

**REPORT OF THE  
LEGISLATIVE SCIENTIFIC AND TECHNOLOGICAL  
ADVISORY COMMITTEE  
TO  
THE GOVERNOR  
AND  
THE GENERAL ASSEMBLY OF VIRGINIA**



**HOUSE DOCUMENT NO. 15**

**COMMONWEALTH OF VIRGINIA  
DIVISION OF PURCHASES AND SUPPLY  
RICHMOND  
1979**

**STATE SCIENCE, ENGINEERING AND TECHNOLOGY-**

**VIRGINIA LEGISLATIVE PROJECT TO BUILD AN**

**INFORMATION TRANSFER CAPABILITY**

**TABLE OF CONTENTS**

	Page
Preface.....	4
Acknowledgements.....	5
Proposed Science and Technology Information	
Transfer Capability in Virginia.....	
Introduction.....	7
S & T Information Needs Analysis.....	8
S & T Information Dissemination Mechanism.....	11
Role of S & T Advisory Committee.....	13
Institutionalization of S & T Office.....	14
Figures.....	16
Signatures.....	23
Appendices.....	24

## **PREFACE**

In mid-1977, the availability of funding from the National Science Foundation for planning a mechanism to incorporate scientific and technological information into the legislative process in Virginia became known. Acting on this knowledge, a proposal was submitted and a project funded in the Division of Legislative Services to examine Virginia's need for transferring information broadly classed as "Science and Technology" (S & T) into the legislative process. Further, if the need were established, a means of accomplishment was to be planned.

In order to carry out the proposed project, two capacities were established and filled. First of all, a Legislative Scientific Advisor was added to the Division of Legislative Services' staff. Second, a Legislative Scientific and Technological Advisory Committee was created by passage of House Joint Resolution No. 7 (See Appendix IV). The principal task of this committee was to oversee the planning project and recommend a course of implementation. The committee's action with respect to the report is indicated on the signature page.

## **ACKNOWLEDGEMENTS**

The material in this report is based upon work supported by the National Science Foundation under Grant No. ISP 77-25863.

A number of people have been instrumental in this project. The Honorable John Warren Cooke and Senator E. E. Willey requested the grant and have been most gracious and helpful when called on to provide information to this project. Mr. John Banks, Director of Division of Legislative Services, has provided the full support of his office to accomplishment of the objectives of the project. Miss Jill Pope, Research Associate, has been most helpful, particularly in familiarizing the Scientific Advisor with the legislative process. Mrs. Penny Smithers, Secretary, has probably worked as hard as anyone throughout the project, but particularly in preparation of this report. Mr. Ben Reese, Fiscal Officer, has provided support by handling all accounting chores. There has been continuing, fruitful dialogue with Crichton Armstrong, project performer for the executive SSET effort. Staffs at both NCSL and NSF have been more than generous with both their time and valuable experience in helping to acquire and assimilate useful ideas for our project.

Just to keep the record straight, any opinions, findings, conclusions or recommendations expressed in this report are those of the author and do not necessarily reflect the view of the National Science Foundation.

**PROPOSED SCIENCE AND TECHNOLOGY INFORMATION TRANSFER CAPABILITY IN VIRGINIA**

**I. Organization**

**A. Office should operate within the Division of Legislative Services**

**B. Reporting responsibility**

- 1. Director, or
- 2. Director of Research Services
- 3. S & T Advisory Committee

**C. Constituency**

- 1. General Assembly
- 2. Division of Legislative Services Staff
- 3. Others as directed by Director of Division of Legislative Services

**II. Functions**

**A. Direct (In-house) Information Delivery**

**1. Consultation**

- a. Division of Legislative Services Staff
- b. Legislative aides
- c. Maintain awareness of current pertinent literature

**2. Staffing assignments**

- a. Highly technical specialty studies
- b. Commissions requiring available expertise
- c. S & T Advisory Committee

**B. Information Brokerage**

- 1. With colleges and universities
- 2. With private sector
- 3. With Government agencies - State and Federal
- 4. With Research Organizations

**C. Anticipation of issues with significant technical impact**

**III. Personnel Requirements**

**A. Technical**

- 1. Legislative Scientific Advisor - full time
- 2. Research Associate - part time ★in.02,60, ★ B. Clerical - part time secretary

**IV. Funding**

**A. Costs**

Total salaries, wages and benefits	\$42,900
Expendable Equipment and supplies	500
Travel	3,500
Total.....	\$46,900

**B. Funding**

- 1. Division of Legislative Services Budget

2. NSF or other federal agency as available, probably on some matching basis

## V. Implementation

Proposal is essentially fully implemented now with exception of

- Information brokerage with private sector
- Technical functions should be initiated forthwith

## VI. Funding Impact

The office of Legislative Science Advisor has been institutionalized in the Division of Legislative Services. This has been accomplished by incorporating this function into the office of Director of Research Services in this Division, along with the attendant responsibilities for legislative research activities of the Division, including initiation of quantitative policy research capabilities. Therefore, the implementation as herein proposed of the S & T information transfer capability in Virginia does not depend on the availability of federal funds. However, the availability of research associate time does in large measure depend on outside funding. Should the half-time research associate (approximate \$8,500) not be available, the project will proceed as proposed albeit at a slower pace. Should sufficient funding be made available for a full time research associate, the pace will be more rapid than anticipated, but additional projects will not be proposed. Therefore, the impact of external funding is on the time required to accomplish the proposed project.

There is an additional impact of external funding availability. This is on travel funds. Travel funds are always under extreme pressure at the state level. It would greatly benefit the Virginia project (and I suspect all the others) if travel funds, at the very least, were made available. This would insure participation in workshops and meetings which are essential in any capacity building effort. It could well be that insuring the availability of travel funds is as important a contribution as any that an external funding source can make to the success of implementation of SSET type projects.

## INTRODUCTION

The role of the State Legislature is rapidly changing. A recent treatment of some aspects of this transition appeared in the March 20, 1978 issue of U. S. News & World Report entitled "State Governments Take on New Vigor." The overall thrust of this article is that the states' lawmaking bodies are showing new vitality in asserting themselves as primary policy making bodies - in being the political laboratories they were created to be. There are three commonly cited reasons for this climate of change.

1. State legislative reapportionment which has made legislators more responsive to urban needs and the attendant complex problems requiring sophisticated technological solution.

2. New Federalism, the concept that requires states to manage federal programs and to dispense federal monies for this purpose.

3. Recognition that uniform national approaches to problem solutions seldom produce the best programs on a local basis.

Probably the most critical factor as far as the impetus for S & T information transfer in the legislatures is the growth in the number of policy issues which have scientific issue areas, including at least the following:

- ... Energy
- ... Natural Resources
- ... Land Use
- ... Economic Development and Growth Management
- ... Weather Modification
- ... Natural Hazards Management - (e.g., drought, flood, earthquake)
- ... Privacy of Information
- ... Nuclear Wastes

- ... Environmental Management
- ... Medical and Health Care
- ... Public Finance (equity in taxation and the distribution of government services)
- ... Genetic Research
- ... Transportation

Figure 1 (all figures are at end of paper) lists some examples of recent legislation enacted by Congress which delegates implementation or program delivery responsibilities to the states in complex or technical policy areas.

As the forces discussed above have been at work creating a need, some other forces have begun to flow so as to satisfy the need. For example, "public technology" has been acquiring political legitimacy in recent years. As part and parcel of this new-found status of technology is the concern among scientists and technologists over the social, environmental and economic impact of their work. Attendant with the concern of the technical community is the growing realization that the only way this concern is going to have any impact is through political institutions and, therefore, we begin to see some real interest in working with governmental organizations.

Prior to November, 1977, formal S & T transfer channels existed only in the executive branch. Each agency had its own technical expertise, but there was relatively little interagency coordination, at least on S & T matters. It should be noted that Virginia's executive branch is also currently studying S & T transfer mechanisms under a SSET project. As pointed out a little later, most technical expertise available to the legislature was from the agencies' capabilities.

The occupational composition of the 1978 General Assembly shows technological expertise to be spread quite thin. In the Senate, 80% of the members are attorneys and businessmen, and 10% (4) can be identified as having had specialized technical training. On the House of Delegates side only about 7% can be specifically identified as likely having had some technology related training, whereas 72% are either attorneys or businessmen. Individual legislators and legislative committees and study commissions have depended essentially entirely on executive agencies and lobbyists for S & T information. For the most part, to be sure, the information was accurate, but of course there was always the problem of perception of bias and resolution of technically supportable conflicting claims.

To fulfill the demands for information services Virginia has provided the principle resource to be the Division of Legislative Services. This Division is the principal service agency for both Houses of the General Assembly. The overall purpose of this Division is to provide general legal and research support for the Assembly, the individual legislators, standing committees and interim legislative studies. Over the course of its development, the Division of Legislative Services has proven to be an excellent information service. This information service has performed admirably and has by and large fulfilled the information requirements of both houses of Virginia's legislature.

At the State level the problem is not the dearth of technical information, but rather the problem of developing a suitable mechanism to present an objective analysis of information that relates specifically to the legislators' needs. A recent development in efforts to allow states to develop the necessary mechanism is the SSET (State Science, Engineering and Technology) project funded by the National Science Foundation. It is under the auspices of this project that Virginia has instituted the Office of Legislative Scientific Advisor.

A companion development is the increased opportunity for states to participate in the development of federal science policy and research priorities. One mechanism for promoting this participation is the Intergovernmental Science, Engineering and Technology Advisory Panel (ISETAP). This panel, which includes state legislative representation makes direct impact into the federal science policy and priority setting machinery. To make the most of the opportunity afforded by this device, state legislatures should pursue efforts to improve their in-house S & T information capabilities.

#### **SCIENCE & TECHNOLOGY INFORMATION NEEDS IN THE VIRGINIA GENERAL ASSEMBLY**

Science & Technology information needs are of two types. The first type deals with substantive issues (issue specific). This information need deals with specific issues having science and



technology components, for example, auto emissions, solid waste disposal, water quality. The second type of need is described as a procedural or a capacity building need. This need deals with the building of an internal capability for assessing and evaluating information having significant scientific or technical features. Both of these types of needs are dealt with in this section and from this analysis conclusions are drawn as to the resources required to satisfy the science and technology information needs of the General Assembly. The methodology used in developing this needs assessment has been that of a survey of the members of the Virginia General Assembly, personal interviews with members of the Division of Legislative Services staff, review of laws passed in 1976, 1977 and 1978, review of Study Commissions in 1976 through 1978, and consultation with the Executive SSET project.

Probably the clearest way to get an indication of the concerns facing the Commonwealth is that of a review of legislation enacted over the past several years. Just this sort of review has been made for the years 1976, 1977 and 1978 in order to ascertain the issues with significant science and technology content. It should be noted here that the health sciences are not included in this analysis, not because it is not relevant, but rather because the need for this branch of science is clearly recognized without additional analysis. Figure 2 presents a numerical summary of the analysis of the legislation enacted over the past three years. As shown in the last column of this figure, approximately 7 to 10 percent of the legislation enacted from 1976 through 1978 has had a significant science and technology content. The lower half of Figure 1 is the same sort of numerical analysis concerning study commissions and committees over the past four years in this case. It is seen that the studies conducted with significant science and technology content has apparently been on the increase from 1976 levelling out at what looks to be about 25% of the total studies. It is not known whether this growth curve is representative, however, it does cover both short and long sessions of the General Assembly. Even though the number of studies with S & T content has increased, the laws resulting from the subsequent sessions have not shown a corresponding increase. It is not clear from this analysis whether we can expect a growth of legislation with S & T content in years subsequent to 1978. However, the issues as discussed below would indicate that we cannot expect a decrease in the amount of legislation concerned with highly technical issues.

Information relating to the specific categories of legislation enacted concerned with technical issues is found in Appendices IA thru IF. Appendices IA, IB, and IC show bill numbers and titles and Appendices ID, IE, and IF show the bill numbers categorized according to generic issue area titles expected to be prominent. It is first of all seen that the amount of legislation in each year can be rather overwhelmingly categorized in the general categories chosen, with but few bills having to be placed in the miscellaneous category. This analysis shows that the policy concerns of Virginians over the past three years with significant technical content have been in the issue areas of agriculture, energy, water, coastal resources, environmental concerns, mining and mineral resources, solid waste disposal, and transportation.

In order to get some feel as to whether the issue areas revealed above in the survey of legislation enacted will remain of interest, the study commissions from the 1978 Session of the General Assembly have been reviewed. The results of this review can be found in Figure 3. Once again it is seen that the general issue areas that are the subjects of the 1978 study commissions are essentially the same as the issue areas revealed in the review of enacted legislation. Thus we can anticipate that the same issue areas will be with us for the next several years.

As part of an overall effort to ascertain Virginia's legislator's perception of information delivery and issues, the General Assembly was surveyed following the conclusion of the 1978 Session. There was a response rate of 50%, and significance tests showed that this rate would be a representative sample. The result of this survey may be found in two memoranda in Appendix II. Data summarized in the memorandum dated June 8, 1978 concerned the general issues facing the Commonwealth. Responses to the importance of the general issues rank these issues in the following order: finance, energy, education, government, public health, human resources and environment, moving from most to least important. For the same set of issues the respondents were also asked to evaluate the importance of the scientific and technological aspects of these issues. In this context the ranking was as follows: energy, finance, environment, public health, government, human resources and education. The ranking clearly shows that the technical aspects of the issues are well perceived. The logical followup to these considerations of the general issues is how well Legislative Services performs in providing the information necessary to consider these issues. These performance ratings showed energy and environment and public health to be at the bottom of the list, however, finance was second in ranking showing that a satisfactory job is being done in providing information in this area.

That the more technical issue areas are found at the bottom of this list is not surprising since the Division of Legislative Services has up to this point never had in-house capability in scientific or technical areas. This latter point of discussion will be touched on again later when the procedural needs are addressed.

Interviews with Division of Legislative Services personnel show that staff perception of issues to be essentially the same as that of the legislators revealed in the survey above. This should not be surprising since these staff people conduct studies mandated by the General Assembly, and draft the legislation acted on by the legislators. Therefore, it would be surprising if the staff perception were different from those for whom their services are performed. These interviews reveal that the problems involved in the Clean Air Act Amendments of 1977 is an extremely important issue facing Virginia for the next several years, and the issues of energy, water resources, coastal resource management and solid waste management will continue to be of legislative interest.

The committee structure of the General Assembly is indicative of both substantive and procedural areas of need for S & T information services: substantive in that the nature of the issues considered is revealed in the name of the committee and procedural in that there needs to be an institutional mechanism for input directly into the committee structure. There are eleven (11) Senate standing committees (see Figure 4) of which four are expected to require increasing amounts of highly technical information, these being Agriculture, Conservation and Natural Resources, Commerce and Labor, Education and Health, Transportation, and one, General Laws, expected to require this type of information on certain issues (e.g. automobile inspection and maintenance implementation). On the House side there are 20 standing committees (Figure 5) with 7, Roads and Internal Navigation, Health, Welfare and Institutions, Conservation and Natural Resources, Agriculture, Labor and Commerce, Chesapeake and Its Tributaries and Mining and Mineral Resources as well as General Laws on occasion, needing increasing amounts of specific technical information.

We must now turn our attention to the procedural or capacity building needs. Having identified the substantive needs as discussed above, ways to address these needs must be examined. The areas considered in this discussion are institutional and procedural issues.

A number of papers have been published on the subject of technology transfer and public technology. One of the most useful of these publications is that by Feller, King, Menzel, O'Connor, Wissel & Ingersoll, entitled "Scientific & Technological Information In State Legislatures." A model is developed in this paper for measuring the conditions which produce the driving force for improving information delivery services. This model recognizes two kinds of information services, the first being "generalist," the other being "specialist." The generalist type of information service deals with information needs much in the same way as the legislator himself would deal with those needs. Whereas, the specialist type of information service is one which requires some special expertise in one or more substantive areas. The model recognizes a move from the generalist to the specialist, i.e. the provider of information services tends to move toward a more specialized information service.

A method of determining the perception of the utility of an information service is to measure the relative use of internal versus external information sources. Such a measure was accomplished in the survey of the General Assembly discussed above in another context using the same questions as used in the Feller, et al, paper to allow a comparison to be made. The survey results (See Appendix II) show a large tendency for Virginia General Assembly members to use internal information sources. Using the continuum developed in the Feller paper, Virginia falls at just the point expected - that of adding specific expertise to the existing general research staff.

At the same time we were locating where we are in terms of information services, we gauged legislative perception of S & T information delivery. Again this was accomplished in the same survey of the General Assembly. Choice of three innovative functions, policy analysis, quantitative research and S & T information delivery along with the usual Division of Legislative Services' services was offered. The three innovative functions were rated at the bottom of the list as they should have been since capability in these areas is negligible. These same functions were also rated at the bottom of an importance ranking of the services showing that the legislators do not perceive an outstanding need for these functions at this time. Some comments made on the appropriate place on the survey indicate the desire to have S & T information available.

The above discussion has described the needs of the Virginia legislature relative to scientific and

technological information. We must now consider the resources required to fulfill the needs as outlined. The resources will fall into the same two general categories, that is, procedural and substantive. Procedural resources can be broadly defined as those involved with delivery of information and substantive resources are of a more special nature dealing with the particular technical issue at hand.

One must have in place an information delivery system before information can be effectively transferred. The Division of Legislative Services is the information arm of the Virginia General Assembly. As was pointed out above the Virginia legislators tend to use the internal sources available to them far more than the external sources. To meet the demands for information, the Division of Legislative Services has provided a very effective general research capability. From that vantage point one always perceives the needs to be in the direction of more specialized capability. Indeed the Division of Legislative Services has so perceived itself and over the last several years has been adding special skills to its' staff. For example, there is now available on the staff economic expertise, advanced degree political scientists, and now a so-called "hard" physical scientist. Once again referring to the continuum developed in the Feller paper as discussed above, it is seen that Virginia is in the position of having provided the generalized skills necessary and now wishes to be able to provide information of a highly specialized nature.

It is of course impossible to be able to add all of the expertise to the staff to answer any question that might be posed. This would essentially require an expert in every field encountered in the course of a legislative study or consideration of any of a variety of bills. Therefore, the provider of information must devise some mechanism for accessing the skills necessary to answer the questions that may be asked at anytime. In this way, the information delivery service becomes an information broker as distinguished from an information processor, i.e., act as a liaison with expertise from other sources. There are essentially three sources to be considered outside the legislative sphere. These sources are (1) the State agencies; (2) private sector; (3) the universities. Legislators already obtain information from the first two of these sources, either via private contact or through standing committees, or study commissions. However, there is no formal mechanism in place whereby the Virginia General Assembly can interface with the rather extensive university system available in the State of Virginia. It is certainly true that the colleges and universities in the State should be able to provide some information on almost any issue confronting our lawmakers. Therefore, as a provider of information dealing with rather specific substantive issues as is now necessary as discussed above, it becomes necessary to provide a link with the university system whereby legislators' questions can be answered.

It is appropriate at this juncture to point out that the Division of Legislative Services has been organized to maximize input into the standing committee structure of the General Assembly. (See Figure 6 for the organizational structure of the Division.) Each team is responsive to prescribed legislative needs and thereby becomes "expert" in certain areas as well as building rapport with committee leadership. This structure provides automatic access to any standing committee from within the Division of Legislative Services.

Superimposed over the activities of providing information, whether general or specialized, is the necessity for providing some interpretative capability. When dealing with the highly technical nature of the issues which are the subject of the current discussion, even the language itself can become a barrier. Therefore it is necessary to have the capability available which can translate the issues into the form that relates specifically to the legislator's need. There is seldom a problem with having enough information available, but if the information is not in a useful form it may as well not be available. Therefore, the information delivery system and the brokerage activity must both be cognizant of the applicability of the information delivered.

## **S & T INFORMATION DISSEMINATION MECHANISM**

The foundation upon which to build a legislative S & T information mechanism is quite solid in Virginia. By initiating, planning and implementing (as is recommended) the project under the auspices of the Division of Legislative Services, a high degree of visibility and credibility is automatic. This positional acceptance has another very important advantage vis a vis the executive branch. Virginia has for many years had one political party in the ascendancy. This has resulted in excellent lines of communication between executive and legislative branches of State government. Even with the more recent trends to two party representation, the relationship between these two

governmental entities remains excellent. The Division of Legislative Services has simply become a part of the over-all information exchange between the executive and the legislature. Thus, the addition of an S & T capability to the existing information service is likely to be viewed as adjunct rather than as interposition and yet objectivity can be retained. This facet of credibility and objectivity is quite important for being able to impact legislation in its formative stages. Quite clearly, it is very important that lines of communication with the agencies (including the executive SSET project) be kept as open as in the past.

There are two broad classifications of the S & T information delivery in the Virginia legislative arena. First, there is direct in-house capability and second, an information brokerage service to be offered. Each of these is now discussed in turn.

Direct, or in-house, service has been identified in several ways. There is a clear need for consultation services to the Division of Legislative Services staff in their capacities of staffing study and standing committees and commissions. Input is made from personal experience, awareness of technical literature and by virtue of the scientist's training in researching technical subjects. An excellent example of these consultation services is the consulting offered to the staff of the Air Pollution Study Commission. This study is a rather comprehensive overview of Virginia's response to the Clean Air Act Amendments of 1977. As such, the study is highly technical and it has been quite advantageous to have expertise available to ensure the objectivity of information input into this legislative study.

Another area of in-house S & T information services is that of staffing of study committees in a highly specialized technical area. A current example of this type of assignment is the staffing of the joint subcommittee to study a Virginia Resource Information System. This study involves an examination of the desirability and feasibility of a statewide geographic information system. As such it involves some highly sophisticated computer techniques, as well as some highly technical data gathering methods, e.g. satellite remote sensing. It is recommended that the S & T office always be directly involved in a staffing assignment so that research skills remain sharply honed for visibility, credibility, political awareness and maintenance of contact with fellow staff members.

The second major classification of information delivery is that of information brokerage. There are two aspects of this activity as relates to the information sought. First, one must look elsewhere for information that one does not have and, secondly, objectivity is maximized by probing more than one source. The S & T office would be the broker serving requestors from the legislature and from legislative staff (of course, including Division of Legislative Services staff). This activity could be extended to agency personnel if such an expansion seemed desirable and feasible. The primary sources of information to be queried are state colleges and universities, private sector (professional societies for example), state agencies, federal agencies and national research organizations as, for example, MISTIC.

The details of the brokerage system with the colleges and universities are found in Appendix III. The essentials of the mechanism are quite simple. Interinstitutional contact is essentially by two people, the legislative science advisor at the legislature and the office of research dean (or equivalent title) at the university. Each of these people will deal with their own institutional requirements and this link will be the prime communication link. The information sought, at least initially, is state-of-the-art and will be supplied as a public service by the universities. The primary tasks of the S & T office are to be sure the question posed requests the desired information and comments and interprets only as necessary to ensure utility to the requestor.

Brokerage of information from the other sources is less developed at this juncture. The principle State agency contact will be the existing legislative liaison officer within the agency. Federal agencies and national research organizations will be queried by developed contacts. Yet to be addressed is the problem of probing the private sector.

A vital element of the information brokerage system is the marketing of its availability to the General Assembly and legislative staff. These marketing activities will have to be closely matched with the capability of the system to respond, so as to avoid delays and any perception of unresponsiveness. Thus there will be no large scale marketing campaign at any time, but rather a ripple effect as the system matures. Some of the chief marketing targets and methods will be personal contact with standing and study committee chairmen and corresponding staff, personal contact with Division of Legislative Services staff, publishing examples of inquiries and responses of

selected audiences and expanding this activity to include the entire General Assembly and to keep the S & T Advisory Committee aware of the capability of the information brokerage system.

It is quite likely that the executive branch S & T information service as proposed under the SSET grant will also probe the same information sources using the same mechanism. This cooperation will be encouraged and rather close contact between the legislative and executive S & T offices will be maintained in this, as well as other facets of the efforts as they can support each other.

### **ROLE OF S & T ADVISORY COMMITTEE**

One item for consideration that has evolved during the course of this planning study is the role that the S & T Advisory Committee should assume following the recommendations for implementing the Office of Scientific Advisor. The resolution creating the committee speaks directly only to the task of evaluating the results of the efforts from the planning work and does not suggest additional responsibilities. However, there do seem to be areas of responsibility that the Advisory Committee could profitably assume. In each role discussed below the Advisory Committee would oversee the S & T office, acting in the capacity of staff to the committee, in evaluating alternatives proposed by the staff and recommending action.

#### Legislative Foresight

An area of research that is being considered by several states is that of legislative foresight or technology assessment. It would be a legitimate activity of the Advisory Committee to examine these technologies for applicability to the Virginia legislative situation and to make the appropriate recommendations.

In this same general area, there is a much less sophisticated alternative. It may be very worthwhile each year to look ahead at the technical issues expected to be faced by the upcoming General Assembly. The issues could be briefly described and alternative actions examined. The Advisory Committee may wish to assign priorities to these issues and publish their comments for consideration by the appropriate standing committees. Such a publication would also be very useful to the information sources being probed by the information brokerage system.

#### Access to Private Sector

Probably the most diverse and yet one of the most valuable sources of technical information is the private sector. It would be highly desirable for the legislature to have the benefit of the technology available from private industry in an objective fashion early in the legislative process. At present, no systematic way to tap this resource exists. A most worthwhile objective of the S & T Advisory Committee would be to study mechanisms to tap the private sector and recommend action to implement probing this information source.

#### Ad Hoc Studies

Since societal problems requiring highly technical solutions seem to appear with regularity, it may be that the S & T Advisory Committee may wish to reserve for itself a role in one or more in-depth studies of technical issues facing Virginia. Problem areas could be chosen and studied and recommendations made to appropriate standing committees. These studies could be more focused on technical issues than is normally the case for study commissions. Or, as an alternative in this vein, emerging issues could be examined with a view to defining the legislative impact of a given technology or problem area.

Of course, any or all of the above roles could be assumed by the Committee. A combination of roles could be chosen. These various roles that the committee may wish to implement will require consideration of the manpower required to implement them. There follows a table showing the manpower required for the several roles—this manpower being in addition to that required for the proposed S & T information transfer capability.

#### Additional Manpower

## Legislative Foresight

1. Technology Assessment      1 professional and upward
2. Issue anticipation            None

Access to Private Sector      Part-time Research  
   Associate for initial survey

Ad Hoc Studies                      Half time Research  
   Associate and upward, depending  
   on level of studies

The above alternatives have been evaluated by the S & T Advisory Committee in light of the needs of the General Assembly. As a result of this evaluation, it has been decided that the committee should remain as a functioning unit for at least 3 more years. The principle activity of the committee will be to act in an advisory capacity to the Legislative Scientific Advisor. In this capacity the very useful function of providing a sounding board for evaluation of projects in progress as well as new ideas will be insured. At the end of the additional 3 year tenure, the committee will decide the question of whether it should be made permanent and what its long range goals will be from that perspective.

Two other activities of the committee are to be implemented as time and funding permit. This committee can serve as a focal point for accessing the private sector due to the experience and contacts of the committee members. An activity that will be implemented in some form is to present to the committee for review a survey of impending issues with significant S & T content. Such a review will be most useful for informing the several information linkages of the technologies expected to be queried during the coming year.

This very limited scope of the S & T Advisory Committee was chosen so that our progress in installing the S & T information transfer capabilities could proceed without undue complication or haste and the monitoring would be in a cost effective manner. The relationship of the Advisory Committee and the S & T information transfer capability (i. e., the Legislative Scientific Advisor) is thus mutually nurtured and overall success of the project enhanced by the solid foundations built all along the way.

## **INSTITUTIONALIZATION OF S & T OFFICE**

This report has indicated throughout that the time is right in Virginia for adding specific expertise to the legislative information services. The availability of the National Science Foundation SSET grant precipitated action on a concept whose time has arrived. As the project progressed, it became apparent that the whole concept of technical support could be woven into the Virginia fabric in a way to benefit a larger constituency than just S & T interests.

As has been pointed out, the Division of Legislative Services is organized into functional teams. This organization has proven to be quite effective and accomplishes the purposes for which it is designed. As this system has matured, the perceived need became one of horizontal information transfer in order that efficiencies could be realized in dealing with the ever increasing volume of interdisciplinary issues. Furthermore, a need is now being perceived for increasing amounts of quantitative policy and data analyses. Such analyses require staff specialists and interdisciplinary research.

In order to begin to develop the types of research capability described above, the office of Director of Research was established March, 1978. The Legislative Scientific Advisor performing the SSET project was appointed to the post of Director of Research. This appointment has had the net effect of institutionalizing the S & T office, but even more, it provides the basis for adding a quantitative research dimension to our overall research effort. This quantitative aspect is to be staffed by specialists from the several teams serving on an ad hoc basis and being spread across interdisciplinary lines, as is the S & T capability. Thus, these two research capabilities very neatly mesh and tend to complement each other and will be so developed.

## **Figure 1**

### **Examples of Federal Laws Delegating**

#### **Implementation Responsibilities to the States**

**National Traffic and Motor Vehicle Safety Act of 1966**  
**Highway Safety Act of 1966**  
**Natural Gas Pipeline Safety Act of 1968**  
**Radiation Control for Health and Safety Act of 1969**  
**Federal Coal Mine Health and Safety Act of 1969**  
**Federal Railroad Safety Act of 1970**  
**Occupational Safety and Health Act of 1970**  
**Federal Boat Safety Act of 1971**  
**Energy Policy and Conservation Act (EPCA)**  
**Energy Conservation and Production Act (ECPA)**  
**Coastal Zone Management Act of 1972**  
**Comprehensive Employment and Training Act (CETA)**  
**Resource Conservation and Recovery Act**  
**National Mass Transportation Assistance Act**  
**Water Quality Act of 1965**  
**Federal Environmental Pesticide Control Act of 1972**  
**Noise Control Act of 1972**  
**Federal Water Pollution Control Act of 1972**  
**Marine Mammal Protection Act of 1972**  
**Safe Drinking Water Act of 1974**  
**Marine Protection Research and Sanctuaries Act of 1972**  
**Emergency Highway Energy Conservation Act**

**Figure 2**

**Legislation with S & T Content**

	<b>Total</b>	<b>S &amp; T Content</b>	<b>% of S &amp; T</b>
		.....	.....
<b>Introduced 1978</b>	<b>2018</b>	<b>130</b>	<b>6.4</b>
<b>Enacted - 1978</b>	<b>1097</b>	<b>73</b>	<b>6.7</b>
<b>Enacted 1977</b>	<b>870</b>	<b>71</b>	<b>8.2</b>
<b>Enacted 1976</b>	<b>781</b>	<b>52</b>	<b>6.7</b>

**Study Commissions and Committees**

<b>1978</b>	<b>85</b>	<b>23</b>	<b>27</b>
<b>1977</b>	<b>80</b>	<b>18</b>	<b>22.5</b>
<b>1976</b>	<b>33</b>	<b>5</b>	<b>15.1</b>
<b>1975</b>	<b>85</b>	<b>8</b>	<b>9.4</b>



### Figure 3

#### 1978 Studies with S & T Implications

##### ENERGY

- HJ 296 Energy Study
- HJ 95 Surface Mining and Mining Regulated Program
- HJ 11 Energy Programs, Interrelationship of  
State & Federal
- HJ 108 Coal and Energy

##### AIR POLLUTION CONTROL

- SJ 37 Air Pollution Study

##### WATER

- HJ 43 Marine Patrols Study
- HJ 142 Wastewater Treatment & Disposal Systems
- HB 35 Shellfish Industry Management in Virginia
- HB 580 Oil Spillage Liabilities Limits
- SJ 1 Water Study
- SJ 24 Flow-Through Marine Sanitation Devices
- SJ 63 Coastal Resources Management Act
- SJ 22 Coastal Erosion Abatement

##### SOLID WASTES

- SB 856 Solid Wastes Commission

##### MISCELLANEOUS

- HJ 161 Air Rights Over Government Property
- HJ 37 Occupational Health and Safety Administration
- HJ 239 Products Liability
- HJ 7 Legislative, Scientific and Technology  
Advisory Committee
- HJ 10 Chesapeake Bay Legislative Advisory

HJ 175      Resource Information System  
SJ 9        Agricultural Opportunities  
SJ 10      Dulles International Airport Development  
SJ 15      Explosives, Use of

FIGURE 4

SENATE STANDING COMMITTEES

AGRICULTURE, CONSERVATION AND  
NATURAL RESOURCES

COMMERCE AND LABOR

COURTS OF JUSTICE

EDUCATION AND HEALTH

FINANCE

GENERAL LAWS

LOCAL GOVERNMENT

PRIVILEGES AND ELECTIONS

REHABILITATION AND SOCIAL  
SERVICES

RULES

TRANSPORTATION

FIGURE 5

HOUSE STANDING COMMITTEES

AGRICULTURE

GENERAL LAWS

APPROPRIATIONS

HEALTH, WELFARE AND  
INSTITUTIONS

CHESAPEAKE AND ITS  
TRIBUTARIES

INTERSTATE COOPERATION

CLAIMS

LABOR AND COMMERCE

CONSERVATION AND NATURAL  
RESOURCES

MILITIA AND POLICE

CORPORATIONS, INSURANCE  
AND BANKING

MINING AND MINERAL  
RESOURCES

COUNTIES, CITIES AND TOWNS

NOMINATIONS AND CONFIRMATIONS

COURTS OF JUSTICE

PRIVILEGES AND ELECTIONS

EDUCATION

ROADS AND INTERNAL  
NAVIGATION

FINANCE

RULES

FIGURE 6

V.A.L.C.                      LEGISLATIVE SERVICES                      CODE COMMISSION

DIRECTOR  
John A. Banks, Jr.

Deputy Director  
 G. W. White, Jr.

[ Team 1 ]	[ Team 2 ]	[ Team 3 ]	[ Team 4 ]	[ Team 5 ]	[ Team 6 ]	[ Team 7 ]	[ Team 8 ]
COMMERCE & LABOR	AGRICULTURE AND NATURAL RESOURCES	COURTS OF JUSTICE AND CRIME	LOCAL GOVERNMENTS AND ELECTIONS	EDUCATION AND HEALTH	CORRECTIONS AND OTHER SOCIAL SERVICES	FINANCE AND TAXATION	GENERAL LAWS, TRANSPORTATION
<u>House</u> Corporations, In- surance and Banking Labor	<u>House</u> Agriculture Conservation and Natural Resources Chesapeake & Its Tributaries Mining and Mineral Resources	<u>House</u> Courts of Justice Militia and Police	<u>House</u> Privileges and Elections Counties, Cities and Towns Nominations and Confirmations	<u>House</u> Education	<u>House</u> Health, Welfare and Institutions	<u>House</u> Appropriations Claims Finance	<u>House</u> General Laws Interstate Co- operation Roads and Inter- nal Navigation Rules
<u>Senate</u> Commerce and Labor	<u>Senate</u> Agriculture, Con- servation and Nat- ural Resources	<u>Senate</u> Courts of Justice	<u>Senate</u> Privileges and Elections Local Government	<u>Senate</u> Education and Health	<u>Senate</u> Rehabilitation & Social Services	<u>Senate</u> Finance	<u>Senate</u> General Laws Transportation Rules

## **Signatures**

Respectfully submitted,

John Warren Cooke, Speaker of the House

Edward E. Willey, President Pro Tempore

John A. Banks, Jr., Director, Division of Legislative Services, Project Manager

Don L. Shull, Legislative Scientific Advisor, Project Performer

### **S & T Advisory Committee**

Ralph L. Axselle, Jr.

Frederick H. Creekmore

Joseph A. Leafe

Kenneth R. Plum

William E. Fears

Frank W. Nolen

Robert J. Agnew

Dennis W. Barnes

A. L. Brault, Jr.

Addison D. Campbell

John A. Banks, Jr.

## **APPENDIX I**

### **Bills and Resolutions with Science and Technology Content**

**A. 1976**

**B. 1977**

**C. 1978**

**D. 1976 - Legislation Categorized**

**E. 1977 - Legislation Categorized**

**F. 1978 - Legislation Categorized**

APPENDIX 1 - A

1976 Bills, Resolutions, Joint Resolutions

House  
Bills  
Nos.

- 72 A bill to amend and reenact § 62.1-154 of the Code of Virginia, relating to the Virginia Beach Erosion Commission.
- 101 A bill to amend and reenact §§ 15.1-37, 15.1-37.1, 15.1-332.1, 15.1-875 and 15.1-1250.1, as severally amended, of the Code of Virginia, and to amend the Code of Virginia by adding sections numbered 15.1-37.1:1 through 15.1-37.1:7, the amended and added sections relating to water impoundments with court procedures to hear disputes between jurisdictions.
- 160 A bill to amend and reenact §§ 58-266.1:1 and 58-774, as severally amended, of the Code of Virginia, relating to Coal Severance Tax and License Tax.
- 205 A bill to amend the Code of Virginia by adding in Chapter 15.1 of Title 54 an article numbered 10 containing sections numbered 54-524.109:9 through 54-109.109:18, providing for the creation of a Voluntary Formulary of Equivalent Drugs; appropriation therefor.
- 342 A bill to amend and reenact § 62.1-44.19:2, as amended, of Chapter 840 of the 1972 Acts of Assembly, carried by reference in the Code of Virginia as § 62.1-44.19:2, relating to imposition of certain additional requirements on the discharge of sewage in Virginia Beach and Chesapeake.
- 370 A bill to amend and reenact § 46.1-296, as amended, of the Code of Virginia, relating to use of certain tires.
- 374 A bill to amend and reenact § 40.1-23, as amended, and § 59.1-137 of the Code of Virginia, relating to definitions of explosives.
- 438 A bill to amend and reenact §§ 15.1-446.1, 15.1-454, 15.1-464, 15.1-489, 15.1-490, 15.1-491 and 15.1-493, as severally amended, of the Code of Virginia, relating to planning for the use of land.
- 455 A bill to amend and reenact § 18.2-140 of the Code of Virginia; to amend the Code of Virginia by adding in Title 10 a chapter numbered 17.1, consisting of sections numbered 10-186.1 through 10-186.19; and to repeal § 33.1-346, as amended, and § 33.1-346.1, the amended, added and repealed sections relating to the Litter Control Act and providing penalties for littering.
- 488 A bill to amend the Code of Virginia by adding sections numbered 32-414.4:1 and 32-414.4:2, relating to bonding certain facilities handling radioactive materials and the Perpetual Care Trust Fund.
- 560 A bill to amend the Code of Virginia by adding a section numbered 10-145.9 and to amend and reenact § 62.1-3, as amended, of the Code of Virginia, the added and amended sections relating to underwater historic property; penalties for violations.

APPENDIX 1 - A

1976 Bills, Resolutions, Joint Resolutions

House  
Bills  
Nos.

- 605 A bill to amend and reenact § 21-89.5 of the Code of Virginia, relating to local erosion and sediment control plans.
- 780 A bill to amend the Code of Virginia by adding a section numbered 56-234.3, relating to the power of the State Corporation Commission to approve certain expenditures of public utilities.
- 962 A bill to amend and reenact §§ 10-184.1 and 10-185 as amended, of the Code of Virginia; and to amend the Code of Virginia by adding a section numbered 10-184.2, the amended and added sections relating to multiple State agency environmental permits.
- 972 A bill to amend and reenact §§ 62.1-44.18 and 62.1-44.19, as amended, of the Code of Virginia, relating to sewerage systems.
- 1087 A bill to amend the Code of Virginia by adding a section numbered 62.1-104.1, and to amend and reenact §§ 62.1-105 and 62.1-106 of the Code of Virginia, relating to the impoundment of surface waters.
- 1133 A bill to amend and reenact § 40.1-51.10, as amended, of the Code of Virginia, relating to assessment of fees for boiler inspections.
- 1164 A bill to amend and reenact § 56-234, as amended, of the Code of Virginia, relating to public utility rates and services.
- 1213 A bill to amend and reenact § 15.1-456, as amended, of the Code of Virginia, relating to legal status of comprehensive plans.
- 1237 A bill to amend and reenact § 33.1-346, as amended, and § 33.1-346.1 of the Code of Virginia, prohibiting the dumping of trash and litter upon certain property; penalties for violation.
- 1238 A bill to amend the Code of Virginia by adding a section numbered 3.1-382.1, to ban all metal detachable pull tabs on metal beverage containers.

House  
Joint  
Resolutions  
Nos.

- 123 Expressing the sense of the General Assembly that the State Corporation Commission proceed forthwith to devise and implement testing procedures for time-of-usage pricing of electricity.
- 131 Directing the State Board of Education to increase its efforts in the schools of the Commonwealth to encourage students not to litter and to pick up what has been littered.



APPENDIX 1 - A

1976 Bills, Resolutions, Joint Resolutions

Senate  
Bills  
Nos.

- 35 A bill to provide for the designation of the Goose Creek State Scenic River and to authorize the Northern Virginia Regional Park Authority to administer the Scenic River in accordance with the Scenic Rivers Act.
- 101 A bill to amend the Code of Virginia by adding a section numbered 33.1-90.2, relating to property acquired for highway projects suitable for rail mass transit.
- 162 A bill to amend and reenact § 28.1-51.1 of the Code of Virginia, relating to use of certain fishing devices in certain waters.
- 199 A bill to amend and reenact §§ 3.1-249.6, 3.1-249.8, 3.1-249.12 and 3.1-249.13 of the Code of Virginia; and to amend and reenact the third enactment of Chapter 377 of the 1975 Acts of Assembly, the amended sections and enactment relating to the Virginia Pesticide Law.
- 285 A bill to amend and reenact § 46.1-198.1, as amended, of the Code of Virginia, prohibiting use of devices on motor vehicles to detect the presence of radar.
- 371 A bill to amend and reenact §§ 3.1-22.5 as amended, and 3.1-126.5 of the Code of Virginia, relating to Virginia Agricultural Foundation Fund and fees for agricultural liming materials.
- 325 A bill to amend and reenact §§ 62.1-44.34:1 and 62.1-44.34:2 of the Code of Virginia, relating to oil spill liability.
- 383 A bill to amend and reenact § 9-144 of the Code of Virginia, relating to Solid Waste Study Commission.
- 435 A bill to amend the Code of Virginia by adding a section numbered 46.1-302.01, relating to mufflers on motorcycles.
- 444 A bill to amend and reenact §§ 45.1-5, 45.1-21 and 45.1-42, as amended, of the Code of Virginia, relating to coal mine safety inspections and reports.
- 445 A bill to amend the Code of Virginia by adding a section numbered 56-235.1, relating to conservation of energy and capital resources.
- 499 A bill to amend the Code of Virginia by adding a section numbered 56-248.1 relating to utility oversight procedures by the State Corporation Commission.

APPENDIX 1 - A

1976 Bills, Resolutions, Joint Resolutions

Senate  
Bills  
Nos.

- 532 A bill to amend and reenact §§ 28.1-60 and 28.1-65 as amended, of the Code of Virginia, relating to the season for catching Menhaden fish.
- 540 A bill to amend and reenact § 19.2-8 of the Code of Virginia, relating to the statute of limitations for certain prosecutions.
- 541 A bill to amend and reenact § 62.1-44.15, as amended, of the Code of Virginia, relating to powers and duties of the Water Control Board.
- 543 A bill to amend and reenact § 10-17.23 of the Code of Virginia, relating to compliance with rules and regulations of the State Air Pollution Control Board; penalties for violations.
- 545 A bill to amend and reenact § 32-9.1, as amended, of the Code of Virginia, relating to solid waste disposal.
- 546 A bill to amend the Code of Virginia by adding a chapter numbered 24 in Title 19.2 consisting of sections numbered 19.2-393 through 19.2-397, relating to administrative inspection warrants; penalties provided.
- 547 A bill to amend the Code of Virginia by adding sections numbered 62.1-44.18:1 and 62.1-44.18:2, relating to the Model Sewer Ordinance, Industrial Waste Survey and Sewerage systems use permits.
- 548 A bill to amend the Code of Virginia by adding a chapter numbered 28 in Title 32, consisting of sections numbered 32-428 through 32-440, relating to the Toxic Substances Information Act; penalties for violations.
- 549 A bill to amend and reenact § 32-48 of the Code of Virginia, relating to reports by physicians; penalty for violation.

Senate  
Resolutions  
Nos.

- 11 Relating to construction of pipelines for coal slurry.

Senate  
Joint  
Resolutions  
Nos.

- 2 Continuing the Commission to study the desirability and feasibility of the acquisition of the Washington National and Dulles International Airports; allocation of funds.
- 6 Continuing the Dulles International Airport Development Commission.

1976 Bills, Resolutions, Joint Resolutions

Senate  
Joint  
Resolutions  
Nos.

- 11 Continuing the Virginia Coal and Energy Commission to study the development and utilization of Virginia's Coal; allocation of funds therefor.
- 32 Requesting Virginia's Congressional Delegation to seek the maximum amount of revenues for Virginia from the Federal Government as a consequence of Atlantic Outer Continental Shelf oil leasing, exploration and development.
- 39 Directing the Virginia Coastal Study Commission to include the Coastal Zone Management Program as part of its study; and to allocate funds to continue the study.
- 48 Directing the Commission to study and advise upon the Disposal of Solid Wastes to continue its efforts to formulate a statewide solid waste management plan for the Commonwealth.
- 63 Creating a Commission to study Coal Mine Health and Safety and to allocate funds therefor.

1977 Bills, Resolutions, Joint ResolutionsHouse  
Bills  
Nos.

- 322 A bill to amend and reenact §§ 21-112.1, 21-112.2, 21-112.12, and 21-112.20, as amended, of the Code of Virginia, and to amend the Code of Virginia by adding a section numbered 21-112.12:1, the amended and added sections relating to the watershed improvement districts.
- 589 A bill to amend and reenact § 55-154, as amended, of the Code of Virginia, relating to mineral rights.
- 633 A bill to amend and reenact §§ 62.1-45, 62.1-46, 62.1-47, 62.1-51, 62.1-53, 62.1-55, 62.1-57, 62.1-58, 62.1-59 and 62.1-62 of the Code of Virginia, relating to the public water supply; penalties.
- 767 A bill to amend the Code of Virginia by adding in Title 62.1 a chapter numbered 3.5, consisting of sections numbered 62.1-44.108 through 62.1-44.115, relating to the Flood Damage Reduction Act.
- 777 A bill to amend and reenact §§ 18.2-144 and 18.2-397 of the Code of Virginia and to amend the Code of Virginia by adding in Title 3.1 a chapter numbered 27.3, consisting of sections numbered 3.1-796.39 through 3.1-796.63; and to repeal 3.1-776 and 15.1-29.1, the amended, added, and repealed sections relating to the Animal Welfare Laws; penalties provided.
- 787 A bill to amend and reenact §§ 10-17.107 through 10-17.110 and 10-17.112, as amended, of the Code of Virginia, and to amend the Code of Virginia by adding a section numbered 10-17.113, the amended and added sections relating to Environmental Impact Reports of State agencies and planning for major State facilities.
- 809 A bill authorizing the Governor of the Commonwealth of Virginia to execute the Interstate Mining Compact and appropriate funds therefor.
- 911 A bill to amend and reenact § 46.1-193, as amended, of the Code of Virginia, relating to speed limits.
- 949 A bill to amend and reenact §§ 15.1-237 and 58-769.6, as amended, of the Code of Virginia, and to amend the Code of Virginia by adding a chapter numbered 36 in Title 15.1, consisting of sections numbered 15.1-1506 through 15.1-1512, and sections numbered 25-46.2:2 and 33.1-89.1, the amended and added sections relating to Agricultural and Forestal Districts.

1977 Bills, Resolutions, Joint ResolutionsHouse  
Bills  
Nos.

- 984 A bill to amend and reenact §§ 45.1-180, 45.1-181, 45.1-183, 45.1-184, 45.1-185, 45.1-195, 45.1-197, as amended, and 45.1-197.2 of the Code of Virginia; to amend the Code of Virginia by adding sections numbered 45.1-180.2, 45.1-180.3, 45.1-180.4, 45.1-182.1, 45.1-184.1, 45.1-184.2, 45.1-186.1, and 45.1-193.1; and to repeal §§ 45.1-182, 45.1-186, 45.1-189, and 45.1-193, as severally amended, of the Code of Virginia, the amended, added and repealed sections relating to surface mining of minerals other than coal.
- 999 A bill to amend the Code of Virginia by adding a chapter numbered 22.2 in Title 3.1, consisting of sections numbered 3.1-610.22 through 3.1-610.28, relating to the establishment of a Plant Pollination Commission within the Department of Agriculture and Commerce.
- 1308 A bill to amend and reenact § 46.1-184, as amended, of the Code of Virginia, relating to signals by lights or semaphores.
- 1351 A bill to amend and reenact §§ 62.1-104, 62.1-106, as amended, 62.1-107, 62.1-109, and 62.1-111 of the Code of Virginia, relating to floodwaters and impounding surface waters and procedures therefor.
- 1404 A bill to amend the Code of Virginia by adding a section numbered 58-16.4 relating to certified solar energy equipment, facilities or devices.
- 1411 A bill to amend and reenact § 45.1-200 of the Code of Virginia, relating to surface mining of coal; authority of the Director.
- 1451 A bill to repeal § 9-65.2:1 of the Code of Virginia and to create within the State Energy Office the Solar Energy Center.
- 1454 A bill to amend and reenact §§ 32-429, 32-430, 32-432, 32-433, 32-436, and 32-437 of the Code of Virginia; and to amend the Code of Virginia by adding sections numbered 32-428.1 and 32-435.1; and to repeal 32-435, the amended, added and repealed sections relating to the Toxic Substances Information Act.
- 1455 A bill to amend the Code of Virginia by adding sections numbered 56-249.3 through 56-249.5, relating to fuel adjustment clauses for public utilities.
- 1527 A bill to amend and reenact § 18.2-268, as amended, of the Code of Virginia, relating to use of chemical tests to determine alcoholic content of blood.

1977 Bills, Resolutions, Joint ResolutionsHouse  
Bills  
Nos.

- 1534 A bill to provide for the designation of the Appomattox State Scenic River and to authorize the Virginia Commission of Game and Inland Fisheries to administer the Scenic River in accordance with the Scenic Rivers Act.
- 1566 A bill to amend and reenact § 10-17.16 of the Code of Virginia, relating to records of proceedings, rules and regulations of the Air Pollution Control Board.
- 1568 A bill to amend and reenact § 62.1-44.12 and 62.1-44.15, as amended of the Code of Virginia, relating to the State Water Control Board; records of proceedings, rules and regulations; powers and duties.
- 1645 A bill to amend and reenact § 22-5, as amended, of the Code of Virginia, relating to minimum term for public schools.
- 1651 A bill to amend and reenact § 21-89.3, as amended, of the Code of Virginia, relating to definitions under the Erosion and Sediment Control Law.
- 1684 A bill to repeal Chapter 152 of the 1948 Acts of Assembly relating to hunting wild birds and animals in Caroline County.
- 1732 A bill to amend and reenact § 45.1-196, as amended, of the Code of Virginia, relating to special speed limits on bridges; tunnels.
- 1782 A bill to amend and reenact §§ 2.1-38, 30-28.16 and 42.1-79, as severally amended, of the Code of Virginia; to amend the Code of Virginia by adding in Chapter 5.3 of Title 2.1 sections numbered 2.1-51.18:1 and 2.1-51.18:2 and in Title 2.1 a chapter numbered 32, containing sections numbered 2.1-422 through 2.1-553; and to repeal Chapter 9 of Title 2.1, containing sections numbered 2.1-82 through 2.1-109.07, Chapter 9.2 of Title 2.1, containing sections numbered 2.1-109.6 through 2.1-109.8, Chapter 15 of Title 2.1, containing sections numbered 2.1-235 through 2.1-294, Chapter 16 of Title 22, containing sections numbered 22-331 through 22-344.3, Chapter 2.1 of Title 32, containing sections numbered 32-31.1 through 32-31.8, and 42.1-76, 42.1-80, 42.1-81, 42.1-82, 42.1-84 and 42.1-85, as severally amended, of the Code of Virginia, relating to the administration of State government; creation and powers of the Department of General Services; reorganization of the Division of Engineering and Buildings, Department of Property Records and Insurance, Department of Purchases and Supply, Public Telecommunications Council, Division of Consolidated Laboratory Services, and Public Records Advisory Committee; transfer of allocations of appropriations; penalties for certain violations.

1977 Bills, Resolutions, Joint ResolutionsHouse  
Bills  
Nos.

- 1915 A bill to amend the Code of Virginia by adding a section numbered 44-134.1, relating to powers and duties of the Department of Military Affairs to manage, harvest and sell timber on lands under its control.
- 1958 A bill to amend the Code of Virginia by adding in Title 59.1 a chapter numbered 17, consisting of sections numbered 59.1-196 through 59.1-204, relating to the regulations of invention development services.
- 1971 A bill to amend and reenact § 3.1-387 of the Code of Virginia and to amend the Code of Virginia by adding a section numbered 3.1-394.1 of the Code of Virginia, relating to tolerance levels of adulterants in food.
- 1977 A bill to amend and reenact §§ 9-6.14:4, 182.287.1, 29-62, 29-65, 29-114.2, 29-117, 29-138, 29-140, 29-144.5, 29-144.6, 29-154, 29-155.1, 29-158, 29-163.2, 29-230, 29-231, 29-232, 29-233, and 29-234, as severally amended, of the Code of Virginia, Chapter 334 of the 1928 Acts of Assembly, Chapter 83, as amended, of the 1950 Acts of Assembly, Chapter 288 of the 1956 Acts of Assembly, Chapter 438 of the 1958 Acts of Assembly, Chapter 171 of the 1960 Acts of Assembly, Chapter 68 of the 1962 Acts of Assembly, §§ 1 and 2, as amended, of Chapter 420 of the 1962 Acts of Assembly, and Chapter 59, as amended, of the 1964 Acts of Assembly; to amend the Code of Virginia by adding a section numbered 29-108.1; and to repeal §§ 10-22, 10-23, 10-24, 10-25, 10-26, 10-27, 10-28, 10-29, 10-30, 10-31, 29-23.1, 29-36.1, 29-50, 29-150.1, 29-159, 29-159.1, 29-160, and 29-169 as amended, of the Code of Virginia, Chapter 44 of the 1934 Acts of Assembly, Chapter 187 of the 1938 Acts of Assembly, Chapter 33 of the 1947 Extra Session Acts of Assembly, Chapter 373 of the 1952 Acts of Assembly, Chapters 116, 117, and 118 of the 1954 Acts of Assembly, Chapter 125, as amended, of the 1954 Acts of Assembly and Chapter 542 of the 1956 Acts of Assembly; the amended, added, and repealed sections relating to the Commission of Game and Inland Fisheries and its regulations and local ordinances relating to wildlife management, hunting and fishing licenses, fees, permits, weapons, and seasons.
- 2041 A bill to amend and reenact §§ 62.1-44.23, 62.1-44.31, and 62.1-44.32, as amended, of the Code of Virginia, relating to enforcement of rules, regulations and requirements of the State Water Control Board.
- 2046 A bill to amend and reenact § 18.2-268, as amended, of the Code of Virginia, providing for use of chemical tests to determine alcoholic content of blood; procedure; qualifications and liability of person withdrawing blood, costs; evidence; suspension of license for refusal to submit to test; parallel ordinances.

1977 Bills, Resolutions, Joint Resolutions

House  
Bills

Nos. 2123 A bill to amend and reenact §§ 4-40, 4-108 and 10-201.1 as severally amended, of the Code of Virginia; to amend the Code of Virginia by adding in Title 58 a chapter numbered 7.2 consisting of a section numbered 58-404.02; and to repeal the second enactment of Chapter 757 of the 1976 Acts of Assembly, the amended, added and repealed sections relating to the taxation of certain litter-prone containers and certain wholesalers or distributors thereof.

House  
Resolution:  
Nos.

50 Recognizing the need for expanding vessel traffic services on the Chesapeake Bay.

House  
Joint  
Resolutions  
Nos.

- 187 Memorializing Congress to remove federal price controls on certain natural gas.
- 197 Directing the Virginia Advisory Legislative Council to continue its study on non-coal orphaned lands and to make such recommendations as are deemed necessary to improve the Reclamation Program.
- 206 Memorializing Congress to reate and implement a national coal policy fostering maximum usage and development of coal resources within the United States.
- 210 Requesting the Governor to study the organization of the Commonwealth's conservation, recreation and historic preservation activities and to present his findings and recommendations to the nineteen hundred seventy-eight session of the General Assembly.
- 217 Requesting the Solid Wastes Commission to study certain methods of solid waste disposal.
- 236 Requesting the State Water Control Board to recommend to the General Assembly ways to resolve water supply and allocation problems.
- 242 Requesting the Department of Highways and Transportation to undertake a study of Scenic Highways and Virginia Byways Law.



APPENDIX 1 B

1977 Bills, Resolutions, Joint Resolutions

House  
Joint  
Resolutions  
Nos.

- 245 Requesting the Commission on State Governmental Management and the Council on Transportation to coordinate their analyses of transportation organization and management issues and alternatives before submitting their final reports to the 1978 session of the General Assembly; and establishing legislative policy guidelines to be applied in formulating recommendations on transportation organization management.
- 253 Requesting the House General Laws Committee to conduct a study into methods of reducing the impact of water shortages in Virginia.
- 257 Directing a Joint Subcommittee of the Committee on Agriculture of the House of Delegates and the Committee on Agriculture, Conservation and Natural Resources of the Senate to study the problem of Johnson-grass Infestation in Virginia.
- 264 Censuring the United States Department of Transportation for failing to enforce adequate tanker safety standards.
- 267 Expressing the sense of the General Assembly that the United States should proceed with the Arctic Gas Project.
- 270 Memorializing Congress to allow regulation of surface mining of coal to remain in the hands of the states.
- 285 Requesting the House Mining and Mineral Resources Committee and the Senate Agriculture, Conservation and Natural Resources Committee to study the effect of surface mining of coal on highways, watercourses, buildings and structures located nearby.

Senate  
Bills  
Nos.

- 375 A bill to amend and reenact §§ 56-235, 56-238 and 56-245 as amended, of the Code of Virginia, and to amend the Code of Virginia by adding sections numbered 56-235.1 and 56-235.2, all relating to the setting of rates of public utilities by the State Corporation Commission.
- 406 A bill to amend the Code of Virginia by adding a section numbered 55-154.1, relating to the establishment of mineral rights pertaining to methane and propane.

1977 Bills, Resolutions, Joint ResolutionsSenate  
Bills  
Nos.

- 561 A bill to amend and reenact § 62.1-44.26 of the Code of Virginia, relating to hearings conducted by the State Water Control Board.
- 571 A bill to amend and reenact §§ 62.1-44.85, 62.1-44.87, 62.1-44.90, 62.1-44.91, 62.1-44.93, 62.1-44.95, 62.1-44.96, 62.1-44.97, 62.1-44.98, 62.1-44.99, 62.1-44.100 and 62.1-44.106 of the Code of Virginia, relating to the Groundwater Act of 1973.
- 720 A bill to amend and reenact §§ 3.1-733, 3.1-736, 3.1-737 and 3.1-738 of the Code of Virginia, and to amend the Code of Virginia by adding a section numbered 3.1-738.1, the amended and added sections relating to the control of infectious and contagious diseases in animals and penalties therefor.
- 742 A bill to amend the Code of Virginia by adding in Chapter 27 of Title 3.1 an Article numbered 10, consisting of sections numbered 3.1-796.11:1 through 3.1-796.11:11, relating to biological residues on animals, quarantining animals, intrastate shipments, inspection and testing for biological residues, regulations and penalties.
- 761 A bill to create a Virginia Center of Coal and Energy Research at Virginia Polytechnic Institute and State University; and to appropriate funds therefor; and to create the Virginia Coal Research and Development Advisory Committee.
- 795 A bill to provide that the cities of Chesapeake, Franklin, Norfolk, Portsmouth, Suffolk, and Virginia Beach, being six of the eight incorporating political subdivisions comprising the Southeastern Public Service Authority of Virginia created pursuant to the provisions of Chapter 28, Title 15.1, Code of Virginia, 1950, as amended, shall be authorized from time to time or at any time to contract obligations to provide payments over a period or periods of more than one year to said authority to guarantee the payment of all or any part of the principal of and the interest on bonds issued from time to time by said authority on account of its water system and its garbage and refuse collection and disposal system and such contract obligations shall be an excluded indebtedness within the meaning of and for the purposes of Article VII, Section 10 (A) of the Constitution of Virginia and the charters of said cities, to provide that the term garbage and refuse collection and disposal system as used in said chapter includes, in the case of said authority, solid waste recovery facilities, including facilities for the generation of steam and electricity, and to ratify the creation and purposes of said authority.
- 815 A bill to amend and reenact § 10-206 of the Code of Virginia, relating to the Litter Control Act.

1977 Bills, Resolutions, Joint ResolutionsSenate  
Bills  
Nos.

- 817 A bill to amend and reenact §§ 10-199, 10-201, and 10-203 of the Code of Virginia, relating to the Virginia Litter Control Act.
- 874 A bill to amend and reenact §§ 46.1-351.1 and 46.1-351.2, as amended, of the Code of Virginia, relating to seizure and forfeiture of certain motor vehicles upon arrest of persons believed to have committed certain violations of the motor vehicle code; proceedings.
- 935 A bill to amend the Code of Virginia by adding a section numbered 36-124.1 establishing a program of loans for the installation of certain energy saving devices.
- 936 A bill to amend the Code of Virginia by adding a chapter in Title 23 numbered 17, consisting of sections numbered 23-232 through 23-246; and to repeal chapter 7.1 of Title 9, consisting of §§ 9-65.1 through 9-65.14, as severally amended, the added and repealed sections relating to the Science Museum of Virginia.

Senate  
Resolutions  
Nos.

- 34 Requesting the Senate Committee on Agriculture, Conservation and Natural Resources to work with the State Department of Health to study the effectiveness of flow-through marine sanitation devices.

Senate  
Joint  
Resolutions  
Nos.

- 107 Memorializing Congress to create and implement a national coal policy fostering maximum usage and development of coal resources within the United States.
- 108 Continuing the Virginia Coal and Energy Commission; allocating funds therefor.
- 122 Continuing the Virginia Coastal Study Commission.
- 125 Requesting the State Corporation Commission to study the feasibility of utility financing of home and business insulation to achieve energy conservation.
- 126 Directing all State agencies which own or operate buildings with showers to install fluid control devices during maintenance on the showers.

APPENDIX 1 - B

1977 Bills, Resolutions, Joint Resolutions

Senate  
Joint  
Resolutions  
Nos.

- 136 Requesting a Joint Subcommittee of the Senate Commerce and Labor Committee and the House Corporations, Insurance and Banking Committee to study the safety, reliability, and spent fuel disposal systems of nuclear power plants; including plans for evacuation in case of disaster.
- 137 Proposing a study on the erection of electronic information displays along the highways of the Commonwealth.
- 153 Authorizing a Joint Committee of the House of Delegates and the Senate to study the transportation needs of Northern Virginia.

1978 Bills, Resolutions, Joint ResolutionsHouse  
Bills  
Nos.

- 100 A bill to amend and reenact § 36-55.31:1 of the Code of Virginia relating to loans for energy saving devices by the Virginia Housing Development Authority.
- 102 A bill to amend and reenact § 46.1-334 of the Code of Virginia, relating to width of loads carried on motor vehicles.
- 233 A bill to amend and reenact §§ 3.1-610.25, 3.1-610.26, 3.1-610.27 and 3.1-610.28 of the Code of Virginia, relating to the Plant Pollination Advisory Board and the establishment and administration of a special fund.
- 237 A bill to amend and reenact § 5 of Chapter 523 of the 1948 Acts of Assembly, relating to the Moccasin Gap Sanitation Commission.
- 268 A bill to amend the Code of Virginia by adding in Chapter 16 of Title 45.1 an article numbered 3, consisting of sections numbered 45.1-197.3 through 45.1-197.7, and an article numbered 4, consisting of sections numbered 45.1-197.8 through 45.1-197.18, the added sections relating to the reclamation of non-coal orphaned lands and the creation of Minerals Reclamation Fund; allocation of funds.
- 282 A bill to amend and reenact §§ 2.1-51.27 and 2.1-407 through 2.1-410 of the Code of Virginia and to amend the Code of Virginia by adding in Title 2.1 a chapter numbered 35, containing sections numbered 2.1-560 through 2.1-563, all relating to State Automated Data Processing; the creation of the Department of Computer Services.
- 308 A bill to amend and reenact § 46.1-198.1 of the Code of Virginia, relating to Radar Detection Devices.
- 309 A bill to amend and reenact § 40.1-51.8 of the Code of Virginia relating to the Virginia Boiler and Pressure Vessel Safety Act.
- 311 A bill to amend the Code of Virginia by adding in Title 55 a chapter numbered 19, consisting of sections numbered 55-336 through 55-338, creating the Virginia Solar Easements Act.
- 324 A bill to amend and reenact § 28.1-109 of the Code of Virginia relating to general oyster-planting grounds.
- 335 A bill to amend and reenact § 28.1-128 of the Code of Virginia and to amend the Code of Virginia by adding a section numbered 28.1-128.1, relating to permits to dredge and fish in certain areas.

## 1978 Bills, Resolutions, Joint Resolutions

House  
Bills  
Nos.

- 342 A bill to amend and reenact §§ 28.1-108 and 28.1-109 of the Code of Virginia, relating to oyster planting grounds.
- 347 A bill to amend the Code of Virginia by adding a section numbered 15.1-867.2, relating to Johnson Grass Control Ordinances and Programs.
- 370 A bill to amend and reenact § 28.1-59 of the Code of Virginia, relating to licenses to take certain fish.
- 372 A bill to amend and reenact § 28.1-170 of the Code of Virginia, relating to closed seasons for taking crabs in certain areas.
- 375 A bill to amend the Code of Virginia by adding a section numbered 56-237.3; and to repeal §§ 56-248.1, 56-249.3, 56-249.4, and 56-249.5 of the Code of Virginia, all relating to the Fuel Adjustment Clause.
- 400 A bill to amend and reenact § 45.1-213 of the Code of Virginia and to amend the Code of Virginia by adding in Chapter 17 of Title 45.1 an article numbered 4, consisting of sections numbered 45.1-220.1 through 45.1-220.5, the amended and added sections relating to the issuance of Coal Surface Mining Permits; compliance with interim regulatory procedures established by federal law; exemptions; fees; applicability of article to underground mines.
- 436 A bill to amend and reenact §§ 3.1-99, 3.1-105, 3.1-126.8, 3.1-149, 3.1-543, 3.1-571, 3.1-581, 3.1-698, 3.1-722.7, 3.1-808, 3.1-814, 3.1-821, 3.1-834, 3.1-843, 3.1-894, 3.1-898 and 61.1-9 of the Code of Virginia and to amend the Code of Virginia by adding in Title 3.1 a chapter numbered 4.3, consisting of sections numbered 3.1-22.13 through 3.1-22.21, the amended and added sections relating to the creating of the Virginia Farmer Major Drought, Flood and Hurricane Disaster Act; establish funding and loan programs for farmers.
- 468 A bill to amend and reenact § 2.1-482 of the Code of Virginia, relating to use of water-efficient fixtures, devices, and appliances in State buildings.
- 469 A bill to amend the Code of Virginia by adding a section numbered 15.1-37.2:1, relating to installation of water-saving devices in new buildings.
- 471 A bill to amend and reenact §§ 62.1-44.2 and 62.1-44.15 of the Code of Virginia, relating to duties of the State Water Control Board regarding Water Conservation.
- 495 A bill to amend and reenact § 15.1-475 of the Code of Virginia, relating to Land Subdivision and Development.
- 500 A bill to amend and reenact § 54-113 of the Code of Virginia, relating to the definition of General Contractor.
- 527 A bill to remove certain areas in the waters of Hampton Roads and the Elizabeth River from the Natural Oyster Rocks, Beds and Shoals embraced within the Baylor Survey.

## 1978 Bills, Resolutions, Joint Resolutions

House Bills Nos.	
581	A bill to amend the Code of Virginia by adding in Article 8 of Chapter 3.1 of Title 62.1 a section numbered 62.1-44.34:3, establishing the Virginia Oil Spill.
582	A bill to amend and reenact §§ 62.1-44.34:1 and 62.1-44.34:2 of the Code of Virginia; to amend the Code of Virginia by adding in article 8 of Chapter 3.1 sections numbered 62.1-44.34:3, 62.1-44.34:4, and 62.1-44.34:5; and to repeal § 63.1-44.34 of the Code of Virginia, the amended, added and repealed sections relating to the discharge of oil into State waters; liability for discharges; reporting requirements; civil penalties; and exceptions.
591	A bill to amend and reenact §§ 10-90.23, 10-90.26, 58-838.5:2 and 58-838.7:1 of the Code of Virginia, relating to the Division of Forestry and Reforestation Funds; appropriating money therefor.
595	A bill to amend and reenact §§ 2.1-1, 3.1-1, 3.1-2, 3.1-8, 3.1-14, 3.1-15, 3.1-16, 3.1-18, 3.1-18.1, 3.1-18.2 and 3.1-18.3 of the Code of Virginia, relating to the creation of the Department of Agriculture and Consumer Services and methods for board appointments.
670	A bill to amend the Code of Virginia by adding a section numbered 53-19.38:1, relating to sale or lease of gas, oil or minerals by the director of the Department of Corrections.
698	A bill to amend and reenact § 10-17.23 of the Code of Virginia, relating to civil penalties for violation of rules, regulations, or orders of the Air Pollution Control Board.
699	A bill to amend the Code of Virginia by adding in Chapter 1.2 of Title 10 a section numbered 10-17.30:1, providing for certain permits issued by the Air Pollution Control Board.
729	A bill to amend and reenact § 62.1-13.6 of the Code of Virginia, relating to local wetlands boards.
742	A bill to amend the Code of Virginia by adding a section numbered 57-266.1:2, relating to severance taxes on coal and gases; use of funds from such taxes; expiration of certain taxes.
770	A bill to amend and reenact § 46.1-315.2 of the Code of Virginia, relating to frequency of motor vehicle inspections.
886	A bill to amend and reenact § 15.1-1509 of the Code of Virginia, relating to fees for applications to create agricultural and forestal districts.
921	A bill to amend and reenact § 18.2-268 of the Code of Virginia, relating to tests to determine alcoholic content in blood.
1152	A bill to amend and reenact § 45.1-4 of the Code of Virginia, relating to qualifications of chief and mine inspectors.

## 1978 Bills, Resolutions, Joint Resolutions

House  
Resolution  
Nos.

- 11 Requesting the subcommittee on energy of the Committee on General Laws of the House of Delegates to study the interrelationship of State and Federal Energy Programs.

House  
Joint  
Resolutions  
Nos.

- 7 Creating the Legislative Scientific and Technological Advisory Committee; allocating funds.
- 35 Requesting the House Chesapeake and its Tributaries Committee and the Senate Agriculture, Conservation and Natural Resources Committee to study various problems relating to Shellfish Industry Management in Virginia and related problems.
- 37 Requesting the House of Delegates Labor and Commerce Committee and the Senate Commerce and Labor Committee to make a joint study of the State OSHA plan.
- 88 Requesting the State Water Control Board to study the feasibility of a State Grant Program for certain water impoundment construction.
- 95 Continuing the Joint Subcommittee of the House Mining and Mineral Resources Committee and the Senate Agriculture, Conservation and Natural Resources Committee requested to study the effects of surface mining of coal on highways, watercourses, buildings and structures located nearby; and to examine the present Surface Mining Regulatory Program being conducted by the Department of Conservation and Economic Development.
- 97 Requesting the State Water Control Board to perform additional studies relating to the water supply and allocation problems of Northern Virginia.
- 141 Requesting the Virginia Board of Housing to study the energy provisions of the Building Officials and Code Administrators Energy Code.
- 142 Creating a Joint Subcommittee to study Wastewater Treatment and Disposal Systems.
- 147 Requesting the State Board of Housing to develop and implement a training program on Solar Energy Utilization.



APPENDIX 1 C

1978 Bills, Resolutions, Joint Resolutions

House  
Joint  
Resolutions  
Nos.

- 158 Concerning the water supply for the Fairfax County Water Authority.
- 161 Creating a Commission to study the use of Air Rights over highways and rapid transit facilities; allocating funds therefor.
- 162 Requesting the Virginia Institute of Marine Science to conduct a study on chlorine levels and their effect upon oysters in the Warwick River.
- 174 Expressing the sense of the General Assembly relative to the preemption of State Law as to certain aspects of litter control.

Senate  
Bills  
Nos.

- 125 A bill to amend and reenact §§ 45.1-106 and 46.1-108 of the Code of Virginia; to amend the Code of Virginia by adding a section numbered 45.1-115.1; and to repeal § 45.1-115 of the Code of Virginia, the amended, added, and repealed sections relating to the oil and gas laws of this Commonwealth.
- 145 A bill to amend and reenact §§ 45.1-2, 45.1-4, 45.1-5, 45.1-8, 45.1-10, 45.1-16, 45.1-19, 45.1-20, 45.1-54, 45.1-56, 45.1-57, 45.1-58, 45.1-65, 45.1-67 and 45.1-33.6 of the Code of Virginia, the amended and repealed sections relating to Coal Mine Health and Safety.
- 188 A bill to amend and reenact §§ 45.1-7, 45.1-12, 45.1-13, 45.1-17, 45.1-26, 45.1-30, 45.1-34, 45.1-36, 45.1-37, 45.1-39, 45.1-40, 45.1-44, 45.1-48, 45.1-68, 45.1-69, 45.1-90 and 45.1-98 of the Code of Virginia, and to amend the Code of Virginia by adding sections numbered 45.1-53.1 and 45.1-99.1, the amended and added sections relating to Coal Mine Health and Safety; prohibited acts; penalties.
- 206 A bill to amend and reenact § 21-89.5 of the Code of Virginia, relating to local erosion and sediment control programs.
- 223 A bill to amend and reenact § 46.1-198.1 of the Code of Virginia, relating to the use of radar detection devices on motor vehicles; penalties.
- 324 A bill to amend and reenact §§ 3.1-11, 3.1-18.1, 3.1-685, and 3.1-723 of the Code of Virginia, relating to the appointment of the State Chemist, the Administrator of Consumer Affairs, the Director of the Division of Markets and the State Veterinarian.

1978 Bills, Resolutions, Joint ResolutionsSenate  
Bills  
Nos.

- 327 A bill to amend the Code of Virginia by adding in Article 2 of Chapter 1 of Title 15.1 a section numbered 15.1-37.3:4, relating to water shortage emergencies in localities; interjurisdictional assistance.
- 385 A bill to amend and reenact §§ 58-769.6 and 58-769.8 of the Code of Virginia, relating to adoption and application for land use assessment.
- 418 A bill to authorize and empower the Virginia Marine Resources Commission to grant to Joseph L. Conboy and M. Elinor Conboy a certain easement for use of certain subaqueous and filled lands in the Rappahannock River, Middlesex County, Virginia.
- 436 A bill to amend and reenact § 15.1-28.1 of the Code of Virginia, relating to regulation of garbage and refuse pickup and disposal services.
- 464 A bill to amend and reenact § 1 of Chapter 628 of the 1956 Acts of Assembly, relating to the Shenandoah Valley Joint Airport Commission.
- 482 A bill to amend the Code of Virginia by adding a section numbered 28.1-144.1 relating to temporary restrictions on leasing of certain oyster grounds in the Chesapeake Bay.
- 497 A bill to amend the Code of Virginia by adding a section numbered 32-9.2 providing state aid to localities for solid waste disposal.
- 535 A bill to amend and reenact § 10-38 of the Code of Virginia; to amend the Code of Virginia by adding in Title 10 a Chapter numbered 1-9, consisting of sections numbered 10-17.113 through 10-17.122; to further amend the Code of Virginia by adding in Title 29 a Chapter numbered 12, consisting of sections numbered 29-238 through 29-247; and to repeal §§ 10-21.1 and 29-11.1 of the Code of Virginia, the amended, added and repealed sections relating to leasing of lands owned by the Commission of Game and Inland Fisheries and the Department of Conservation and Economic Development; mineral rights; environmental statements; procedures; approval by Governor.

Senate  
Joint  
Resolutions

- 1 Continuing the State Water Study Commission.
- 10 Continuing the Dulles International Airport Development Commission; allocating funds therefor.
- 22 Creating a Joint Subcommittee to study the effects of erosion on the beaches, islands and inlets of the Commonwealth; allocation of funds.

1978 Bills, Resolutions, Joint ResolutionsSenate  
Joint  
Resolutions  
Nos.

- 24 Requesting the Senate Agriculture, Conservation and Natural Resources Committee to continue its study of the effectiveness and need for flow-through marine sanitation devices and related matters.
- 37 Creating the State Air Pollution Study Commission.
- 53 Increasing membership on the Virginia Coal and Energy Commission.
- 62 Expressing the support of the General Assembly for the efforts of the Secretary of Commerce and Resources to bring greater consistency to federal and State permitting activities in tidal waters and wetlands through negotiations with the United States Army Corps of Engineers; and requesting the Secretary to study certain permit programs for shore-line activities.
- 63 Establishing a Joint Subcommittee of the Senate and House of Delegates to study the proposed Coast Resource Management Act and certain related matters.

APPENDIX 1 - D  
1976 LEGISLATION CATEGORIZED

<u>AGRI- CULTURE</u>	<u>COASTAL</u>	<u>CHEM. &amp; DRUGS</u>	<u>ENERGY</u>	<u>ENVIRON- MENTAL</u>	<u>MINING</u>	<u>PUBLIC UTILITIES</u>	<u>SOLID WASTES</u>	<u>TRANS- PORTATION</u>	<u>WATER</u>	<u>MISC.</u>
HB 438	HB 72	HB 205	HB 488	HB 374	HB 160	HB 780	HB 342	HB 370	HB 101	
HB 1213	SJ 32		SB 445	HB 605	HB 444	HB 1133	HB 455	SB 101	HB 561	
SB 371	SJ 39		SJ 11	HB 962	SJ 63	HB 1164	HB 972	SB 285	HB 1087	
				SB 199	SR 11	SB 499	HB 1237	SJ 6	SB 35	
				SB 325		HJ 123	HB 1238	SJ 8	SB 162	
				SB 435			SB 383		SB 532	
				SB 540			SB 541			
				SB 543			SB 545			
				SB 546			SB 547			
				SB 548			HJ 131			
				SB 549			SJ 48			

APPENDIX 1 - E

1977 LEGISLATION CATEGORIZED

AGRI- CULTURE	COASTAL	CHEM. & DRUGS	ENERGY	ENVIRON- MENTAL	MINING	PUBLIC UTILITIES	SOLID WASTES	TRANS- PORTATION	WATER	MISC.
HB 777	SJ 122	HB 1527	HB 1404	HB 787	HB 589	SB 375	HB 2123	HB 911	HB 322	HB1782
HB 949		HB 2046	HB 1451	HB 1454	HB 809		SB 795	HB 1308	HB 633	HB1958
HB 999		SB 874	HB 1455	HJ 164	HB 984		SB 815	HB 1732	HB 767	SB936
HB 1651			HB 1645	SR 34	HB 1411		SB 817	HJ 242	HB 1351	HJ210
HB 1684			SB 761		SB 406		HJ 217	HJ 245	HB 1534	
HB 1915			SB 935		HJ 197			SJ 137	HB 1566	
HB 1971			HJ 187		HJ 270			SJ 153	HB 1568	
HB 1977			HJ 206		HJ 285				HB 2041	
SB 720			HJ 267						SB 561	
SB 742			SJ 107						SB 571	
HJ 257			SJ 108						HJ 236	
			SJ 125						HJ 253	
			SJ 136						SJ 126	
									HR 50	



## **APPENDIX II**

### **Survey of General Assembly**

**Results of Survey of members of General Assembly to assess perception of information transfer capabilities.**

#### **A. Survey Instrument**

#### **B. Survey Results**

I. The following items are typical in social science research and are used only in analyzing data to ascertain significant collective differences. Do not respond to any item which you feel may jeopardize your anonymity.

- 1. Political affiliation     Democrat     Independent     Republican
- 2. Office held                 Delegate     Senator
- 3. Age                          25 - 39     40 - 59     60 +
- 4. Geographic Region         North (7th, 8th, or 10th Congressional District)
- South (5th Congressional District)
- East (1st, 2nd, 3rd, or 4th Congressional District)
- West (6th or 9th Congressional District)

II. The following items are possible functions of the Division of Legislative Services. We ask that you evaluate the performance of Legislative Services on each of these functions. Check only one response per item.

FUNCTIONS	EVALUATION
1. Bill drafting	<input type="checkbox"/> excellent, <input type="checkbox"/> good, <input checked="" type="checkbox"/> average, <input type="checkbox"/> poor
2. Committee staffing	<input type="checkbox"/> excellent, <input type="checkbox"/> good, <input type="checkbox"/> average, <input type="checkbox"/> poor
3. General information services (answering specific questions)	<input type="checkbox"/> excellent, <input type="checkbox"/> good, <input checked="" type="checkbox"/> average, <input type="checkbox"/> poor
4. General research	<input type="checkbox"/> excellent, <input checked="" type="checkbox"/> good, <input type="checkbox"/> average, <input type="checkbox"/> poor
5. Policy analysis	<input checked="" type="checkbox"/> excellent, <input type="checkbox"/> good, <input type="checkbox"/> average, <input type="checkbox"/> poor
6. Quantitative research	<input type="checkbox"/> excellent, <input type="checkbox"/> good, <input type="checkbox"/> average, <input checked="" type="checkbox"/> poor
7. Scientific and technical information services	<input checked="" type="checkbox"/> excellent, <input checked="" type="checkbox"/> good, <input type="checkbox"/> average, <input type="checkbox"/> poor
8. Statutory research	<input type="checkbox"/> excellent, <input checked="" type="checkbox"/> good, <input type="checkbox"/> average, <input type="checkbox"/> poor

Additional comments:

t

Please evaluate these possible functions on their importance to you in carrying out your duties as a legislator.

FUNCTIONS	EVALUATION
1. Bill Drafting	<input type="checkbox"/> very important, <input type="checkbox"/> important, <input type="checkbox"/> unimportant, <input checked="" type="checkbox"/> very unimportant
2. Committee staffing	<input type="checkbox"/> very important, <input type="checkbox"/> important, <input type="checkbox"/> unimportant, <input checked="" type="checkbox"/> very unimportant
3. General information services	<input type="checkbox"/> very important, <input type="checkbox"/> important, <input type="checkbox"/> unimportant, <input checked="" type="checkbox"/> very unimportant
4. General research	<input type="checkbox"/> very important, <input type="checkbox"/> important, <input checked="" type="checkbox"/> unimportant, <input checked="" type="checkbox"/> very unimportant



FUNCTIONS

EVALUATION

- |  |   |  |
|--|---|--|
| 5. Policy analysis                               | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |
| 6. Quantitative research                         | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |
| 7. Scientific and technical information services | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |
| 8. Statutory research                            | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |

Additional comments:

III. Which of the following have you found to be useful sources of information of all kinds about issues?

Check if useful source of information of all kinds

- |  |                          |
|--|--------------------------|
| 1. Members of committee concerned with issue | <input type="checkbox"/> |
| 2. Committee staff (if any)                  | <input type="checkbox"/> |
| 3. Personal staff (if any)                   | <input type="checkbox"/> |
| 4. Party caucus                              | <input type="checkbox"/> |
| 5. Party leaders                             | <input type="checkbox"/> |
| 6. Legislative Services                      | <input type="checkbox"/> |
| 7. State agencies                            | <input type="checkbox"/> |
| 8. Lobbyists                                 | <input type="checkbox"/> |
| 9. Constituency groups                       | <input type="checkbox"/> |
| 10. University specialists                   | <input type="checkbox"/> |
| 11. Governor's office                        | <input type="checkbox"/> |
| 12. Federal Agencies                         | <input type="checkbox"/> |

Which source is the most useful?

IV. The following items are issues facing the Commonwealth. Please evaluate the importance of these seven general and twenty-one specific issues which the General Assembly may take up during this and the next biennium.

- |   |   |   |
|---|---|---|
| EDUCATION   | <input type="checkbox"/> very important   | <input type="checkbox"/> important  |
|   | <input type="checkbox"/> unimportant  | <input type="checkbox"/> very unimportant                                       |
| 1. Cost to localities of State-mandated programs      | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important<br><input type="checkbox"/> very unimportant |
| 2. Desegregation in higher education                  | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important<br><input type="checkbox"/> very unimportant |
| 3. Improving student performance in secondary schools | <input type="checkbox"/> very important<br><input type="checkbox"/> unimportant,  | <input type="checkbox"/> important<br><input type="checkbox"/> very unimportant |

<u>Issue</u>		
<u>ENERGY</u>	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input type="checkbox"/> very unimportant.
1. Traditional energy sources (coal and petroleum)	<input checked="" type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input checked="" type="checkbox"/> important <input type="checkbox"/> very unimportant
2. Regulation of public energy utilities	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important <input type="checkbox"/> very unimportant
3. Non-traditional energy sources (solar, solid waste, and nuclear)	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input type="checkbox"/> very unimportant
<u>ENVIRONMENT</u>	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input type="checkbox"/> very unimportant
1. Air pollution	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input checked="" type="checkbox"/> important, <input checked="" type="checkbox"/> very unimportant
2. Strip mining	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input checked="" type="checkbox"/> important, <input type="checkbox"/> very unimportant
3. Water pollution	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input checked="" type="checkbox"/> very unimportant
<u>FINANCE</u>	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important <input type="checkbox"/> very unimportant
1. Inequities in State income tax	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important <input checked="" type="checkbox"/> very unimportant
2. Expansion of industrial bond revenue	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input type="checkbox"/> very unimportant
3. Sources of local taxation	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input type="checkbox"/> very unimportant
<u>GOVERNMENT</u>	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input type="checkbox"/> very unimportant
1. Annexation	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important <input type="checkbox"/> very unimportant
2. Collective bargaining for public employees	<input type="checkbox"/> very important <input type="checkbox"/> unimportant,	<input checked="" type="checkbox"/> important <input checked="" type="checkbox"/> very unimportant
3. Growth of State government	<input checked="" type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input checked="" type="checkbox"/> very unimportant
<u>HUMAN RESOURCES</u>	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input type="checkbox"/> very unimportant
1. Consumer protection	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input checked="" type="checkbox"/> very unimportant
2. Economic growth	<input checked="" type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input checked="" type="checkbox"/> important <input type="checkbox"/> very unimportant
3. Unemployment	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input type="checkbox"/> important, <input type="checkbox"/> very unimportant
<u>PUBLIC HEALTH</u>	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input checked="" type="checkbox"/> important, <input type="checkbox"/> very unimportant
1. Mental health	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input checked="" type="checkbox"/> important, <input type="checkbox"/> very unimportant
2. Health care costs	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input checked="" type="checkbox"/> important, <input checked="" type="checkbox"/> very unimportant
3. Social services to the elderly, handicapped and poor	<input type="checkbox"/> very important, <input type="checkbox"/> unimportant,	<input checked="" type="checkbox"/> important, <input type="checkbox"/> very unimportant

Other general or specific issues considered very important: \_\_\_\_\_

Which of the general issues is the most important? \_\_\_\_\_

Which of the specific issues is the most important? \_\_\_\_\_

How important are the scientific or technical aspects of the general issue of:

- |                 |   |  |
|-----------------|---|--|
| EDUCATION       | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |
| ENERGY          | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |
| ENVIRONMENT     | <input type="checkbox"/> very important,<br>unimportant,                          | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |
| FINANCE         | <input type="checkbox"/> very important,<br>unimportant,                          | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |
| GOVERNMENT      | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |
| HUMAN RESOURCES | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |
| PUBLIC HEALTH   | <input type="checkbox"/> very important,<br><input type="checkbox"/> unimportant, | <input type="checkbox"/> important,<br><input type="checkbox"/> very unimportant |

Please evaluate the performance of Legislative Services in providing scientific or technical information on the general issue of:

- |                 |  |   |
|-----------------|--|---|
| EDUCATION       | <input type="checkbox"/> excellent,<br>average,                          | <input type="checkbox"/> good,<br><input type="checkbox"/> poor |
| ENERGY          | <input type="checkbox"/> excellent,<br>average,                          | <input type="checkbox"/> good,<br><input type="checkbox"/> poor |
| ENVIRONMENT     | <input type="checkbox"/> excellent,<br>average,                          | <input type="checkbox"/> good,<br><input type="checkbox"/> poor |
| FINANCE         | <input type="checkbox"/> excellent,<br>average,                          | <input type="checkbox"/> good,<br><input type="checkbox"/> poor |
| GOVERNMENT      | <input type="checkbox"/> excellent,<br>average,                          | <input type="checkbox"/> good,<br><input type="checkbox"/> poor |
| HUMAN RESOURCES | <input type="checkbox"/> excellent,<br><input type="checkbox"/> average, | <input type="checkbox"/> good,<br><input type="checkbox"/> poor |
| PUBLIC HEALTH   | <input type="checkbox"/> excellent,<br>average,                          | <input type="checkbox"/> good,<br><input type="checkbox"/> poor |

Additional Comments:



# COMMONWEALTH of VIRGINIA

## DIVISION OF LEGISLATIVE SERVICES

STATE CAPITOL

JOHN A. BANKS, JR.  
DIRECTOR

POST OFFICE BOX 3-AG  
RICHMOND, VIRGINIA 23208  
(804) 786-3591

### MEMORANDUM

TO: John A. Banks .  
FROM: David S. Castle  
RE: Survey Questionnaire, Preliminary Analysis  
DATE: June 5, 1978

Seventy responses (50 percent) were received by the May 1 deadline. Significance tests verified our assumption that a 50 percent return would be a representative sample. Tests of the return date after 35 responses revealed no significant differences in the patterns of responses to all items on the questionnaire. Thus the few responses received after May 1 were not recorded, as preliminary tabulation and analysis were begun on that date. Six responses were unusable for any item.

Numerical values presented herein are averages unless otherwise specified. They are derived from the division of the total values by the total responses for each item. Values for the evaluation of the performance of functions are as follows: excellent - 6, good - 4, average - 2, poor - 0. Such scale provides some variation in scores essential to quantitative analysis and has been adequate in similar research projects. The same values are used in tabulating responses to items which call for an assessment of importance: very important - 6, important - 4, unimportant - 2, very unimportant - 0.

#### I. PERFORMANCE AND IMPORTANCE OF DIVISION FUNCTIONS

Legislators were asked to evaluate the performance of Legislative Services on selected functions. Five functions were traditional legislative support activities: bill drafting,

committee staffing, general information services, general research, and statutory research. Three functions were innovative in that, while common in other state and national legislative support units, they were new or as yet relatively untried in this division: policy analysis, quantitative research, and scientific and technical information services.

Respondents rated our performance of these functions as follows:

committee staffing	4.85
general information services	4.60
statutory research	4.56
bill drafting	4.00
general research	3.76
quantitative research	3.40
policy analysis	3.30
scientific and technical information	3.18

mean = 3.96  
mean, traditional = 4.35  
mean, innovative = 3.29

Asked to rate the importance of the same functions, the legislators responded as follows:

bill drafting	5.49
committee staffing	5.36
statutory research	5.24
general research	4.81
general information services	4.78
scientific and technical information	4.38
quantitative research	4.22
policy analysis	3.51

mean = 4.72  
mean, traditional = 5.14  
mean, innovative = 4.04

Note that in both performance and importance, the traditional functions outrank the innovative functions. This fact is significant but not unexpected.

The general response pattern indicates that the division performs better on the more important functions. Response patterns also present some problems in the interpretation of performance values for the innovative functions. It is not surprising to find each innovative function below the mean performance score, but it is interesting to note their values and rank. Both quantitative research and policy analysis were

MEMORANDUM

John A. Banks

Page 3

June 5, 1978

rated above scientific and technical information services despite the fact that very little, if any, such activities are performed within the division. One possible explanation for these rankings is lack of understanding on the part of the respondents. The fact that quantitative research and policy analysis received fewer responses than all other items in part II of the questionnaire seems to give some credence to this explanation. If so, the fault rests with the construction of the questionnaire. There was not enough space to fully explain the terms, and I perhaps incorrectly assumed more knowledge of these areas among respondents than is evidenced. This assumption led from my incomplete transition from academe to government.

II. EFFICIENCY OF THE DIVISION OF LEGISLATIVE SERVICES

A major purpose of the survey was to enable legislators to evaluate this division's performance of its functions. The performance values derived from the responses are indicators of the efficiency of the division. These values, however, can be interpreted in terms of absolute efficiency or relative efficiency. An index of absolute efficiency for each function may be defined as the quotient of the actual performance value divided by the maximum possible performance value (X/6.00). Using this absolute efficiency index to evaluate the performance of the division yields the following data:

<u>FUNCTION</u>	<u>PERCENT ABSOLUTE EFFICIENCY</u>
committee staffing	81
general information services	77
statutory research	76
bill drafting	67
general research	63
quantitative research	57
policy analysis	55
scientific and technical information	53

A relative efficiency index is defined as the quotient of the actual performance value divided by the actual importance value (X/Y). The reasoning behind developing a relative efficiency index is that this division should perform its functions at a level corresponding to the importance of those functions. Thus we should expect to perform better those functions which legislators consider more important.

Applying this index of relative efficiency to each function produces the following data:

<u>FUNCTION</u>	<u>PERCENT OF RELATIVE EFFICIENCY</u>
committee staffing	90
general information services	96
statutory research	87
bill drafting	73
general research	78
quantatative research	81
policy analysis	94
scientific and technical information	73

Although the relative efficiency index portrays Legislative Services in a more favorable manner, I would argue against its use for evaluative purposes. First, I would state that quality is not a relative commodity. Excellence in the performance of all functions of this division is a worthwhile goal. Secondly, this index is based on performance values and importance values which are not on the same mathematical or subjective scale (though are on the same value-assignment scale - 6, 4, 2, 0). Mathematically, the performance and importance values are unstandardized. That is, they do not reflect the means and standard deviations of their respective groups. Subjectively, a response of "excellant" cannot be adequately equated with a response of "very important."

I therefore recommend that we use the index of absolute efficiency in evaluating this division's strengths and weaknesses.

### III. INFORMATION SOURCES OF STATE LEGISLATORS

The National Science Foundation recently supported a collaborative research project on information systems of state legislatures. I was a discussant of the findings of the project and am in substantial agreement with the conclusions. I feel that it is both interesting and important to compare our findings with those of research projects conducted in eight other states. Our questionnaire was designed in part to facilitate such comparison. These data are presented in TABLE 1.

It is believed that search patterns are indicative of certain reforms within legislative information systems. The researchers in the NSF project hypothesized that legislators' recommendations for improvements in their information systems would reflect the existing information capabilities of their legislatures. When the search pattern indicates that legislators rely disproportionately on internal information sources, many of their information needs are being served by the existing legislative information system. It is thus hypothesized that changes will center on improving the specialized capabilities of the information system.

TABLE 1. Assessments of the Utility of Internal and External Sources of Information in State Legislatures

Internal Sources	Percent of Respondents Judging Source as "Useful"								
	Va.	Cal.	Ida.	Kan.	Mich.	N.J.	N.C.	S.C.	W.Va.
1. members of committee concerned with issue	92	81	78	76	80	43	79	77	67
2. committee staff	64	100	57	50	80	79	38	44	83
3. personal staff	36	100	27	21	80	75	38	13	29
4. party caucus	17	46	30	47	60	43	38	33	67
5. party leaders	34	35	43	47	53	50	45	31	50
6. Legislative Services	78	77	86	90	90	89	79	44	79
External Sources	Va.	Cal.	Ida.	Kan.	Mich.	N.J.	N.C.	S.C.	W.Va.
1. state agencies	75	92	84	87	93	89	86	90	88
2. lobbyists	83	81	84	95	83	79	69	80	83
3. constituents	58	73	54	53	87	57	45	59	67
4. university specialists	16	46	51	53	43	46	69	67	79
5. Governor's office	17	35	46	26	67	50	48	51	46
6. federal agencies	8	42	27	26	37	29	31	18	54
	Va.	Cal.	Ida.	Kan.	Mich.	N.J.	N.C.	S.C.	W.Va.
mean "use" internal	53	73	53	55	74	63	53	40	62
mean "use" external	43	61	58	57	68	58	58	61	69
information search pattern (mean internal "use" minus mean external "use")	+10	+12	-5	-2	+6	+5	-5	-21	-7



The researchers produced a developmental continuum that posits a series of phases in the growth of the internal information capabilities of state legislatures. These types of reforms are based on existing arrangements and proposals presently under consideration in the 50 states.

Phases I through IV of the developmental continuum call for the addition of generalists to the legislative information system. Phase I would include the development of a conventional bill drafting and processing unit. Phase II would see the addition of research personnel to the legislative support unit; a traditional division of Legislative Services. Phase III would show the establishment of "referral offices" or liaison personnel within state agencies to help deal with legislative information requests. Phase IV would include the development of research staffs for some specialized committees, research assistants for legislators, and conventional student intern programs.

Reforms generated in Phases V through VIII involve the addition of specialists to the system. Phase V would establish liaison with "experts" on a centralized basis by developing scientific and technical information clearinghouses and/or legislature-university information clearinghouses. Phase VI would see the addition of specialists to the legislative support unit. This would include hiring scientific and technical personnel, policy specialists, and social scientists. Phase VII would supplement centralized liaison with specialists (Phase V) by developing "access points" in state universities to refer legislators to appropriate faculty members. Phase VIII would add scientists, engineers, and policy specialists to committee staffs or personal staffs.

To test the validity of this development continuum, researchers in the NSF project interviewed legislators and asked for recommendations for improvement in the legislature's information capabilities. These data were related to the search patterns and were found to closely parallel the continuum. Their results closely approximate our findings presented below. If the developmental continuum is indeed valid, Virginia would be placed in Phase VI. Personal interviews with Virginia legislators would be necessary to verify this judgment.

It should be noted that our methodology was slightly different than that of the NSF team, resulting in slight variations in search pattern values, the placement of Michigan in different phases of the developmental continuum, and the addition of data from Virginia to the findings.

Virginia legislators rely heavily on internal sources of

TABLE 2. Phases in the Development of State Legislative Information Systems

Developmental Phase	<u>Search Pattern</u>							
	<u>External</u>				<u>Internal</u>			
	-21	-7	-5	-2	+5	+6	+10	+12
Phase II	S.C.							
Phase III		W.Va.						
Phase IV			Ida.		Kan.	N.J.		
Phase V			N.C.				Mich.	
Phase VI							Va.	
Phase VII								Cal.

MEMORANDUM  
John A. Banks  
Page 8  
June 5, 1978

information, particularly on members of committees concerned with issues and Legislative Services. The Virginia legislature's search pattern in relation to those of other states places us in Phase VI of the developmental continuum. NSF researchers found that search patterns predicted accurately the preferences for reform emanating from states that differ markedly in population, region, economic strength, and cultural and historical traditions. I am thus at ease in placing Virginia in a developmental phase consistent with the legislature's search pattern.

This means that current change in the legislative information system in Virginia should most likely take the form of the addition of specialists to the staff of Legislative Services. Indeed, the division has already begun to move in this direction with the addition of Don Shull as Scientific and Technical Adviser and John Garka and myself as behaviorally-trained social scientists.

It should be noted that the developmental phases presented herein do not represent clearly defined steps in the reform of legislative information systems. A state legislature may be undergoing change in more than one phase (though closely related) at the same time. There is evidence to suggest, for instance, that Virginia is currently involved in possible Phase V changes.

Other memos, concerning issues and S&T, are forthcoming. I am free to discuss the findings at your convenience.

cc: Don Shull

DSC:sfn

# COMMONWEALTH of VIRGINIA

JOHN A. BANKS, JR.  
DIRECTOR

## DIVISION OF LEGISLATIVE SERVICES STATE CAPITOL

POST OFFICE BOX 3-AG  
RICHMOND, VIRGINIA 23208  
(804) 786-3591

### MEMORANDUM

TO: John A. Banks, Jr.  
FROM: David S. Castle  
RE: Survey Questionnaire  
DATE: June 8, 1978

Part IV of the questionnaire allowed legislators to evaluate the importance of issues facing the Commonwealth. Responses to the importance of general issues are as follows:

Finance	5.35
Energy	5.16
Education	4.91
Government	4.89
Public health	4.76
Human resources	4.54
Environment	4.36

mean = 4.85

The importance of specific issues follows:

Health care costs	5.51
Cost to localities of state-mandated programs	5.50
Sources of local taxation	5.39
Growth of state government	5.19
Non-traditional energy sources	5.09
Regulation of public energy utilities	4.98
Improving student performance in secondary schools	4.93
Traditional energy sources	4.93
Economic growth	4.88
Water pollution	4.75
Annexation	4.74
Unemployment	4.70

MEMORANDUM

John A. Banks, Jr.

Page 2

June 8, 1978

Social services to the elderly and poor	4.64
Mental health	4.62
Air pollution	4.33
Strip mining	4.04
Collective bargaining for public employees	4.04
Consumer protection	4.00
Inequities in state income tax	3.93
Desegregation in higher education	3.79
Expansion of industrial bond revenue	3.35

mean = 4.63

Respondents also evaluated the importance of the scientific and technical aspects of the general issues. Their evaluation follow:

Energy	5.27
Finance	4.73
Environment	4.57
Public health	4.57
Government	4.26
Human resources	4.00
Education	3.70

mean = 4.44

Legislators were also asked to evaluate the performance of Legislative Services in providing scientific or technical information on these general issues. The performance ratings follow:

Government	4.82
Finance	4.57
Human resources	4.40
Education	4.12
Public health	3.93
Environment	3.19
Energy	3.07

mean = 4.01

Applying the index of absolute efficiency to our performance as providers of scientific or technical information yields the following data:

<u>Issue</u>	Percent absolute efficiency
Government	80
Finance	76
Human resources	73
Education	69
Public health	65
Environment	53
Energy	51

The data show that the two most important general issues facing the Commonwealth, finance and energy, are also the most important scientific and technical issues. On these and other issues, legislators have clearly stated their perception of the importance of scientific and technical information.

Team 7 is to be congratulated for their performance in providing S&T information on the very important general issue of finance. Team 2 must become more efficient in providing S&T information on the general issues of energy and environment. I would suggest that Team 2 work closely with the division's scientific and technical adviser. Toward this end, Don Shull has been added to the staff of the Air Pollution Study Commission.

The response pattern indicates that this division must improve its performance in providing S&T information. A rank-order correlation of  $-.43$  between the importance of S&T aspects of issues and our performance in providing such information indicates that we have a big job to undertake in this respect. The addition of Don Shull to this division gives us a much-needed S&T capability. We should examine the possibility of establishing a S&T information clearinghouse to supplement this. Division researchers should be made aware of the perceived importance of S&T information and should be encouraged to use, and contribute to, our S&T capability.

Comments by members of the General Assembly are attached. A memo outlining recommendations for improving division research capability is forthcoming.

DSC:sfn

cc: Don Shull

## **APPENDIX III**

### **Legislature/University S & T Information Transfer Interface**

**A. Legislature/University Inquiry/Response Mechanism**

**B. Request Record**

**C. Response Form**

**D. One Page Format**

**E. Items Received at University**

**F. Reports Issued by Science Advisor**

## APPENDIX III

### A LEGISLATURE/UNIVERSITY INQUIRY/RESPONSE MECHANISM

#### I. Purpose:

- A. To provide the General Assembly (committees and individual members) with a source of independent information and expertise on public issues having scientific and technical components.
- B. To provide legislators ready access to the resources of the academic community.
- C. To foster closer working relations between legislature and academic community through direct interaction.

#### II. Organization Plan:

- A. Interinstitutional contact
  1. Legislature - Science Advisor
  2. University - Research Dean or functionally similar office as appropriate
- B. Reasons for this choice of plan
  1. Minimizes misinterpretation and communications pitfalls
  2. Each contact deals with his own institutional structure
  3. Easier to build one-on-one rapport

#### III. Functions of contact point

- A. Legislature
  1. Provides record of inquiries and responses
  2. Concisely states the question and insures that concerns of inquirer (legislator) are clearly stated
  3. Provides background which has resulted in the inquiry
  4. Farms out the inquiry to the appropriate institutions
  5. Follow-up
  6. Receives responses



7. Resolves Conflicts

- a. Merge
- b. Clarify (if necessary)

8. Prepare one page summary

9. Ascertain confidentiality

- a. Legislator
- b. Respondent

10. Distribute reports

11. Feedback - use and impact of response

B. University

1. Receives inquiry

2. Clarifies inquiry

3. Determines appropriateness of response and availability of respondent

4. Estimates time required (establishes a maximum)

5. Follow-up

6. Establish confidentiality

7. Reconcile clear conflicts and recommend resolutions

8. Forward responses

APPENDIX III B - REQUEST RECORD

Requestor:

Office No. Telephone

Date Received      Month / Day / Year      Date Completed      Month / Day / Year

Inquiry      Inquiry  
Number \_\_\_\_\_ Title \_\_\_\_\_

Received by (give initials) \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Source of      1 - Individual Legislator      4 - Staff  
Request: \_\_\_\_\_ 2 - Several Legislators      5 - Other  
3 - Committee

Brief Description of Request: -

Remarks

APPENDIX III

C - RESPONSE FORM

Return Address:

Don L. Shull, Ph.D.  
Legislative Scientific Advisor  
Division of Legislative Services  
P. O. Box 3-AG  
Richmond, Virginia 23208

Inquiry No.

Short Title

Respondent

Name:

Institution:

Rank/Dep't.

May we use your name?            /Yes            \_\_\_\_\_/No

Signature:

Background:

Response: (Attach additional sheets as necessary)

S/T-2

APPENDIX III

D - ONE PAGE FORMAT

Short Title

Inquiry - Statement of the questions

Background - Brief paragraph to explain the context of the inquiry so  
that persons other than inquirer can benefit from the  
response

Response - Summary of responses

Resources - Literature cited

APPENDIX III

E - ITEMS RECEIVED AT UNIVERSITY

1. Cover letter to Research Dean
  - a. Response form containing
    1. Inquiry No.
    - 2) Short Title
  - b. Background info
  - c. List of specific questions

F        REPORTS ISSUED BY SCIENCE ADVISOR

1.    Complete response direct to inquirer - This will also include the one-page summary
  
2.    One-Page summary for distribution
  
3.    Copy of 1 and 2 to respondent(s)
  
4.    Feedback to University/Respondent as appropriate

## APPENDIX IV

### HOUSE JOINT RESOLUTION NO. 7

Creating the Legislative Scientific and Technological Advisory Committee; allocating funds.

WHEREAS, the General Assembly has access to many sorts of research data; and

WHEREAS, other than in the computer field, however, the General Assembly does not have, and never has had, an in-house staffing capability for interpretation of scientific and technical data, nor had it had the capacity of effectively using such data in preparing legislation; and

WHEREAS, this situation is not consonant with the best principles of representative government, and renders the Legislature far too dependent for information and analysis on the executive branch; and

WHEREAS, the Division of Legislative Services, assisted by a grant from the National Science Foundation, has undertaken a project to improve legislative staffing capabilities so as to be of greater assistance to the Assembly in scientific-technical areas; and

WHEREAS, successful implementation of this project, as one of its first steps, requires the familiarization of the Legislature with the kinds of information potentially available to them, and requires consultation with the Legislature so as to gain a better understanding of the Assembly's data needs; and

WHEREAS, expeditious exploitation of these opportunities requires the operation of an advisory group which can review alternatives and put precise recommendations into a concrete form; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That there is hereby created, as a study and advisory group in the legislative branch, the Legislative Scientific and Technological Advisory Committee. The Committee shall be composed of eleven members as follows: four members to be appointed by the Speaker of the House of Delegates from the membership of the House, two members to be appointed by the Committee on Privileges and Elections of the Senate from the membership of the Senate, two members to be appointed by the Speaker of the House of Delegates from the citizenry of the Commonwealth at large, two members to be appointed by the Committee on Privileges and Elections of the Senate from the citizenry of the Commonwealth at large, and the Director of the Division of Legislative Services. All Committee members, other than the Director of the Division of Legislative Services, shall be compensated at the rate of fifty dollars per day for each day spent on Committee business. All members shall also be reimbursed their actual and necessary expenses incurred in the furtherance of Committee business. For these purposes and for such secretarial and other services as the Committee may require, there is hereby allocated from the appropriations to the General Assembly three thousand dollars. The Committee shall act as both advisor to and liaison agency between the Division of Legislative Services and both houses of the General Assembly. The Committee is authorized and encouraged to issue periodic reports on its work.

