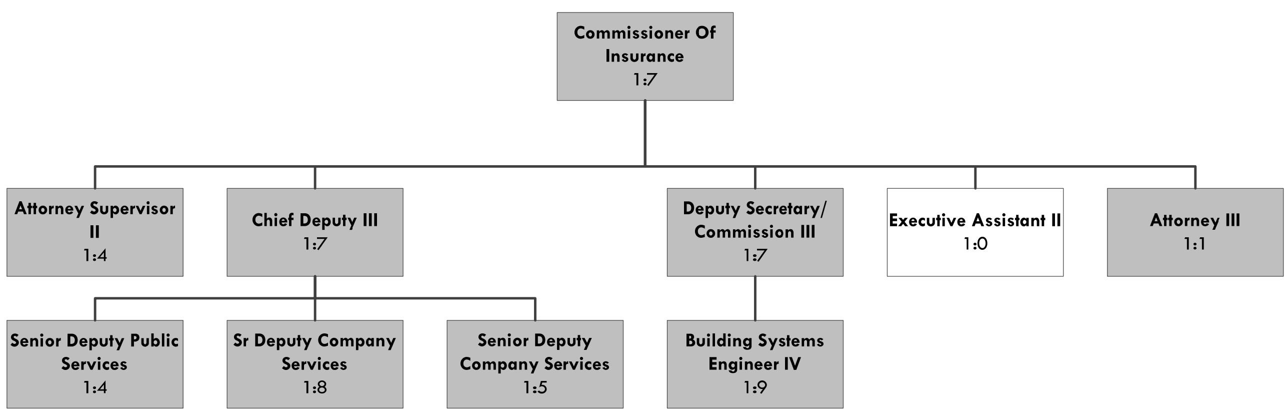
Department of Information Technology



Department of State Treasurer



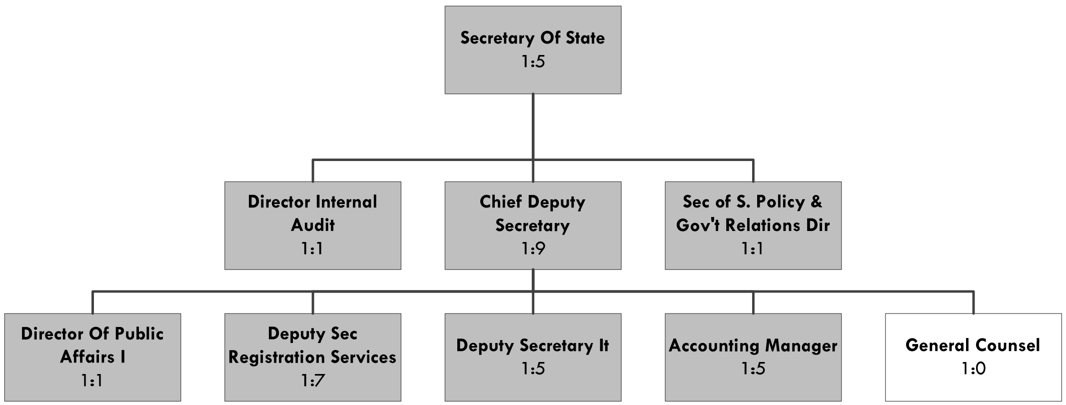
Department of Insurance



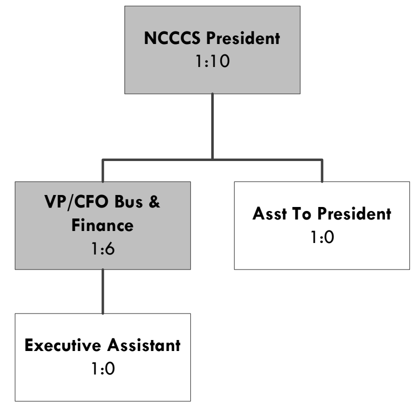
Department of Labor

- **Commissioner Of Labor** 1:4
  - **Director Of Admin & Governmental Affairs** 1:1
    - **Special Asst-Gov & Constituent Affairs** 1:0
  - **Chief of Staff** 1:8
    - **Director of Research Policy And Planning** 1:4
    - **Director Of Communications** 1:2
      - **Print Shop Manager** 1:4
    - **General Counsel** 1:2
    - **Deputy Commissioner For OSHA** 1:6
      - **OSHA Consultative Services Bureau Chief** 1:5
      - **Executive Assistant I** 1:0
      - **OSHA Interagency Coordinator** 1:0
      - **OSHA - Etta Bureau Chief** 1:5
      - **OSHA - PSIM Bureau Chief** 1:5
      - **Assistant Director of OSHA** 1:6
        - **OSHA Agricultural Safety Supervisor** 1:8
        - **OSHA - Compliance Bureau Chief** 1:7
        - **OSHA - Compliance Bureau Chief** 1:7
    - **Deputy Commissioner Standards & Inspect** 1:6
      - **Mine & Quarry Bureau Chief** 1:5
      - **Executive Assistant I** 1:0
      - **Employment Discrimination Bureau Chief** 1:6
      - **Boiler Safety Bureau Chief** 1:2
      - **Wage & Hour Bureau Chief** 1:2
      - **Elevator & Amusement Device Bureau Chief** 1:3
    - **Director of Budget & Management** 1:1
    - **W/A Executive Assistant I** 1:0
    - **W/A Executive Assistant I** 1:0
  - **Executive Asst To Commissioner Of Labor** 1:0
  - **Human Resources Director** 1:2

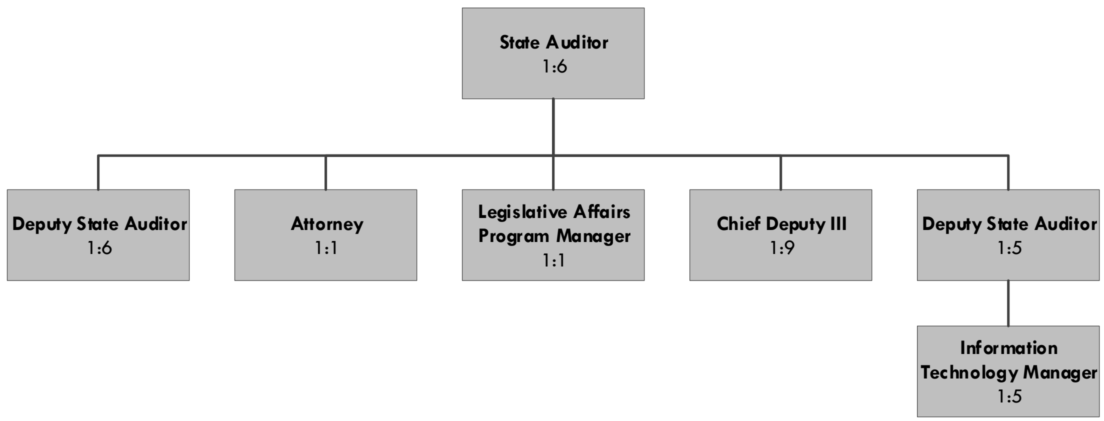
Department of Secretary of State



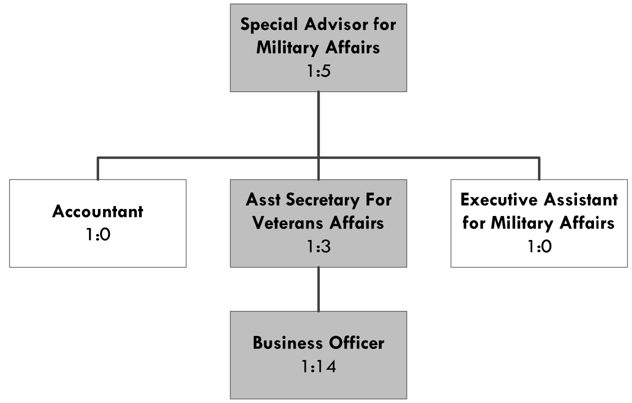
Community College System Office



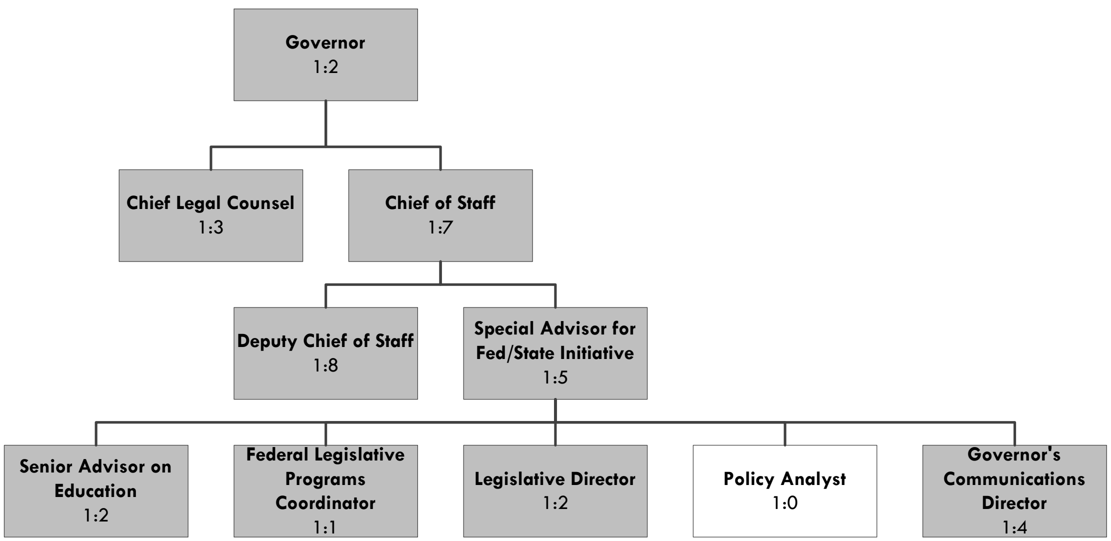
Office of the State Auditor



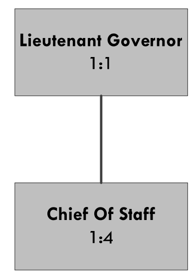
Department of Military and Veterans Affairs



Office of the Governor



Office of the Lieutenant Governor



Appendix E: OSBM and OSHR Activities Relating to Spans of Control and Organizational Layers

Entity	Name of Activity	Summary of Activity
OSHR	Process department requests to create new positions or reclassify positions (referred to as position/job analysis)	OSHR determines if proposed classification recommendations are appropriate and either negotiates or accepts the classification. This is a study of a type of work covering one or more positions, including job duties and responsibilities; scope and complexity of work; required analytical skills, education, and experience requirements; knowledge, skills, and ability requirements; and other considerations affecting the level of work when compared with other jobs. During these studies, the Classification and Compensation unit (C&C) obtains position descriptions, current and proposed organization charts, analyst notes, and other documents. C&C staff reviews documentation for content. OSHR reviews documentation to determine if the department's request meets certain standards and either follows up with departmental human resources analysts to notify them of the request's approval or to further discuss classification of position details to obtain approval. In State Fiscal Year 2015–16, C&C conducted 133 specific job analyses.
	Perform classification studies	As part of the Statewide Classification and Compensation Project study, OSHR has developed guidelines for determining the appropriateness of position descriptions, job families, and classification specifications. During this process, state experts reviewed organization charts if they were available and current. Experts were instructed to avoid reorganizing departments but were asked to note when organizational structures could be improved. During the course of these studies, every vacancy has been reviewed by the Talent Management Section for assurance of appropriate supervisory levels.
	Review vacant positions	OSHR monitors vacant positions at the request of departments to determine the length of time positions have been vacant and if those positions should subsequently revert, be abolished, or reallocated; to see the types of positions vacant that may be difficult to recruit and fill; and to determine if vacancies create an increase in overtime pay.
	Review key measures on organizational structure	OSHR's Classification and Compensation unit (C&C) and Human Resources Planning and Metrics unit meet to review key measures regarding how an organization's structure is working; key measures include vacancy and turnover rates, overtime pay and compensatory time accruals, supervisory relationships, and comparative pay across similar positions within the State or within a specific department. OSHR uses this data to review findings and identify follow-up actions with departments, such as further position analysis, salary adjustments, position reallocations, organizational changes, updating of job descriptions, etc.
OSBM	Process department requests to create new positions, reclassify positions, or move positions across funds	OSBM approves the establishment of all new positions as well as changes to funding for existing positions. New positions or funding changes approved outside the legislative process are requested through budget revisions during the year. OSBM budget sections review requests to ensure sufficient justification of the department's business need for the request and to ensure appropriate funding sources are available to support the annualized cost. OSBM ensures sufficient legal authority exists to establish new positions and either approves or declines the request. OSBM also has responsibility to ensure the total number of permanent positions created does not increase in a fiscal year by a greater percentage rate of change than the State's population.
	Review vacant positions	OSBM routinely reviews vacant positions in the budget development process to identify long-term vacancies and to evaluate them as potential reductions. Per S.L. 2015-241 (and continued with S.L. 2016-94), OSBM conducted a formal review to identify long-term vacant positions, determined appropriate exemptions from abolishment as submitted by agencies, and processed budget revisions to abolish positions and realign funds to critically underfunded operational requirements consistent with legislative direction.
	Process legislative direction to create new position	Positions established through legislation are established either at budget certification or through budget revision by OSBM. Budget sections review requests to ensure consistency with legislative direction and to ensure appropriate funding sources to support the annualized cost of the position.
	Propose department reorganization	Through the budget process, OSBM may propose reorganizations aimed at efficiency and effectiveness. In developing proposals, OSBM works with impacted departments to determine appropriate organizational structures to achieve the goals of the proposed reorganization. Major reorganizations typically require legislative action, and the associated movement of budget and positions would be done either at certification and/or through budget revisions that would require OSBM approval.
	Approve proposed reorganization	OSBM approves all department-proposed reorganizations (authorized by G.S. 143B-10, G.S. 143B-12, or other department-specific authority) requested at certification or through budget revision. OSBM budget sections review requests to move budget and positions across funds and/or create new funds. Depending on the scope of the reorganization, OSBM also reviews the proposed organization chart.

Source: Program Evaluation Division based on information from OSBM and OSHR.

State Human Resources

PAT McCRORY
Governor

PAULA WOODHOUSE
Interim Director, State Human Resources

November 30, 2016

Mr. John Turcotte, Director
Program Evaluation Division
300 North Salisbury Street, Suite 100
Raleigh, NC 27603-5925

Dear Mr. Turcotte,

On behalf of the Office of State Human Resources (OSHR) and the Office of State Budget and Management (OSBM), thank you for the opportunity to review the Program Evaluation Division's Report entitled *"Most Departments Spans of Control and Number of Organizational Layers Do Not Meet Recommended Levels"*. Please accept this letter as our formal response.

Recommendation 1. The General Assembly should direct the Office of State Human Resources to take steps to proactively monitor state department spans of control and organizational layers.

OSHR recognizes the need for monitoring and oversight over state departments' spans of control and organizational layers. Over the past couple of years, OSHR has focused on these issues and is working to improve organizational efficiency through various statewide initiatives that are already underway. These initiatives outlined below directly deal with each of the specific recommendations in the report. Therefore, additional legislation is not needed to address these recommendations.

1. **Implementation of the Statewide Classification and Compensation System**

Due to be implemented on February 1, 2017, the new system will greatly reduce the need to make an employee a supervisor in order to increase their pay. The new system will have wider salary ranges, which will allow employees to receive pay increases due to job enrichment and not solely from job enlargement.

Our new compensation policies will allow employees to receive pay increases while gaining technical skills and knowledge, where the previous course of action would have been to promote them to supervisor level. There will be a career path for employees who choose to remain in a technical career path as opposed to a supervisory/management career path. Therefore, rather than developing legislation to implement criteria-based technical leadership tracks as an alternative way to reward and retain valuable employees, the new OSHR compensation policies and the Classification and Compensation system will address this issue.

In addition, the new Statewide Classification and Compensation system will bring standardization and consistency to the classification of executive positions. OSHR has been working with the Office of the

State Controller (OSC) to identify position titles that promote consistency. Within the HR system, OSHR and OSC are working together to consistently identify the executive branch positions.

2. Implementation of a New Organization Charting Tool

The current organization charting tool is inadequate to meet state government needs. OSHR and the Department of Information Technology (DIT) have completed an RFP for a new organizational charting tool. OSHR has a goal to implement this new tool in 2017. This new organizational charting tool will have the following benefits:

- Improve Human Resource process performance and standardization
- Lower support and operational costs
- Allow charts to be visible online for public viewing.
- Reduce the need for departments to submit their executive office organizational chart at least semi-annually by compiling this information at a single location on the OSHR website.
- Create standardization of organizational charts throughout state government.
- Allow for standard analytical studies to enable regular monitoring and evaluation of span of control.

3. Implementation of the Organizational Structure Policy

This statewide policy will set standards for departments to monitor and evaluate their spans of control as recommended in this study. The policy will also include a time frame for a department to make organizational changes.

OSHR Action Plan for Addressing Recommendation 1

- Release RFP for new organizational charting tool (late 2016)
- Implement Statewide Classification and Compensation system (February 2017)
- Select vendor for new organizational charting tool (mid 2017)
- Develop new Statewide Organizational Structure Policy (mid-late 2017)

Recommendation 2. The General Assembly should direct OSBM to report every five years on each state department's span of control and organizational layers.

OSHR/OSBM Action Plan for Addressing Recommendation 2

The new organizational charting tool discussed earlier will allow members of the General Assembly and the public to view each department's span of control and number of organizational layers. Allowing organizational charts to be displayed publicly will ensure this information is readily available on a regular basis. Once this functionality is operational, we question the need for OSBM to generate a formal report on the metrics identified in this recommendation. While there may be value in publishing certain metrics to allow for comparisons across departments, we advise against establishing set benchmarks. As noted in PED's report, there are many factors that need to be considered when determining an appropriate ratio for an organizational unit. For these reasons, when conducting staffing analyses for organizations, OSBM has steered away from identifying and applying a uniform standard and has provided individualized recommendations for improving the efficiency of operations based on specific factors impacting that entity.

We recognize the intent of this recommendation is to enhance accountability for improving efficiency and effectiveness. OSBM proposes the same underlying goals and corrective action can be accomplished by utilizing strategic planning. By requiring departments to develop and maintain a strategic plan with performance measures dedicated to improving efficiency and effectiveness, the natural process to improve performance will drive organizational evolution such as change in span of control and organizational layers. This should all work in conjunction with the new Statewide Classification and Compensation system, a new organization charting tool and the Organizational Structure Policy, all of which will improve OSHR's organizational visibility on spans of control and organizational layers.

Sincerely,

Paula Woodhouse

Paula Woodhouse
State Human Resources Interim Director, Office of State Human Resources

Andrew Heath
State Budget Director, Office of State Budget and Management

Office of State Human Resources

ROY COOPER
Governor

BARBARA GIBSON
Director, State Human Resources

Mr. John Turcotte, Director
Program Evaluation Division
300 North Salisbury Street, Suite 100
Raleigh, NC 27603-5925

February 2, 2018

Dear Mr. Turcotte,

Thank you for offering the current leadership at OSHR and OSBM the chance to provide an updated response to the Program Evaluation Division report "Most Departments' Spans of Control and Number of Organizational Layers Do Not Meet Recommended Levels," dated December 12, 2016. A number of items included in the initial response from the prior Administration are no longer accurate, and we appreciate the opportunity to provide you more current information as it relates to the report.

Both OSHR and OSBM strongly agree with the overarching intent of this study, which is to enhance accountability and improve efficiency and effectiveness in agency operations. However, we do have some concerns with the conclusions and recommendations in the report and think there may be more effective alternatives for accomplishing these goals.

Review of Findings

The report makes the following findings:

> *Finding 1. Of 21 state government departments, all but one have lower supervisor-to-employee ratios, on average, than the recommended ratio of 1:8.*
>
> *Finding 2. Of 21 state government departments, 10 exceed the recommended maximum of 7 organization layers.*
>
> *Finding 3. Executive offices of state government departments vary in terms of their span of control, number of layers, and salaries.*
>
> *Finding 4. State departments have broad discretion to determine their organizational structures and receive limited guidance.*

We appreciate the challenges in completing this study, as there are a number of limitations with the BEACON system that make it difficult to obtain sufficient data for this type of analysis. Below are just a few of the issues we are aware of that pose limitations in conducting a thorough analysis of organizational structure:

- Incomplete data on temporary employees, contractors, or other work requirements that may have a substantial influence on supervisory ratios.
- Limited information on the duties of a supervisor's reports to ascertain the level of complexity or dissimilarity in the type of work being supervised.

- Limited information on other variables that may have an effect on the way an organization is structured: funding sources; geographical location of employees; the workload an individual supervisor has that is unrelated to supervisory activities; lead worker responsibilities when the employee is not a supervisor; or other variables that may influence organization structure.

Regarding the first two findings, we have concerns with the study's reliance on the 1996 OSBM study cited in the report as an appropriate source for benchmarks. As your study appropriately notes, academic and practitioner literature generally states that there is no "one size fits all" standard for span of control or organizational layers. Our review of the literature concurs with this statement, and we find the recommended ratios and organizational layers in OSBM's 1996 study arbitrary and not supported by current research. For these reasons, when conducting efficiency studies for organizations, OSBM has steered away from identifying and applying a uniform standard for staffing ratios and has provided individualized recommendations for improving the efficiency of operations based on specific factors impacting that entity.

We do not disagree with the last two findings; however, we do not draw the same conclusion that this is inherently a problem. There is wide variation in the size and roles of state departments, so we would expect to see variance in organizational structures. Research on private sector entities also finds wide variance in the executive structure across companies, even those in similar lines of business. Differences in culture, size, geographic distribution and other variables all factor into determining what structure is most effective for an organization, whether private or public.

We think it is appropriate that state departments have broad discretion to determine organizational structures. It would be difficult for central organizations such as OSHR and OSBM to substitute their judgement for independently elected Council of State members and Cabinet Secretaries that are involved in day-to-day operations.

Response to Recommendations

Recommendation 1. The General Assembly should direct the Office of State Human Resources to take steps to proactively monitor state department spans of control and organization layers

The Office of State Human Resources has limited staff and technology resources to provide any detailed monitoring of spans of control and organization layers within agencies. While the prior administration's response indicated a number of initiatives were underway to increase monitoring and oversight of organizational structures, we did not find that to be the case. We found limited evidence of any active monitoring during 2015-16, and the originally scheduled implementation date for the new Classification and Compensation System had to be postponed for over a year in order to establish better quality control measures before implementation. OSHR is briefing the General Government Oversight Committee on this issue on

February 6, 2018, and is happy to provide information to the Program Evaluation Division and Program Evaluation Committee upon request.

We believe that many more efficiencies for the state could be gained by more general monitoring of agency compensation decisions, as opposed to focusing on spans of control and organizational levels. OSHR has done some limited reviews covering the past two years of employees being reclassified from non-supervisory to supervisory positions and not found those reclassifications to be excessive. For FY 2016-17, OSHR reviewed all reclassifications in agencies subject to the State Human Resources Act and found only 8 reclassifications where an employee who had previously been a non-supervisor was reclassified to a supervisory position. Of those 8, three of the reclassifications did not result in a change to the employees' salary.

OSHR is implementing the new Classification and Compensation System on June 1, 2018. The current system dates to 1949. We believe that insuring that this system is properly implemented will greatly improve efficiency of state government. Although implementation begins on June 1, 2018, review and adjustments will be made throughout the first year of this new system. We believe that any legislation on this subject should not be considered until the new system has been in place for at least a year.

Recommendation 2. The General Assembly should direct OSBM to report every five years on each state department's span of control and organizational layers.

We recognize the intent of this report is to enhance accountability and improve efficiency and effectiveness in agency operations. OSBM shares these goals and proposes that they can be accomplished by utilizing performance management. By requiring departments to identify major systems and processes and then develop and maintain metrics dedicated to improving efficiency and effectiveness, organizational change will inevitably take place. The process of improving program performance will lead to changes in how programs are overseen and managed and how organizations are structured. OSBM is currently developing a performance management initiative that will work in conjunction with other efforts to improve monitoring and oversight of organizational structures.

We are also piloting a quarterly review process whereby OSBM analysts meet with agency leaders (budget, finance, senior management) to track goals and progress. Reviews are currently focused on budget and financial performance, but will be expanded to include program performance as our new initiative is implemented. These types of meetings help to draw attention to potential efficiencies and also provide greater context for understanding organizational needs and existing structures.

Given these ongoing efforts and the concerns raised earlier in this response, we question the need for an ongoing, formal report every five years on spans of control and organizational layers. We do agree that there may be value in publishing certain metrics to help inform policies related to organizational structure. The Office of State Human Resources (OSHR) may be the more appropriate entity to report on this subject as they have the statutory authority to develop and implement personnel management policy and to maintain information on

Office of State Human Resources

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employees and positions within agencies, departments, and institutions in the State's personnel system. However, as previously noted, there are current resource limitations for effectively providing this information.

While OSHR has the ultimate responsibility for setting policies, OSBM advises against establishing set benchmarks. As noted in PED's report, there are many factors that need to be considered when determining an appropriate ratio for an organizational unit, and current literature on the topic advises against "one size fits all" benchmarks.

We look forward to working with the General Assembly as you continue to look at these important issues.

Sincerely,

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