

July, 1995
Edition

RESEARCH ANALYST

CLASS SERIES

GUIDEBOOK

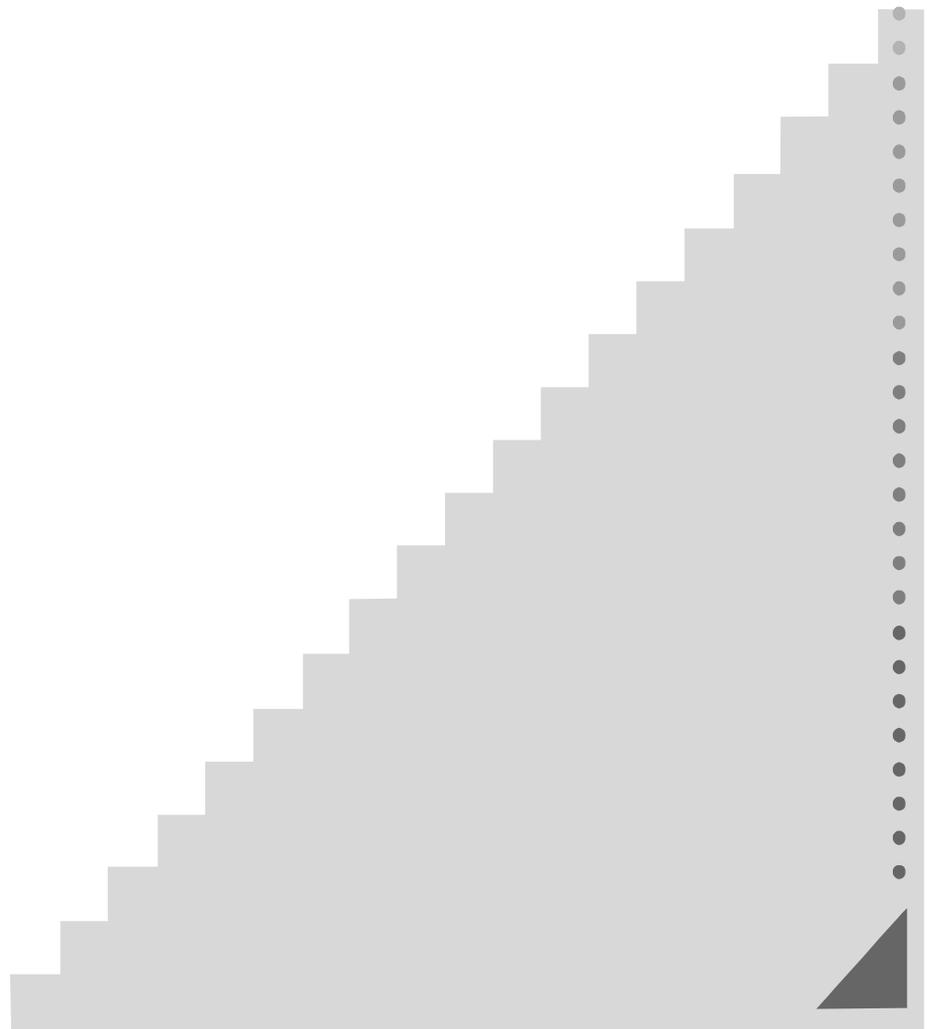


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Introduction

Background

Recommendations from the Commission on Reform and Efficiency (CORE), Staffing Division sponsored Refocus Groups, the implementation of the Unclassified Project Class Series and the need to continuously improve customer service all contributed to the development of the Statewide Class Standards Project.

- ◆ In February, 1993, the Commission on Reform and Efficiency recommended that the State of Minnesota create 20 broadly-defined Occupational Families to improve the structure of the job class plan.
- ◆ During Fiscal Year 1994, Refocus Groups of agency Human Resources partners, managerial and supervisory customers and union stakeholders recommended “statewideness” as an approach to ensuring the consistent application of Staffing Division policies and services (including job classification) across state agencies.
- ◆ In July, 1994, the implementation of the Unclassified Project Class Series provided alternative job class choices for allocating temporary unclassified positions. Prior to the creation of this class series, class concepts for statewide job classes such as Research Analyst were “stretched” to accommodate the immediate service delivery needs of state agencies.
- ◆ Continuously improve customer service to reduce job audit turnaround time by organizing job class series information more conveniently and completely.

The Statewide Class Standards Project Objectives

- ◆ Identify, describe and create 20 broadly-defined Occupational Families to improve the job class plan’s structure (Planning, Research and Analysis is one of these 20 Occupational Families).
- ◆ Within the Planning, Research and Analysis Occupational Family, select at least 2 statewide class series (Management Analyst and Research Analyst) for this project.
- ◆ Collect and clarify current information on each job class within the class series by researching the Staffing Division’s class clarification and job audit files, by requesting representative positions for each class from partner agencies, by meeting with Human Resources staff and subject matter experts at each partner agency.

- ◆ Organize this current information on each job class series so that it is easy to understand and accessible to state agencies and customers by publishing a guidebook for each job class series and distribute it to each agency that currently employs Management Analysts and Research Analysts.

Special thanks to the following agency partners for their advice and assistance during the Statewide Class Standards Project: Departments of Administration, Economic Security, Health, Human Services, Natural Resources, Transportation and the Pollution Control Agency.

The Statewide Class Standards Team

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Planning, Research and Analysis Occupational Family

This occupational family includes jobs concerned with reviewing, examining and evaluating organizational structures, administrative policies, and management systems. Prepares summary reports and recommends changes in organizations, methods, policies, procedures, or practices concerning such management systems as budget forecasting, records management and information management. Conducts studies and advises program administrators on feasibility, cost-effectiveness, and regulatory conformance of proposals for special project or ongoing programs. Consults with administrators to discuss overall intent of projects, and determines broad guidelines for studies, using knowledge of subject area, research techniques, and regulatory limitations. Reviews and evaluates materials provided with proposals. Organizes data from all sources using statistical methods to ensure validity of materials. Evaluates information to determine feasibility of proposals or to identify factors requiring amendment. Develops alternate plans for programs or projects, incorporating recommendations for review of program administrators. Maintains collection of socioeconomic, environmental, regulatory, etc. data related to agency functions for use in planning and administrative activities.

Management Analyst-series

Professional/supervisory organization and administrative analysis work. Positions evaluate and make recommendations to improve agency organizational structure, administrative policy/procedure, and work methods in such areas as records and publications management, organization of office space, work and information flow, information systems, fiscal and budgetary analysis, cost-benefit analysis, legal or regulatory requirements, etc.

Planner-series

Professional/supervisory interdisciplinary planning and analysis work. Positions develop or assist in the development of state or community plans, which involves such activities as identifying customer/client needs; evaluating the effectiveness of current services; projecting service utilization; presenting information at public meetings to explain or interpret agency policy/positions, interpret technical material or explain controversial issues; conducting cost-benefit analyses of current or proposed policy/services; collecting and assembling data from a variety of sources for analysis or inclusion in reports or plans; developing action plans; monitoring the planning project and execution of actions in adopted plans; advising municipal, county, regional and other planning entities on the development and management of plans; researching and social and economic impact of proposed actions; and review of plans and proposals submitted by consultants.

Planning Grants Analyst-series

Professional/supervisory grants planning, analysis and administration work. Positions plan, write, evaluate, administer, train and/or monitor grants/grant proposals/grant recipients for a grant-award authority or perform similar work for a grant-recipient agency. Positions identify possible grant projects, write/edit grant proposals, develop procedures and evaluation criteria for review of grant applications, review and evaluate grant applications for administrative requirements, approve requests to modify grant conditions, evaluate proposed research methodology, approve disbursement of grant monies, provide technical assistance to grantees, monitor the application process and administration of grants, conduct training for grant recipients, closeout grants, conduct program evaluations and financial audits of grants.

Program Evaluation Specialist-series

Professional/supervisory program evaluation and analysis work. Positions critique the effectiveness and efficiency of agency programs. Work involves developing research designs to better identify problem areas of programs, designing survey instruments to measure program effectiveness, development of evaluation criteria, conducting cost-benefit analyses, evaluating various management systems, collecting, organizing, and analyzing data, recommending changes to administrative or program policy/procedure, preparing written reports to present results of analyses, and preparation and delivery of oral presentations of study results to interested audiences.

Project-series

Professional/supervisory/managerial unclassified project planning, administration, implementation and evaluation work. This class series is only intended to staff projects of limited duration. Although the subject matter and purpose of the project will vary, these projects have defined starting and ending dates, clearly specified objectives which define the scope of the work to be performed and frequently have a temporary organization that will be dismantled once the project is completed.

Research Analyst-series

Professional, professional-supervisory or managerial work collecting, compiling, analyzing, interpreting, and reporting numerical/statistical data. Work involves the application of quantitative methods in a subject area and focuses on the performance, direction and/or evaluation of one or more of the following activities:

- ◆ determining research/study scope (problems, issues or questions to be addressed) and design (data needed, sources, collection methods, sampling technique and analytical strategy);
- ◆ data collection (design/development of data collection forms, collection of data, and organization of data);

- ◆ analysis of data using quantitative methods and statistical analysis software;
- ◆ computer modeling (to simulate operations, analyze interactions, forecast trends or make projections);
- ◆ interpretation of results, drawing conclusions and making recommendations; and/or
- ◆ reporting results (writing reports, including graphical presentation of data/results, preparation and delivery of oral presentations, and preparation of oral and written replies to inquiries).

Research Analyst-series “At-a-Glance”

Key:

C = work characteristics of the class
S = work characteristics of some positions
Blank = not a work characteristics of the class

Class	RA	RA Int.	RA Spec	RA Spec Sr	RA Supv Sr	Res Plan & Eval Dir	Res Dir
Comp level and bargaining unit	5L -214	7L- 214	10L-214	14L-214	19K-216	15M-220	17M-220
WORK CONTEXT:							
Scope /Impact of Work							
• Limited – Subject Specialty/Unit	C	C					
• Intermediate - Division			C	S	S		
• Broad – Multi Division/Major Dept/ Major Statewide			S	C	C	C	C
Nature of Work Assignments							
• Recurring & Non-Routine	C						
• Non-Recurring & Similar		C	C				
• Non-Recurring & New/Novel/Complex				C	C	C	C
Degree of Control Received							
• Immediate Supervision	C						
• General Supervision		C					
• Limited Supervision			C	C			
• Administrative Direction				C	C	C	C
WORK CONTENT:							
Research Activities							
• What: Study Topics/ Objectives/Scope/Issues/Questions				S	C	C	C
• How: Study Methods/Analytical Strategy							
o Select/Precedent	S	C	S				
o Adapt/Develop/No Precedent			S	C	C	C	C
• Data Collection/Information Resources							
o Available/Collect//Complile	C	C	S				
o Few/No Existing/Develop Instruments			C	C	C	C	C
o Data base Design/Administration	S	C	C	C	S		
• Data Analysis							
o Calculate, Describe/Explain, Report	C						
o Analyze, Interpret, Summarize	S	C	C	C	C		
o Evaluate Results/Extract Meaning/Recommendations			S	C	C	C	C
o Forecasts/Projects/Modeling/Simulations			S	C	C	S	S
• Reporting Results							
o Statistics/Tables, Charts & Graphs	C	C	C	S	S		
o Narrative – draft/intermediate	S	C	C				
o Narrative – final		S	C	C	C	S	S
o Critique/Edit/Evaluate/Review – OA Study			C	C	C	C	C
o Prepare & Deliver Oral Presentations		S	C	C	C	C	
o Advisor to Top Management on Application of Research Results				C	S	C	C
• Program Planning and Development						C	S
Know-How (Methods & Statistics)							
• Basic/Descriptive (plots, cent. Tendency/dispersion, correl, etc.)	C	C	C	C	C	C	C

Research Analyst-series “At-a-Glance”

Key:

C = work characteristics of the class
S = work characteristics of some positions
Blank = not a work characteristics of the class

Class	RA	RA Int.	RA Spec	RA Spec Sr	RA Supv Sr	Res Plan & Eval Dir	Res Dir
Comp level and bargaining unit	5L -214	7L- 214	10L-214	14L-214	19K-216	15M-220	17M-220
• Intermediate Inferential (tests of mean & category differences, CI’s, regression analyses, etc.)	S	C	C	C	C	C	C
• Advanced Inferential (anova, factor, cluster, discriminate, multivariate, psychometric analyses, etc.		S	C	C	C	C	C
• Expert/Consultant (advanced multivariate, modeling, non-parametric, survival analyses, etc.				C	C	C	C
Blank							
Administrative							
• Monitor/Coordinate/Lead worker to clerical/para-professional.		C	C				
• Monitor/Coordinate/Lead worker to professional		S	C	S			
• Project/Study Leader or Director							
o Small or segment of large			C	S	S		
o Large/complex; no precednt				C	S	S	S
• Supervisor					C		
• Manager (including subordinate supervisors & budget						C	C

RESEARCH ANALYST-series

Title: Research Analyst-series

Job Family: Planning, research and analysis

Kind of work: Professional, professional-supervisory, or managerial work collecting, compiling, analyzing, interpreting, and reporting numerical/statistical data.

Class-Series Concept (i.e., characteristics of work performed by positions in this class series)

Professional, professional-supervisory or managerial work collecting, compiling, analyzing, interpreting and reporting numerical/statistical data. Work involves the application of quantitative methods in a subject area and focuses on the performance, direction and/or evaluation of one or more of the following activities:

- ⇒ determining research scope (problems, issues or questions to be addressed) and design (data needed, sources, collection methods, sampling technique and analytical strategy);
- ⇒ data collection (design/development of data collection forms, collection of data, and organization of data);
- ⇒ analysis of data using quantitative methods and statistical analysis software;
- ⇒ computer modeling (to simulate operations, analyze interactions, forecast trends or make projections);
- ⇒ interpretation of results, drawing conclusions and making recommendations; and/or
- ⇒ reporting results (writing reports, including graphical presentation of data/results, preparation and delivery of oral presentations, and preparation of oral and written replies to inquiries).

Key Activities:

Research/Study Design

- Determine project scope (define problem, issue, or questions to be addressed);
- Decide approach/method for project or study;
- Identify data/information needed, sources, collection methods, and analytical strategy;

Data Collection

- Design and develop data collection forms, questionnaires/surveys, evaluation tools and associated rating measures/scales;
- Determine sampling technique;

- Collect raw data from primary sources (e.g., via individual interviews or focus groups with research subjects), records or reports;
- Develops procedures to organize, code, and enter data;
- Design, construct and/or administer databases (e.g., using statistical analysis, database management or spreadsheet software) to facilitate retrieval, manipulation and analysis of data;
- Check accuracy and integrity of database information;

Data Analysis

- Determine how data will be analyzed (includes selecting appropriate descriptive and inferential statistics);
- Compute statistics, using calculator or statistical analysis software. Examples of statistics calculated/interpreted include: data plots, measures of central tendency and dispersion, percentiles and standard scores, correlations, cross-tabulations/chi-square tests, t-tests, confidence intervals, regression/multiple regression, analyses of variance, factor analysis, cluster analysis, discriminant analysis, forecast/trend analysis, and reliability/item analysis);
- Write/modify computer programs (e.g., using statistical analysis, spreadsheet, database, or presentation graphics software) to facilitate analysis and display/reporting of data;
- Analyze and interpret data/results, draw conclusions and make recommendations (i.e., decide what the data/results mean, and what should be done);
- Develop computer models to simulate operations, analyze interactions, forecast trends or make projections;

Report Results

- Write narrative reports (both summary memoranda or other short papers, as well as major reports), describing purpose, methodology, data collected, results, and recommendations based on analyses or research studies;
- Construct tables, graphs and maps displaying data/results, using statistical analysis, database, spreadsheet, and presentation graphics software;
- Prepare and deliver oral presentations describing analyses or research to both small and large internal/external audiences;
- Orally reply to internal and external inquiries from policy makers, stakeholders, customers, etc.;
- Write letters in response to inquiries concerning statistical data;.
- Testify before committees in legislative hearings on regulatory or program issues related to research;

Program/Project Management

- Direct staff in the role of a supervisor or project leader (i.e., plan, organize, assign, direct and evaluate the work of others on a permanent, on-going basis or on a temporary, project basis);
- Provide leadwork direction to co-workers (i.e., prioritize, schedule, assign, direct, guide and report on the work of co-workers, while also performing similar work);
- Develop and control budgets;

- Request, allocate, approve and monitor expenditure of funds for projects.

As a lesser responsibility, work may include management analysis, planning, grants planning/analysis, or program evaluation activities (see descriptions of “Related series” below).

Number of levels in series: 7

Class titles in series: Research Director (17M)
Research Planning & Evaluation Director (15M)
Research Analyst Supervisor, Senior (19I - MMA)
Research Analysis Specialist, Senior (14I - MAPE)
Research Analysis Specialist (10I - MAPE)
Research Analyst, Intermediate (7I - MAPE)
Research Analyst (5I - MAPE)

Related series:

- Management Analyst-series
- Program Evaluation Specialist-series
- Planner-series
- Planning Grants Analyst-series
- Research Scientist-series (related work, although not included in “Planning, Research & Analysis” occupational family)

RESEARCH ANALYST

KIND OF WORK

Entry-level professional work analyzing and reporting numerical/statistical or spatial data.

NATURE AND PURPOSE

Under immediate supervision/procedural control, collect, compile, analyze, interpret, and report numerical/statistical data.

Job evaluation profile narrative (Hay method):

Know-How (specific and integrative) -- Requires specialized knowledge/skills to conduct and continually improve a work process with awareness of many immediate effects on customers. Activity or activities have specific objective and content, and require appropriate awareness of related activities.

Problem-Solving (context and thinking challenge) -- Acceptability of conclusions, improvements or solutions is guided/governed by substantially diversified procedures, specialized standards, and historical examples; positions have latitude to consider which among many procedures should be followed and in what sequence to achieve the required results. Work involves differing situations, requiring search for solutions/appropriate choices among defined options or within area of learned things.

Accountability (freedom to act/empowerment and impact on end results) -- standardized practices and procedures, general work instructions from supervisor; or consultation on progress and results with other team members. Impact is contributory, providing supportive, interpretive or advisory services for use by others.

The “Series at a Glance” Chart differentiates Research Analyst from the adjacent class of Research Analyst, Intermediate. When work activities overlap several adjacent job classes within this series, the importance, autonomy, and frequency/time spent on these activities impact the final classification decision.

CLASS CONCEPTS

- ⇒ Work focuses on activities related to data collection, analysis and reporting (versus research issues/scope, research design/methods or supervision/project management).
- ⇒ Work is performed under close supervision/procedural control (i.e., the WHAT, WHY, and HOW of activities are clearly defined); employee is expected to follow established methods, procedures and standards; may act independently in doing routine work, but does not have the authority to make major decisions.

- ⇒ Not independently responsible for entire projects or significant parts of large projects; completes assigned project tasks and sub-tasks.
- ⇒ Scope of analytical/research activities is usually a subject specialty (e.g., unit with the Division of Labor Statistics in the Department of Economic Security).
- ⇒ Primary emphasis is on descriptive statistics, although duties may involve the calculation/interpretation of statistics requiring knowledge of probability and statistical inference.
- ⇒ Reports are limited in scope and complexity; focus is on collection, compilation and interim analysis/presentation of raw data typically gathered from readily available sources (e.g., records or reports) or, under close supervision, from primary sources. May assist in compiling data or drafting parts of larger/major studies.

TYPICAL WORK BEHAVIORS

Data Collection

- Collects raw data from primary sources (e.g., via individual interviews or focus groups with research subjects), records or reports. Identifies data sources, retrieves and reviews materials, and extracts and compiles relevant information.
- Under close supervision/procedural control, designs and develops data collection forms, questionnaires/surveys, evaluation tools and associated rating measures/scales.
- Develops procedures to organize, code, and enter data.
- Constructs and/or administers databases (e.g., using statistical analysis, database management or spreadsheet software) to facilitate retrieval, manipulation and analysis of data. Checks accuracy and integrity of database information.

Data Analysis

- Computes statistics to provide information to requesting individuals or organizations, to condense source data and/or for report preparation. Examples of statistics calculated/interpreted include: data plots, frequency distributions, measures of central value and variability, percentiles and standard scores, correlations, cross-tabulations/chi-square tests, t-tests, confidence intervals, etc.
- Writes/modifies computer programs (e.g., using statistical analysis, spreadsheet, database, or presentation graphics software) to facilitate calculation of statistics, analysis and display/reporting of data.
- Analyzes and interprets data/results, draws conclusions and makes preliminary recommendations (i.e., decide what the data/results mean, and what should be done).
- May write computer application programs, maintain databases or perform technical production tasks on GIS databases.

Report Preparation

- Constructs tables, graphs and maps displaying data/results to facilitate data analysis and/or visually report data (e.g., trends, rates and levels), using statistical analysis, database, spreadsheet, and presentation graphics software.
- Compiles information for reports; writes drafts of sections of reports to present and explain/interpret data in an understandable manner.
- Writes drafts of letters in response to inquiries concerning statistical data and reports.

- Orally replies to internal and external requests for data from policy makers, stakeholders, customers, etc.
- May prepare and deliver oral presentations to describe analyses and report data to small internal/external audiences.

ADJACENT CLASSES:

Research Analyst, Intermediate (A-07I, MAPE)

COMPENSATION LEVEL

State Compensation Level: A-05I (Unit 214, MAPE)

Hay Profile: DI1-152 D3(29)-43 C1C-43 =238 Hay points

MAJOR USER AGENCIES:

Economic Security

Minnesota Planning - Office of Strategic & Long Range Planning

Health

Natural Resources

Revenue

Trade & Economic Development

Transportation

**RESEARCH ANALYST
SAMPLE OF A TYPICAL POSITION (BENCHMARK)***

Position Purpose:

Gather and analyze data and prepare reports for policy projects in the Planning Division.

Reports to: Program Manager
Receives technical direction from the Strategic Analysis Team Project Coordinator

Supervises: Occasionally, the incumbent coordinates other project team members to complete specific project tasks.

Budget: NA

Clients: Strategic Analysis Team and Project Coordinator
Department managers and staff
Other state agencies'
Community agencies
Local governments
Local businesses

***This position is a composite of several positions.**

Principal Responsibilities

I. Conduct comparative and historical research on public laws and policies and social and economic trends (using descriptive statistics), according to project work plan and direction from the Project Coordinator and the team.

A-65-B

1. Assist in framing issues and outlines for research.
2. Identify resources and retrieve materials.
3. Review materials, extract and compile relevant information into written and graphic interim products useful to the team and advisory groups.
4. Compile and analyze census data and other data using available software, including spreadsheets and statistical packages.
5. Prepare analysis of implications and impacts of research findings in concert with team.
6. Prepare finished drafts of reports or oral and audio visual presentations as requested.

ANNOTATION: Responsibility I illustrates several key allocation factors:

- **An RA works under immediate supervision and procedural control.**
- **Primary emphasis is on descriptive statistics rather than inferential statistics.**
- **Reports are limited in scope and complexity. Often they are parts of larger, major studies.**

II. Lead focus groups and conduct surveys to obtain data from other agencies, subject experts and the public, according to the work plan and team plans.

A-20-A

1. Prepare agendas, minutes, letters and memos as determined by the team project coordinator.
2. Help identify and contact appropriate participants.
3. Design survey methods and instruments in consultation with the project team.
4. Facilitate groups as requested.
5. Record, compile, analyze and format results.

ANNOTATION: An RA typically designs and develops data collection forms, questionnaires/surveys, evaluation tools and associated rating measures and scales. This is done under close supervision and procedural control.

III. Protect the quality of the project database so that reports and information are reliable and timely.

A-15-A

1. Develop quality standards and procedures in cooperation with the project team.
2. Monitor the quality of data input to ensure that data standards are met.
3. Monitor the maintenance of the databases.

Research Analyst, Intermediate

KIND OF WORK

Journey-level professional work analyzing and reporting numerical/statistical or spatial data.

NATURE AND PURPOSE OF WORK

Under general supervision/procedural control, design and conduct non-routine analytical studies in a specialized field, using a variety of research/statistical methods, available information resources, and specialized knowledge of program operations to complete specific, assigned projects/reports which require interpretation of results or application and interpretation of policy.

Job evaluation profile narrative (Hay method):

Know-How (specific and integrative) -- Requires a basic grasp of the foundation principles and practices of a general field of knowledge, to conduct and continually improve work processes with strong awareness of most immediate and sustained effects on customers. Activity or activities have specific objective and content, but coordination of, and with, related activities is required.

Problem-Solving (context and thinking challenge) -- Acceptability of conclusions, improvements or solutions is guided/governed by substantially diversified procedures, specialized standards, and historical examples; positions have latitude to consider which among many procedures should be followed and in what sequence to achieve the required results. Work involves differing situations with moderate rates of substantive change which may have new or unusual elements, requiring intensive search for solutions/appropriate choices among defined options or within area of learned things.

Accountability (freedom to act/empowerment and impact on end results) -- Practices and procedures covered by historic examples, well-defined specific process considerations or necessary periodic review of results with supervisor or other team members (“key customer representatives”); may deviate from established procedures and practices as long as long as end results meet standards of acceptability. Impact is contributory, providing supportive, interpretive or advisory services for use by others.

The “Series-at-a-Glance” Chart distinguishes Research Analyst, Intermediate from the adjacent classes of Research Analyst and Research Analyst, Senior. When work activities overlap several adjacent job classes within this series, the importance, autonomy, and frequency/time spent on these activities impact the final classification decision.

CLASS CONCEPT

- ⇒ Like RA, work focuses on activities related to data collection, analysis and reporting (versus research issues/scope, research design/methods or supervision/project management), but includes determining issues/objectives and analytical approach on projects/studies of limited scope/complexity.
- ⇒ Work is performed under general supervision/procedural control (i.e., the WHAT, WHY and HOW are prescribed, but the methods are not typically reviewed nor controlled while the work is in progress). The analyst is expected to perform most work independently; usually reporting to supervisor only at significant junctures on a project/study.
- ⇒ Complex analytical work is typically guided by a higher-level analyst.
- ⇒ Responsible for project activities and tasks (versus tasks and sub-tasks). If position has project responsibility; projects are fairly straightforward or limited in scope or are significant parts of large/major projects.
- ⇒ Like RA, scope of analytical/research activities is usually a subject specialty;
- ⇒ Like RA, data is typically gathered from available sources; may design and develop large, survey-type information databases.
- ⇒ May select appropriate analytical statistics; calculates/interprets a variety of statistics (both descriptive and inferential).
- ⇒ Data analysis involves interpretation of results and identifying meaning/implication (e.g., as would be required to analyze and explain trends, make historical comparisons, and make projections concerning revenue collections and refunds or prepare economic impact assessments using established forecasting and simulation models). May develop preliminary recommendations or recommend alternatives.
- ⇒ Summarizes data and results of analyses. Assists in drafting parts of large/major studies. May draft replies to inquiries from officials.
- ⇒ On GIS applications, lead production specialist, handling advanced production tasks, techniques, and cartographic design.
- ⇒ May act as a leadworker to other analysts on smaller studies or parts of larger projects/studies, or may plan the work of and provide leadwork direction to clerical/para-professional data processing/reporting staff and/or evaluate and redesign data collection/processing procedures (but serving as a lead analysts isn't necessary for allocation to this level).

TYPICAL WORK BEHAVIORS

Research/Study Design

- On projects/studies of limited scope/complexity, determine issues/objectives and analytical approach.

Data Collection

- Identifies data needed, sources, collection methods; develop statistical records systems.
- Collects raw data from primary sources (e.g., via individual interviews or focus groups with research subjects), records or reports. Identifies data sources, retrieves and reviews materials, and extracts and compiles relevant information.

- Designs and develops data collection forms, questionnaires/surveys, evaluation tools and associated rating measures/scales.

Designs, constructs and administers databases (e.g., using statistical analysis, database management or spreadsheet software) to facilitate retrieval, manipulation and analysis of data; develops and/or assists in the development and implementation of database or statistical record systems(e.g., communicating operational requirements to programming and systems personnel, assisting in creating/modifying all input and output forms).

- Develops procedures to organize, code, and enter data; checks accuracy and integrity of database information; initiates and develops procedures to improve/revise the processing of existing statistical information (reviews procedures, evaluates input and corrections, produces and assists in development of systems specifications).

Data Analysis

- Compiles data.
- Computes statistics to provide information to requesting individuals or organizations, to condense source data and/or for report preparation. Examples of statistics calculated/interpreted include: data plots, frequency distributions, measures of central tendency and dispersion, percentiles and standard scores, correlations, cross-tabulations/chi-square tests, t-tests, confidence intervals, reliability/item analyses, etc.
- Writes/modifies computer programs (e.g., using statistical analysis, spreadsheet, database, or presentation graphics software) to facilitate calculation of statistics, analysis and display/reporting of data.
- Analyzes and interprets data/results, draws conclusions and makes preliminary recommendations (i.e., decides what the data/results mean, and what should be done).
- May write computer application programs, maintain databases or perform technical production tasks on GIS databases.

Report Preparation

- Constructs tables, graphs and maps displaying data/results to facilitate data analysis and/or visually report data (e.g., trends, rates and levels), using statistical analysis, database, spreadsheet, and presentation graphics software.
- Compiles information for reports; writes drafts of sections of reports to present and explain/interpret data in an understandable manner.
- Writes letters in response to inquiries about statistical reports/data.
- Orally replies to internal and external requests for data from policy makers, stakeholders, customers, etc.; may prepare and deliver oral presentations to report data and describe analyses to small internal/external audiences. Reports findings to complete assigned projects/reports by preparing written analyses.

Program/Project Management/Leadwork

- Provide leadwork direction to co-workers (i.e., prioritize, schedule, assign, direct, guide and report on the work of co-workers, while also performing similar work) or clerical/para-professional staff.

ADJACENT CLASSES

Research Analysis Specialist (A-10I, MAPE)

Research Analyst (A-05I, MAPE)

COMPENSATION LEVEL

State Compensation Level: A-07I (Unit 214; MAPE)

Hay Profile: EI1-175 D3(29)-50 D1C-50 = 275 Hay points

MAJOR USER AGENCIES

Economic Security

Health

Human Services - Central Office

Revenue

Transportation

RESEARCH ANALYST INTERMEDIATE
Sample of a Typical Position (Benchmark)*

Position Purpose:

Conduct fiscal and economic analyses for assigned research studies. Revise the Division's computer projection models.

Reports to: Assistant Division Director
Research Analyst Senior for technical direction

ANNOTATION: The complex analysis conducted at the Intermediate level is generally guided by a higher level analyst.

Supervises: N/A

ANNOTATION: A Research Analyst Intermediate may act as lead analyst for smaller studies or segments of larger projects/studies, but serving as a lead analyst isn't necessary for allocation to this level.

Clients: Department managers and staff
Federal, state and local agencies
Private and public research groups
Governor's staff
Legislature
Local businesses

***This position is a composite of several positions.**

Principal Responsibilities

I. Conduct fiscal and economic analyses of property tax data and prepare reports for multiple research studies.

A-70-A

1. Review statutes pertaining to studies and clarify study objectives.
2. Design data collection forms, collect and analyze data.
3. Design, develop, and maintain databases for multiple studies.
4. Applies appropriate statistics for assigned studies such as correlation, regression, time series comparisons.
5. Interpret study results and provide written, tabular, and graphic presentations to management and other interested individuals.

ANNOTATION: Although a Research Analyst Intermediate conducts complex studies, studies are limited in scope. For examples, an RA Intermediate may study the impact of different variables on property taxes or labor market fluctuations.

ANNOTATION: A Research Analyst Intermediate designs and develops databases and applies and interprets a variety of statistics such as univariate and bivariate statistics, measures of central tendency and dispersion, correlations and econometric modeling.

II. Modify and operate the property tax computer model (this model is fully developed and focuses on a complex, but single tax type) to analyze proposed changes in the Minnesota property tax system.

A-30-A

1. Determine needed changes in the model such as additional tables and new program steps.
2. Modify the projection model by changing or adding program steps; creating new program steps on the mainframe, modifying input and output files, and downloading additional data from the mainframe.
3. Develop new spreadsheet reports or modify existing spreadsheets.

ANNOTATION: At the Intermediate level, Research Analysts modify forecasting and simulation models to meet the special needs of studies and projects. They determine what to change and how to change it with technical assistance from a higher level RA.

Research Analysis Specialist

KIND OF WORK

Advanced-level professional work analyzing and reporting numerical/statistical or spatial data.

NATURE AND PURPOSE OF WORK

Under limited supervision/procedural control, conducts studies in a specialized field of research and forecasts trends by determining methodology, monitoring overall system and making final recommendations for major program studies which have direct statewide or department-wide impact and for which little or no existing informational resources are available; provides technical advice and assistance to professional co-workers by directing/leading a unit engaged in difficult statistical research.

Job evaluation profile narrative (Hay method):

Know-How (specific, integrative and human relations) -- Requires a thorough foundation (both theoretical and applied) in the principles and practices of a general field of knowledge sufficient to critique and evaluate the work of lower-level professional staff to assure work quality and continually improve work processes with strong awareness of most immediate and sustained effects on customers. Activity or activities have specific objective and content, but coordination of, and with, related activities is required. Ability to influence, persuade, understand and work collaboratively with others are important.

Problem-Solving (context and thinking challenge) -- Acceptability of conclusions, improvements or solutions is guided/governed by substantially diversified procedures, specialized standards, and historical examples; positions have considerable latitude to consider which among many procedures should be followed and in what sequence to achieve the required results. Work involves differing situations with moderate rates of substantive change which may have new or unusual elements, requiring intensive search for solutions/appropriate choices among defined options or within area of learned things.

Accountability (freedom to act/empowerment and impact on end results) -- Practices and procedures are covered by historic examples, well-defined specific process considerations or necessary periodic review of results with supervisor or other team members; may deviate from established procedures and practices as long as end results meet standards of acceptability. Impact is contributory, providing supportive, interpretive or advisory services for use by others.

The “Series-at-a-Glance” Chart distinguishes Research Analysis Specialist from the adjacent classes of Research Analyst, Intermediate and Research Analysis Specialist, Senior. When work activities overlap several adjacent job classes within this series, the importance, autonomy, and frequency/time spent on these activities impact the final classification decision.

CLASS CONCEPT

- ⇒ Typically accountable for all aspects of a study -- excluding identification of study/project topics/issues/scope (usually initiated by higher-level research or management staff) -- including study design/methods, data collection, analysis, drafting reports and making final recommendations to management. On very large, complex studies/projects, involvement may be limited to selected issues/activities.
- ⇒ Work is performed under limited supervision/procedural control; technical direction is minimal.
- ⇒ Study/project topics are usually initiated by higher-level research or management positions. Develops research proposals (i.e., significant responsibility for recommending/determining objectives, issues, methods, and analytical approach); often designs project activities.
- ⇒ Independently performs or monitors overall conduct of research and reporting systems of considerable scope/complexity (e.g., affecting multiple agency divisions or a large segment of the public, such as research needed to develop and recommend detailed service coordination, establishment, recruitment, education and training programs for rural health care services; conduct a comprehensive assessment of all aspects of the emergency medical service system in Minnesota; prepare statewide traffic road forecasts; analyses of census and related demographic data, including recommending topics for demographic analyses and assisting in preparation of population estimations and projections; etc.).
- ⇒ Often few or no existing information resources, requiring development of collection tools and use of sampling methods.
- ⇒ Research issues/analyses are complex, with a significant number of alternatives/variables to consider.
- ⇒ Uses/interprets a variety of descriptive or inferential statistics (see list below).
- ⇒ Often a leadworker or project leader to professional research analyst staff on smaller studies or segments of larger studies.
- ⇒ Coordinates major data collection activities and quarterly/annual reporting activities.

TYPICAL WORK BEHAVIORS

Research/Study Design

- Determines research methodology to be used in assigned statewide/department-wide project or program (analyze requests, define needs, develop objectives, determine resources, determine collection methods, analytical strategy, develop work plans and timetables, etc.).

Data Collection

- Independent performance or leadwork direction of RA-series staff on data collection activities, including design and development of data collection forms, questionnaires/surveys, evaluation tools and associated rating measures/scales.
- Plans, develops, and maintains major databases (i.e., determine requirements, provide technical guidance in regard to hardware/software and system/sub-system design, developing a plan for database development, and by testing data integrity); direct the management of databases so that program data is available to produce reports by performing/scheduling necessary analysis activities, by evaluating program, policy and systems changes; and by developing and initiating plans for modification.
- Plans, develops and directs the design, development, maintenance and validity/reliability testing of major GIS databases, and/or applications; reviews and recommends adoption/selection of new GIS technology/software.

Data Analysis

- Writes/modify and executes computer programs (e.g., using statistical analysis, spreadsheet, database or presentation graphics software) to build statistical models used to forecast changes in existing programs.
- Computes/interprets a variety of descriptive and inferential statistics, including data plots, frequency distributions, measures of central tendency and dispersion, percentiles and standard scores, correlations, cross-tabulations/chi-square tests, t-tests, confidence intervals, reliability/item analyses and, not uncommonly, other non-parametric tests, regression/multiple regression, analysis of variance, factor analysis, cluster analysis, discriminant analysis, forecast/trend analysis/modeling statistics. .
- Evaluates and applies advanced quantitative and qualitative analytical tools to complete studies and projects.
- Analyzes and interprets data/results, draws conclusions and make recommendations to management/clients (i.e., decides what the data/results mean, and what should be done).

Report Preparation

- Writes or coordinates the writing of narrative reports (both summary memoranda or other short papers, as well as major reports), describing purpose, methodology, data collected, results, and recommendations based on analyses or research studies; writes materials for publication (write, edit, critique, coordinate reviews of authored drafts and coordinate final production of reports).
- Prepares and delivers oral presentations describing analyses or research to both small and large internal and/or external audiences.

Program/Project Management/Leadwork

- Provides leadwork direction -- in the role of a project/study leader -- to lower-level professional RA-series co-workers (i.e., prioritize, schedule, assign, direct, guide and evaluate/report on the work of co-workers, who are also performing similar work).

ADJACENT CLASSES

Research Analysis Specialist, Senior (A-14I, MAPE)
Research Analyst Intermediate (A-07I, MAPE)

COMPENSATION LEVEL

State Compensation Level: A-10I (Unit 214, MAPE)
Hay Profile: EI2-200 D3(33)-66 D1C-66 = 332

MAJOR USER AGENCIES

Economic Security
Health
Human Services - Central Office
Natural Resources
Minnesota Planning - Office of Strategic & Long Range Planning
Revenue
Transportation

RESEARCH ANALYSIS SPECIALIST
Sample of a Typical Position (Benchmark)

Position Purpose

Conduct statistical studies of vehicular traffic on Minnesota roads.

ANNOTATION: Studies conducted by Research Analysis Specialists generally affect multiple divisions; or services provided to a significant segment of the public. This is illustrated in the benchmark. Studies conducted by the benchmark influence traffic flow on State highways.

Reports to: EDP Information Systems Manager

Supervises: Sometimes provides direction to project teams.

Budget: No direct budget control

Clients: Traffic Systems Design and Operations Unit
Office of Traffic Engineering
Federal Highway Administration
Private Research Firms

Principal Responsibilities

I. Conduct projects and studies initiated by the Traffic Engineering Center.

A-75-A

1. Review research literature to find useful ideas and information.
2. Clarify scope of studies or projects, including objectives, methodology, timetables, assumptions and constraints.
3. Guide project teams in the development of data collection tools and techniques such as questionnaires, work sheets, information gather forms, and on-site observations.
4. Develop proposals for research design and select appropriate descriptive/analytical statistics (i.e. univariate, bivariate and multivariate statistics).
5. Analyze study data (test results for significance, search for additional information that might suggest relationships, analyze tested results for meaning and appropriateness to study goals).
6. Prepare draft reports of research studies, methods and results for review and publication.
7. Coordinate review of research drafts.
8. Coordinate production of final reports.

ANNOTATION: Study and project topics are generally initiated by higher level research or managerial positions. Once topics are identified, a Research Analysis Specialist is accountable for all facets of a study. This includes determining study methodologies, gathering and analyzing study data, drafting reports and making final recommendations to agency management. As studies become more complex in terms of number of issues, size of database, and use of complicated analytical techniques, an RA Specialist will get assistance from a higher level research professional.

II. Complete and lead other workers in the completion of special research requests related to traffic control and road use.

A-25-A

1. In consultation with the manager, determine the approach to use in analyzing each request. Options include statistical analysis, historical analysis, or comparisons of aggregate data.
2. Select employees to serve on study teams from across the department, allocate work assignments to study teams, and hold regular team meetings.
3. Obtain data from files within the Division, other divisions in the Department, government publications, and data from other government agencies.
4. Analyze data using a variety of statistics.
5. Write technical reports describing and interpreting research results.

ANNOTATION: Research Analyst Specialists often serve as study or project leaders on smaller studies or segments of larger studies.

RESEARCH ANALYSIS SPECIALIST, SENIOR

KIND OF WORK

Advanced-level professional work analyzing and reporting numerical/statistical or spatial data.

NATURE AND PURPOSE OF WORK

Under administrative direction, develops and executes complex and highly technical statistical studies for new/existing programs with statewide impact and/or for areas with little or no procedural precedent; builds statistical models and forecasts trends which have major departmental and/or statewide policy implications, and provides management with information necessary for decision making and long-range planning; performs audit and quality assurance functions for major programs by providing leadwork direction and review to high-level professional staff. Some positions provide leadwork direction to state agencies or to a large state agency in the design, development, use and sharing of spatial data, integrated GIS databases, and GIS tools.

Job evaluation profile narrative (Hay method):

Know-How (specific, integrative and human relations) -- Requires a thorough foundation in the principles and practices (i.e., both theoretical and applied) of a general field of knowledge sufficient to critique and evaluate the work of advanced professional staff to assure work quality and continually improve work processes with strong awareness of most immediate and sustained effects on customers. Activity or activities have specific objectives and content, but coordination of, and with, related activities is required. Ability to influence, persuade, understand and work collaboratively with others are important.

Problem-Solving (context and thinking challenge) -- Acceptability of conclusions, improvements or solutions is guided/governed by substantially diversified procedures, specialized standards, and historical examples; positions have great latitude to consider which among many procedures should be followed and in what sequence to achieve the required results. Work involves variable situations with high rates of substantive change (or presenting problems involving circumstances, facts and issues not encountered before) requiring analytical, interpretive, evaluative and/or constructive thinking to identify alternatives and consequences.

Accountability (freedom to act/empowerment and impact on end results) -- Practices and procedures are covered by historic examples, well-defined specific process considerations or necessary periodic review of results with supervisor or other team members; may deviate from established procedures and practices as long as end results meet standards of acceptability. Impact is primary, providing direct authorization for important decisions.

The “Series-at-a-Glance” Chart distinguishes Research Analysis Specialist, Senior from the adjacent classes of Research Analysis Specialist and Research Analyst Supervisor, Senior. When work activities overlap several adjacent job classes within this series, the importance, autonomy, and frequency/time spent on these activities impact the final classification decision.

CLASS CONCEPT

- ⇒ Project leader or consultant to professional research/evaluation staff on large/complex studies with little or no procedural precedent; consultant on all technical aspects of studies/projects. Provides technical expertise/guidance/leadership and coordination to the activities of entry, intermediate and advanced-level professional research staff. At this level, positions are experts in research methods and statistics.
- ⇒ Work is performed under administrative direction (i.e., receives no technical direction).
- ⇒ Studies/projects involve multi-agency programs or major state agency programs with statewide impact; study results have major policy, program and legislative impact and may lead to long-range changes in major state programs/services (e.g., research on effectiveness of existing and proposed methods of service delivery as well as analysis of fiscal and utilization trends in health care).
- ⇒ Performs sophisticated research activities; advises advanced-level professional research staff on research design, methods, data collection techniques, DBMS design/application development, selection and interpretation of analytical statistics, use of statistical analysis and DBMS software, analysis of data and interpretation of findings, design of reporting systems, and writing of reports, including graphical presentation of data/results.
- ⇒ In the role of a technical expert, represents the department by providing advice and interpretations of highly technical data at hearings, conferences, and through requests for information.
- ⇒ Writes, critiques and evaluates research reports (often for multiple projects/programs).
- ⇒ In the GIS area, develops spatial database design standards/guidelines, resolves differences in data utilization among different GIS applications, identifies and corrects performance problems, assist in evaluating designs for new GIS databases and application systems. Designs, develops and executes GIS methodology and procedures to produce integrated databases.

TYPICAL WORK BEHAVIORS

Research/Study Design

- Assists management to develop research plans and proposals, and prioritize research questions.
- Determines or reviews approach/method.

- Consults/advises the Director, the Commissioner, or others to communicate significant research or program issues by reviewing and completing reports; recommends improvements in research or reporting techniques/media; reviews pertinent newsletters, journals and commercial services, and maintains appropriate professional contacts within and outside of government.

Data Collection

- Supervises development of research instruments.
- Determines sampling technique.
- Directs database design/development.
- Develops and coordinates/directs data collection activities; designs, creates and maintains computerized data bases and reporting systems for new programs/projects with statewide impact; supervises communication with client agencies.

Data Analysis

- Analyzes proposed legislation and coordinates fiscal analysis of major programs/program changes.
- Builds statistical/mathematical models for programs to identify interactions, forecast trends and make projections; positions require advanced-level knowledge of research methods, sampling methods, statistical analysis (e.g., hypotheses testing, analysis of variance, factor analysis, cluster analysis, discriminant analysis, multivariate methods, trend analysis, psychometric analyses, etc.), statistical analysis and DBMS/GIS software, econometric analysis/modeling (some positions), and demographic techniques/theory (some positions).
- Analyzes and interprets data/results, draws conclusions and makes recommendations (i.e., decide what the data/results mean, and what should be done); critiques analyses of entry, intermediate and advanced professional research staff.
- Develops computer models to simulate operations, analyze interactions, forecast trends or make projections;

Report Preparation

- Designs major reporting systems.
- As project director/leader, participates with program staff in the preparation of the final report; lead writer on reports of major agency studies; reviews and edits reports published by the unit.
- Prepares and delivers key oral presentations on study objectives, methods and results involving highly technical data or on important large/complex studies.

Program/Project Management/Leadwork

- Directs staff in the role of a project leader (i.e., plan, organize, assign, direct and evaluate the work of others on a temporary, project basis); monitors, evaluates and reports on the work performance of co-workers to determine overall conformity to established timetable and quality standards and to document and communicate employee production levels and training.

- Schedules, distributes/balances and guides the work assignments of co-workers in accordance with established workflow/assignment requirements to assist supervisory staff in the timely accomplishment of the assigned workload by consulting with the section director in the overall management of the section and directing the activities of a statistical research and reporting unit engaged in reporting data of major importance in planning programs of a large department.

ADJACENT CLASSES

Research Analyst Supervisor, Senior (J-19I, MMA)
Research Analysis Specialist (A-10I, MAPE)

COMPENSATION LEVEL

State Compensation Level: A-14I (Unit 214, MAPE)
Hay Profile: EI2-230 D4(38)-87 D1P-87 = 404

MAJOR USER AGENCIES

Health
Human Services - Central Office
Labor & Industry
Natural Resources
Minnesota Planning - Office of Strategic & Long Range Planning
Revenue
Trade & Economic Development
Transportation

RESEARCH ANALYSIS SPECIALIST, SENIOR
Sample of a Typical Position (Benchmark)*

Position Purpose

Provide statistical and policy analysis on statewide forestry and related natural resource issues.

ANNOTATION: The Research Analysis Specialist, Senior directs studies and projects with little or no procedural precedents. Studies and projects have department and statewide implications and may lead to long-range changes in an agency's programs and services. Statewide forestry and related natural resource issues have this broad impact on the forestry, paper, wood products, and recreation industries in Minnesota. Each industry has multiple natural resource and economic issues as well as interrelated industry issues. This adds to the complexity of most research studies and projects conducted by the benchmark.

Reports to: Forestry Research Director

Supervises: Provides technical direction to Project teams

Budget: N/A

Clients: National Association of State Foresters
Minnesota Forest Industries
Minnesota Timber Producers Association
Federal, state and local environmental agencies
Environmental organizations
National Association of Business Economists
Legislature and governor's office
University research staff
Planning Agency
General public

Principal Responsibilities

I. Design and conduct forestry studies and projects to measure the effect current and proposed policies and programs have on Minnesota's forests, timber industry, and related industries.

A-85-A

1. Define the scope of studies or projects, including objectives, timetables and assumptions.
2. Determine research design and select descriptive/analytical statistics (i.e. univariate, bivariate and multivariate statistics).
3. Determine data sources.
4. Select project teams, allocate work assignments to individual team members and establish parameters for study teams.
5. Prepare project budgets for approval by the Director.
6. Approve study and project expenditures.
7. Guide project teams or directly develop data collection tools and techniques such as questionnaires and work sheets.
8. Guide project teams in their analysis of multiple variables such as supply and demand of timber products, taxable values of forest goods and services, and resource management policies.
9. Interpret economic and financial data and forecast the impact on timber industries, forest management policies and programs.
10. Present findings and recommendations to the Research Director.

ANNOTATION: As an expert in research methods and statistical analysis, a Research Analysis Specialist, Senior typically conducts studies that have few precedents to follow in developing study designs and methodologies; studies often have significant policy, program and legislative impact.

II. Analyze proposed forestry legislation.

A-15-A

1. Conceptualize impact and costs of proposed legislation.
2. Identify data sources.
3. Analyze fiscal and administrative aspects of the proposed programs.
4. Summarize the results of the analysis and prepare the rationale for approval or disapproval of the legislation.

RESEARCH ANALYST SUPERVISOR, SENIOR

KIND OF WORK

Advanced professional, supervisory statistical research work.

NATURE AND PURPOSE OF WORK

Under administrative direction, supervises (i.e., plans, organizes, assigns, directs, and evaluates) the collection, compilation, analysis, and reporting/presentation of complex statistical data used in planning and operating a major program within a large state department. Supervisory responsibilities include: assigning and controlling the flow of work, changing and/or modifying reports and procedures, training employees, effectively recommending hiring and disciplinary actions, and conducting performance evaluations.

Job evaluation profile narrative (Hay method):

Know-How (specific, integrative and human relations) -- Requires a thorough foundation in the principles and practices (i.e., both theoretical and applied) of a general field of knowledge sufficient to critique and evaluate the work of advanced professional staff to assure work quality and continually improve work processes with strong awareness of most immediate and sustained effects on customers. Activity or activities have specific objectives and content, but coordination of, and with, related activities is required. Human relations skills needed to understand, develop, persuade, motivate, collaborate with and lead others are essential.

Problem-Solving (context and thinking challenge) -- Acceptability of conclusions, improvements or solutions is guided/governed by clearly defined agency policies and principles from fields of science, commerce, public administration and academic disciplines; positions have latitude to consider whether new procedures may have to be developed, consistent with policies or existing principles, to achieve required end results; the “what” is clearly stated but the “how” is largely determined by the employee’s own judgment. Work involves differing situations with moderate rates of substantive change which may have new or unusual elements, requiring intensive search for solutions/appropriate choices among defined options or within area of learned things.

Accountability (freedom to act/empowerment and impact on end results) -- Practices and procedures are covered by historic examples, well-defined specific process considerations or necessary periodic review of results with supervisor or other team members; may deviate from established procedures and practices as long as end results meet standards of acceptability. Impact is primary, providing direct authorization for important decisions.

The “Series-at-a-Glance” Chart distinguishes Research Analysis Supervisor, Senior from the adjacent classes of Research Analysis Specialist, Senior and Research Planning & Evaluation Director or Research Director. When work activities overlap several adjacent job classes within this series, the importance, autonomy, and frequency/time spent on these activities impact the final classification decision.

CLASS CONCEPT

- ⇒ Supervisory position (i.e., authority to plan, organize, prioritize, assign, direct and evaluate the work of staff on a permanent basis). Trains employees.
- ⇒ Directs the activities of multiple professional research staff (entry, intermediate, advanced and, in some cases, expert/consultant level) in regard to all research activities (research design, methods, data collection techniques, DBMS design/application development, selection and interpretation of analytical statistics, use of statistical analysis and DBMS software, analysis of data and interpretation of findings and drafting of final recommendations, design of reporting systems, and writing of reports, including graphical presentation of data/results).
- ⇒ Activities involve collecting, analyzing, and reporting/publishing data for one or more major programs (i.e., issues/analyses are complex, with a significant number of alternatives/variables to consider. Studies have few precedents to follow; results have major policy, program and legislative impact and may lead to long-range changes in major state programs/services (e.g., research on effectiveness of existing and proposed methods of service delivery as well as analysis of fiscal and utilization trends in health care). On very large, complex studies/projects, involvement may be limited to selected issues/activities.
- ⇒ Work is performed under administrative direction (i.e., receives little/no technical direction);
- ⇒ Recommends/determines research objectives, issues, methods, and analytical approach; designs project activities.
- ⇒ Interprets complex and highly technical data and forecasts trends used in the formulation of departmental policy.
- ⇒ Supervises the preparation and writing of complex statistical reports; writes and edits research reports.
- ⇒ Performs sophisticated research activities (see examples below).

TYPICAL WORK BEHAVIORS

Research/Study Design

- Assists line management in defining scope of projects (i.e., define problem/issues, questions to be addressed, etc.).
- Determines approach/method for project or study.
- Identifies data/information needed, sources, collection methods and analytical strategy.

Data Collection

- Develops and coordinates data collection methods; supervises development of research instruments and databases.
- Develops and coordinates data collection methods; designs, creates and maintains computerized databases and organizes and controls reporting systems for assigned programs/projects (e.g., Transportation Information System, tax policy research on state and federal tax proposals, etc.).

Data Analysis

- Directs staff in the analysis of data, including selection of appropriate analytical statistics, and drawing of conclusions and making recommendations.
- Analyzes proposed legislation and coordinates fiscal analysis of major programs/program changes.
- Builds statistical/mathematical models for assigned research to identify interactions, forecast trends and make projections; positions require advanced-level knowledge of research methods, sampling methods, statistical analysis (e.g., hypotheses testing, analysis of variance, factor analysis, cluster analysis, discriminant analysis, multiple regression, trend analysis, etc.), statistical analysis and DBMS or related software, econometric analysis/modeling (some positions), and demographic techniques/theory (some positions).

Report Preparation

- Designs reporting systems and, supervises preparation of periodic and special reports.
- Reviews staff's analysis of data and conclusions. Leads staff in the making of recommendations.
- Directs staff in the writing of reports. Edits reports.
- Prepares and delivers oral presentations on analyses/studies to Director, agency managers and legislative committees.

Program/Project Management/Leadwork

- Supervises the work of professional, para-professional/technical, and clerical staff. Includes developing work plans, organizing the structure of the unit, assigning work to specific positions, hiring, monitoring completion of work and evaluation of work performance, and resolving employee performance issues.

ADJACENT CLASSES

Research Planning & Evaluation Director (15M) / Research Director (17M)
Research Analysis Specialist, Senior (A-14I, MAPE)

COMPENSATION LEVEL

State Compensation Level: J-19I (Unit 216, MMA)
Hay Profile: EI3-264 E3(38)-100 D1P-115 = 479 Hay points

USER AGENCIES

Health

Human Services - Central Office

Natural Resources

Revenue

RESEARCH ANALYST SUPERVISOR SENIOR
Sample of a Typical Position (Benchmark)*

Position Purpose

Supervise the Fiscal Analysis Section which is responsible for conducting research studies that measure the impact of existing and proposed state and federal tax legislation and tax policies.

Reports to: Tax Research Director

Supervises: 3 Research Analysis Specialists
3 Research Analysts, Intermediate
1 Research Analyst
Interns

Budget (annual): \$350,000 salaries and supplies

Clients: Legislature and Governor's Office
Internal Revenue Service
Local governments
Revenue officials in other states
General public

***This position is a composite of several positions.**

Principal Responsibilities

I. Supervise employees in the Fiscal Analysis Section.

A-35-A

1. Analyze Section's needs and develop and implement short and long-range workplans.
2. Determine structure of work units and specific job assignments.
3. Hire, transfer, and promote employees.
4. Train employees in technical areas, safety policies and procedures.
5. Determine work priorities, assign work, and monitor completion of work.
6. Evaluate work performance.
7. Analyze and recommend courses of action to resolve employee problems. Discipline, suspend, demote or terminate employees if necessary, mediate and adjust grievances.
8. Ensure understanding and practice of Affirmative Action and Workplace Diversity principles.

ANNOTATION: The percent of time spent doing supervisory tasks varies by position, but supervisory positions perform most of the tasks described above. Refer to M.S. 179A.03 Subd. 17 for the statutory definition of supervisory employee.

II. Supervise research studies conducted by the Fiscal Analysis Section. Studies measure the impact of existing and proposed state and federal tax legislation and policies.

A-65-A

1. Prepare Section budget for approval by the Tax Research Director.
2. Conduct preliminary reviews of proposed state and federal legislation covering all tax types.
3. Develop study plans to address legislative and policy issues. This includes defining scope, methodology, timetables, assumptions, and restraints.
4. Guide staff in the development of data collection tools and techniques such as questionnaires, work sheets, information gathering forms, and on-site observations.
5. Guide staff in the analysis of data and preparation of recommendations.
6. Guide staff in writing study reports.
7. Present findings and recommendations to the Director, Department managers, and legislative committees.

ANNOTATION: A Research Analyst Supervisor, Senior supervises studies that have few precedents to follow; studies often have significant policy, program and legislative impact. Research supervised by the benchmark will affect tax legislation and policy. Complexity is added to this position because it directs studies covering all Federal and State tax types.

RESEARCH PLANNING & EVALUATION DIRECTOR

KIND OF WORK

Managerial research, program development and administration work.

NATURE AND PURPOSE OF WORK

Under administrative direction, identify legislative-level issues affecting major agency programs; design and direct research projects which address these issues; participate in the development and presentation of new legislative proposals; and design statewide programs, delivery systems and monitoring functions.

Job evaluation profile narrative (Hay method):

Know-How (specific, integrative and human relations) -- Requires a broad grasp of advanced principles and practices of at least one specialized field of knowledge sufficient to critique/evaluate the work of advanced professional staff and assure work quality, and to establish, conduct, and continually improve work processes with strong awareness of immediate and sustained effects on customers. Activity or activities have specific objectives and content, but coordination of, and with, related activities is required. As a first-level manager, work involves planning, organizing, controlling and reviewing the work of others, usually through the direction of supervisory and leadwork project staff; human relations skills needed to understand, develop, persuade, motivate, collaborate with and lead others are essential.

Problem-Solving (context and thinking challenge) -- Acceptability of conclusions, improvements or solutions is guided/governed by clearly defined agency policies and principles from fields of science, commerce, public administration and academic disciplines; positions have latitude to consider whether new procedures may have to be developed, consistent with policies or existing principles, to achieve required end results; the "what" is clearly stated but the "how" is largely determined by the employee's own judgment. Work involves variable situations with high rates of substantive change requiring analytical, interpretive, evaluative and/or constructive thinking to define options for choices; problems involve new circumstances, issues and facts and the jobholder must consider various possible decisions and assess their consequences before making decisions.

Accountability (freedom to act/empowerment and impact on end results) -- Practices and procedures are covered by historical example, process considerations, requirements identified by directly comparing process results to expectations, or review of results with key customer representatives; while management direction establishes what results are expected, these positions determine how and when the results will be achieved. Impact is primary, providing direct authorization for important decisions.

The “Series-at-a-Glance” Chart distinguishes Research Planning & Evaluation Director from the adjacent classes of Research Analyst Supervisor, Senior and Research Director. When work activities overlap several adjacent job classes within this series, the importance, autonomy, and frequency/time spent on these activities impact the final classification decision.

CLASS CONCEPT

- ⇒ Managerial-level position (i.e., accountable for determining, securing and allocating human, financial and other resources needed to accomplish objectives; determines overall objectives, priorities and policies within a program area; work involves planning, organizing, controlling and reviewing the work of others, usually through the direction of supervisory and leadwork project staff). Annual budget development and control for a research unit.
- ⇒ Work is performed under administrative direction (i.e., receives no technical direction, and control is exercised managerially only where matters such as policy development, intermediate/long-range planning, and budgeting and expenditure of funds are involved).
- ⇒ Directs the activities of a large, professional research unit -- including supervisory and/or expert/consultant level research staff -- in regard to all research activities (i.e., research design, methods, data collection techniques, DBMS design/application development, selection and interpretation of analytical statistics, use of statistical analysis and DBMS software, analysis of data and interpretation of findings and drafting of final recommendations, design of reporting systems, and writing of reports, including graphical presentation of data/results).
- ⇒ Positions have a dual focus: 1) directs complex research studies/projects, AND 2) has major role in resulting program planning and development activities (e.g., development and presentation of new program/legislative proposals or recommendations; design of new programs, delivery systems and monitoring/reporting systems).
- ⇒ With line management, determines research/study objectives and scope (identifying problems, issues and questions to be addressed) and translates research results into policy/program recommendations or new legislation.
- ⇒ Research studies/projects and/or program development activities typically have few procedural precedents to guide decision-making; study results often attract considerable public interest and generate controversy, and lead to policies that affect a large segment of the population (e.g., long-term health care services).

TYPICAL WORK BEHAVIORS

Research/Study Design

- Identifies agency or program area research needs. Develop research proposals.
- Assists line management in defining project/study scope (i.e., define objectives, problems/issues, questions to be addressed, etc.).

- Directs staff in the development/selection of research methodology, including study design, identification of data/information needed, sources, collection methods, sampling strategy, statistical methods and analytical approach, and in the development and implementation of systems for analyzing and reporting program information.
- Develops project/study workplans.

Data Collection

- Directs staff in the development and coordination of data collection methods; supervises development of research instruments and databases.

Data Analysis

- Analyzes proposed legislation and coordinates fiscal analyzes of major programs/program changes.
- Reviews complex and highly technical data and forecasts trends used in the formulation of departmental policy.
- Directs staff in the analysis of data, particularly with regard to conclusions and recommendations for new or modified legislation, policies and/or program services.

Report Preparation

- Directs staff in the design of reporting systems and supervises preparation of periodic and special reports.
- Directs the writing and editing of complex statistical reports. Reviews staff's analysis of data, conclusions and recommendations.
- Prepares and delivers oral presentations on analyses/studies, program and legislative recommendations to agency managers and executive staff, legislative committees, other local-state-federal officials, service providers, and client groups.
- Directs and coordinates the dissemination of data and analysis through public relations and marketing methods (e.g., news releases, publications, establishing rapport with the news media to market results of agency studies or program/policy recommendations; providing management with data for speeches, field visits, and meetings; representing agency at meetings and conferences).
- Testifies before committees in legislative hearings on regulatory or program issues related to research.

Program Planning, Evaluation & Development

- Initiates and develops new programs, pilot programs, and experimental projects including, but not limited to, identifying unaddressed agency or client needs, researching and reviewing similar programs in other states and, negotiating changes or amendments to procedure and policy with other agency units.
- Proposes legislation, answer questions and defends (orally or in writing) department agenda to other agencies, organizations and local interest groups at public hearings and the legislature by synthesizing results of research and defined organizational goals.
- Develops plans to implement study/project recommendations.

Program Management (staff & budget)

- Determines research/program planning & evaluation division's overall objectives, work priorities and policies.
- Determines Division's organizational structure and job design.
- Plans, organizes, schedules, assigns, controls and reviews the work of professional research and program development/evaluation staff, typically through the direction of supervisory, expert/consultant-level and leadwork project staff.
- Develops and controls budgets; requests, allocates, approves and monitors expenditure of funds for projects.

ADJACENT CLASSES

Research Director (17 M)

Research Analyst Supervisor, Senior (J-19I, MMA)

COMPENSATION LEVEL

State Compensation Level: 15M (Unit 220, Mgr)

Hay Profile: FI3-304 E4(43)-132 E1P-152 = 588 Hay points

USER AGENCIES

Human Services - Central Office

Labor & Industry

Natural Resources

RESEARCH PLANNING AND EVALUATION DIRECTOR
Sample of a Typical Position (Benchmark)*

Position Purpose

Develop research projects that lead to new programs and legislation for long-term health care services in Minnesota. Develop new and modified long term health care programs.

ANNOTATION: Positions allocated to this class must have two major components: 1) program planning and design and 2) research. Programs designed at this level often generate considerable public interest and controversy. Research at this level requires innovative approaches to data analysis. Study results often guide policy and program decisions and lead to new or modified legislation.

Reports to: Long Term Care Audit Director

Supervises: 1 Research Analysis Specialist, Senior
2 Research Analyst Specialists
2 Research Analysts, Intermediate
1 Nursing Evaluator
1 Systems Analyst (on a project basis)

Budget: \$500,000 (Annually)

Clients: County Human Service Agencies
Approximately 800 Long Term Care Facilities
State Regional Treatment Centers and Group Homes
Departments of Health, Planning, Finance and Housing Finance
Legislature and Governor's Office

***This is a composite of several positions.**

Principal Responsibilities

I. Manage the staff and budget for the Long Term Health Care Division.

A-25-A

1. Determine the Division's organizational structure and design of its jobs.
2. Hire, promote, reward, discipline, and terminate staff.
3. Assign and reassign employees within the work area.
4. Schedule, assign work and establish work priorities.
5. Evaluate work performance.
6. Develop and implement the research and program development annual budget.
7. Approve all Division expenditures to ensure that spending meets the legislative audit requirements and good business practices.

II. Manage the research and program development activities of the Long Term Health Care Division.

A-75-A

1. Identify and analyze problems or gaps in existing long term policies, legislation, and regulations.
2. Develop research proposals that address these problems.
3. Direct staff in developing research design and analysis.
4. Direct staff in preparing recommendations for new or modified legislation, policies, and/or program services.
5. Present findings and recommendations to Long Term Care Audit Director and Executive Staff.
6. Develop plans to incorporate study and project recommendations into new programs and new and modified legislation.
7. Present research results, program and legislative recommendations to the legislature, other state, federal and county long term care agencies and providers.

ANNOTATION: The Research Planning and Evaluation Director class has a dual focus: 1) research and 2) program planning and design. Incumbents direct complex research studies and projects. Secondly, they incorporate research results into statewide programs and, in some instances, new legislation. Programs and legislation affect broad segments of the population as in the case of Long Term Health Care.

RESEARCH DIRECTOR

KIND OF WORK

Managerial research and planning work.

NATURE AND PURPOSE OF WORK

Under administrative direction, plans, directs, coordinates and evaluates various research programs and special projects carried out by a large research staff. Work includes the collection, compilation, analysis, interpretation, forecasting and reporting/presentation of data in such areas as corrections/criminal justice, health/vital statistics, human services/public assistance, strategic & long-range planning, and public utilities. General objectives are outlined by a department head or division director, but this employee is given wide latitude in developing specific projects and determining procedures to follow in accomplishing them. The employee supervises a staff of professional, para-professional and clerical employees.

Job evaluation profile narrative (Hay method):

Know-How (specific, integrative and human relations) -- Requires a broad grasp of advanced principles and practices of at least one specialized field of knowledge sufficient to critique/evaluate the work of advanced professional staff and assure work quality, and to establish, conduct, and continually improve work processes with strong awareness of immediate and sustained effects on customers. Requires operational or conceptual integration of activities and teams (e.g., on multiple projects) that are relatively homogeneous in nature and objective; may involve integration of these activities with others in non-related areas. As a manager, work involves planning, organizing, controlling, and evaluating the work of others, usually through the direction of supervisory and leadwork project staff; human relations skills needed to understand, develop, persuade, motivate, collaborate with and lead others are essential.

Problem-Solving (context and thinking challenge) -- Acceptability of conclusions, improvements or solutions are guided/governed by clearly defined agency policies and principles from fields of science, commerce, public administration and academic disciplines; positions have latitude to consider whether new procedures may have to be developed, consistent with policies or existing principles, to achieve required end results; the "what" is clearly stated but the "how" is largely determined by the employee's own judgment. Work involves variable situations with high rates of substantive change requiring analytical, interpretive, evaluative and/or constructive thinking to define options for choices; problems involve new circumstances, issues and facts and the jobholder must consider various possible decisions and assess their consequences before making decisions.

Accountability (freedom to act/empowerment and impact on end results) -- Practices and procedures are covered by historical example, process considerations, requirements identified by directly comparing process results to expectations, or review of results with key customer representatives; while management direction establishes what results are expected, these positions determine how and when the results will be achieved. Impact is primary, providing direct authorization for important decisions. Operations budget = \$500M - \$2MM.

The “Series-at-a-Glance” Chart distinguishes Research Director from the lower adjacent classes of Research Analyst Supervisor, Senior and Research Planning & Evaluation Director. When work activities overlap several adjacent job classes within this series, the importance, autonomy, and frequency/time spent on these activities impact the final classification decision.

CLASS CONCEPTS

- ⇒ Managerial-level position (i.e., accountable for determining, securing and allocating human, financial and other resources needed to accomplish objectives; determines overall objectives, priorities and policies; work involves planning, organizing, controlling and reviewing the work of others, usually through the direction of supervisory and leadwork project staff); work is performed under administrative direction (i.e., receives no technical direction, and control is exercised managerially only where matters such as policy development, long-range planning and budgeting of funds are involved). Develops and controls budget for a research unit.
- ⇒ Directs all research activities (i.e., data collection, processing, analysis, reporting, publishing, and data dissemination activities) for a large state agency. Supervises a large professional research staff, typically including multiple supervisory professional staff.
- ⇒ Directs large, complex projects/studies, often producing information for multiple, large programs; research studies/projects typically have few procedural precedents to guide decision-making; study results often attract considerable public interest and generate controversy, and lead to policies that affect a large segment of the population.
- ⇒ In cooperation with top program managers, establishes agency research agenda that will provide information needed for policy-making.
- ⇒ Advisor to top management on the interpretation and application of research results into policy/program recommendations.

TYPICAL WORK BEHAVIORS

Research/Study Design

- Identifies agency research needs. Develops research proposals.
- Assists line management in defining project/study scope (i.e., define objectives, problems/issues, questions to be addressed, etc.).
- Plans, develops and evaluates new research programs, pilot programs, and experimental projects including, but not limited to, identifying unaddressed agency or client needs, researching and reviewing similar programs in other states and negotiating changes or amendments to procedure and policy with other agency units.
- Directs staff in the development/selection of research methods, including study design, identification of data/information needed, sources, collection methods, sampling strategy,

statistical methods and analytical approach, and in the development and implementation of standards, procedures and systems for analyzing and reporting program information.

Data Collection

- Directs staff in the development and maintenance of data collection and reporting systems; supervises development of research instruments and databases.

Data Analysis

- Analyzes proposed legislation and coordinates fiscal analyzes of major programs/program changes.
- Directs staff in the analysis of data, particularly with regard to conclusions and recommendations for new or modified legislation, policies and/or program services.
- Directs the development of models used for making forecasts/projections. Provides direction to the development and preparation of forecasts and projections (e.g., economic forecasts, state revenue and tax collections, etc.) used for major policy decisions or for proposing changes in laws pertaining to agency programs. Reviews complex and highly technical data and forecasts trends used in the formulation of departmental policy.

Report Preparation

- Designs reporting systems and supervises preparation of periodic and special reports.
- Directs the writing and editing of complex statistical reports. Reviews staff's analysis of data, conclusions and recommendations.
- Prepares and presents (orally and/or in writing) results of analyses/studies (e.g., recommendations, forecasts, etc.) to agency managers and executive staff, legislative committees, local-state-federal officials, service providers, client groups and professional associations. Testifies before committees in legislative hearings and answers questions at public hearings on regulatory/program issues related to research.
- Directs and coordinates the dissemination of data and analysis through public relations and marketing methods (e.g., news releases, publications, establishing rapport with the news media to market results of agency studies or program/policy recommendations; providing management with data for speeches, field visits, and meetings; representing agency at meetings and conferences).
- Confers with representatives and officials of governmental agencies, private industry and other public and private groups.

Program Management (staff & budget)

- Determines research division's overall objectives, work priorities and policies.
- Determines Division's organizational structure and job design.
- Plans, organizes, prioritizes/schedules, assigns, controls and reviews (including establishing performance standards) the work of professional research and program development/evaluation staff, typically through the direction of supervisory, expert/consultant-level and leadwork project staff.
- Develops and controls budgets; requests, allocates, approves and monitors expenditure of funds for projects.
- Develops project/study workplans.
- Develops plans to implement study/project recommendations.

ADJACENT CLASSES

Research Planning, and Evaluation Director (15M)/Research Analyst Supervisor, Senior (J-19I)

COMPENSATION LEVEL

State Compensation Level: 17M (Unit 220, Mgr)

Hay Profile: FII3-400 E4(50)-200 E2P-200 = 800 Hay points

USER AGENCIES:

Corrections - Central Office

Health

Human Services - Central Office

Minnesota Planning - Office of Strategic & Long Range Planning

Public Utilities Commission

RESEARCH DIRECTOR

Sample of a Typical Position (Benchmark)*

Position Purpose

Direct the Research and Forecasting Division which is responsible for research and data collection for Minnesota's self-sufficiency and Medical Programs.

ANNOTATION: At this level, research programs have broad impact on public policy. Over \$2.3 billion is allocated annually for Minnesota's self-sufficiency and Medical Programs.

Reports to: Assistant Commissioner, Program Administration

Supervises: 2 Research Analyst Supervisors, Senior
3 Research Analysis Specialists
4 Research Analysts, Intermediate
3 Research Analysts
1 Clerk Typist 3
2 Clerks 4

ANNOTATION: Research Directors frequently supervise subordinate supervisors; subordinate supervisors then supervise the remaining staff.

Budget: \$900,000 (annually)
Total state expenditures for programs affected by the Division's research exceed \$1.2 billion.

Clients: Department Management
Legislature and Governor's Office
County Human Services Offices
Client advocates
Consumer groups
General public

* This is a composite of several positions.

Principal Responsibilities

I. Manage the staff and budget for the Research and Forecasting Division.

A-40-A

1. Determine the Division's organizational structure and the design of its jobs.
2. Hire, promote, reward, discipline, and terminate staff.
3. Assign and reassign employees within the work area.
4. Schedule, assign work and establish work priorities.
5. Evaluate work performance.
6. Develop and implement the Division's annual budget.
7. Approve all Division expenditures to ensure that spending meets legislative audit requirements and good business practices.

II. Manage the research and data collection activities of the Research and Forecasting Division. The Division provides research and data collection services for Family self-sufficiency Programs (Medical Assistance, Alternative Care Grants, General Assistance Medical Care, Aid to Families with Dependent Children, Minnesota Supplemental Aid, General Assistance, Work Readiness, and Minnesota Care).

A-60-A

1. Develop research proposals that address problems and gaps in existing and proposed policies, legislation and regulations.
2. Direct staff in developing research designs and analysis.
3. Direct staff in developing models for forecasting fiscal impact and populations to be served by new or modified programs.
4. Direct staff in preparing research recommendations and fiscal forecasts.
5. Direct staff in developing and maintaining data collection and reporting systems to analyze program performance.
6. Present program and fiscal data to legislature.

ANNOTATION: Research Directors are responsible for complex research studies and projects. Studies may generate information for multiple, large programs. Family self-sufficiency and Medical Programs illustrates this magnitude.

staffing/classif/raseries