



THE MINNESOTA BOARD OF ARCHITECTURE, ENGINEERING, LAND SURVEYING,
LANDSCAPE ARCHITECTURE, GEOSCIENCE & INTERIOR DESIGN

March 15, 2013

Legislative Reference Library
645 State Office Building
100 Constitution Avenue
St. Paul, Minnesota 55155

Re: In The Matter of the Proposed Amendment to Rules of the Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design Governing Engineering, Land Surveying, Geology and Soil Science Licensure, and Housekeeping Updates; Revisor's ID Number R-0432

Dear Librarian:

The Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design intends to adopt rules governing engineer, land surveying, geology and soil science licensure, and housekeeping updates. We plan to publish a Dual Notice of Intent to Adopt Rules without a Public Hearing in the March 25, 2013 State Register.

The Board has prepared a Statement of Need and Reasonableness. As required by Minnesota Statutes, sections 14.131 and 14.23, the Board is sending the Library an electronic copy of the Statement of Need and Reasonableness prior to mailing our Notice of Intent to Adopt Rules.

If you have questions, please contact me at 651-757-1511.

Yours very truly,

A handwritten signature in cursive script that reads "Andrea Barker".

Andrea Barker
State Program Administrator Intermediate

Enclosure: Statement of Need and Reasonableness

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Minnesota Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design

STATEMENT OF NEED AND REASONABLENESS

Proposed Amendment to Rules Governing Engineering, Land Surveying, Geology and Soil Science Licensure; and Housekeeping Updates: Minnesota Rules, 1800.0200, 1800.0300, 1800.0400, 1800.0500, 1800.0800, 1800.0900, 1800.1000, 1800.1500, 1800.2100, 1800.2500, 1800.2700, 1800.2800, 1800.2805, 1800.2900, 1800.3505, 1800.3600, 1800.3700, 1800.3750, 1800.3850, 1800.3905, 1800.3910, 1800.3915, 1800.3920, 1800.3930, 1800.4200, 1800.4300, 1800.4600, 1805.1600

AR 2017

Revisor's ID Number R-0432

INTRODUCTION

The nature of the proposed rules of the Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design ("Board") is to amend its current rules that generally pertain to all licensees and certificate holders and specifically pertain to the licensure of professional engineers, land surveyors, professional geologists and professional soil scientists and the application process. The proposed rules will update the education and experience requirements for licensure as a professional engineer, professional geologist or professional soil scientist and will update the examination procedures for engineering and land surveying.

The proposed rules also include amendments to language pertaining to all applicants, licensees and certificate holders and are "housekeeping" in nature. These housekeeping modifications do not make any substantive changes to requirements for applications, licensure or certification, but rather remove obsolete or duplicative language and rewrite sections for clarity and uniformity.

Changes to the education and experience requirements for engineer applicants are intended to update and clarify the requirements which have been in place for many years. Many of the rules are out-of-date and need to be rewritten to reflect current procedures. The minimum education, examination and experience requirements are not specifically changing, but rather are updated to reflect current procedures in Minnesota and across the country.

Changes to the education and experience requirements for geoscience (geology and soil science) applicants are intended to update and clarify the requirements which have been in place since geoscience licensure began in Minnesota in 1997. Many of the changes are to remove obsolete language. Additional modifications codify and clarify the requirements and update the language to reflect current procedures.

Changes to the examination procedures for engineering and land surveying are intended to allow for multiple examination administrations within an examination window rather than limited, fixed examination dates. The National Council of Examiners for Engineering and Surveying ("NCEES"), the organization which the Board is a member and from which it purchases the required examinations for licensure, is moving to computer-based examinations that are

proctored at testing agencies throughout the country on multiple dates throughout examination windows. The Board's current rules specify application deadlines for examinations that are held on a specific date. Modifications to the language make the application procedure less restrictive while maintaining the same minimum requirements for licensure.

This package includes rule language that can easily be divided into four parts: (1) Housekeeping, (2) Engineering, (3) Land Surveying, and (4) Geoscience. The background information, regulatory analysis and rule-by-rule analysis will be repeated four times under each of the above headings for clarity.

ALTERNATIVE FORMAT

Upon request, this Statement of Need and Reasonableness can be made available in an alternative format, such as large print, Braille, or audio recording. To make a request, contact Andrea Barker at the Board of Architecture, Engineering, Land Surveying, Landscape Architecture, Geoscience and Interior Design, 85 E. 7th Place, Suite 160, St. Paul, MN 55101, (651) 757-1511, Fax: (651-297-5310), and email: andrea.barker@state.mn.us. TTY users may call the Board at (800) 627-3529.

STATUTORY AUTHORITY

All sources of statutory authority were adopted and effective prior to January 1, 1996, so Minnesota Statutes, section 14.125, does not apply.

The Legislature granted the Board's authority to engage in rulemaking in Minnesota Statutes §326.06, which states:

326.06 General powers and duties of Board.

Each member of the board shall receive a certificate of appointment from the governor, and, before beginning a term of office, shall file with the secretary of state the constitutional oath of office. The board shall adopt and have an official seal, which shall be affixed to all licenses granted; shall make all rules, not inconsistent with law, needed in performing its duties; and shall fix standards for determining the qualifications of applicants for certificates, which shall not exceed the requirements contained in the curriculum of a recognized school of architecture, landscape architecture, engineering, geoscience, or interior design. The board shall make rules to define classes of buildings with respect to which persons performing services described in section 326.03, subdivision 2, may be exempted from the provisions of sections 326.02 to 326.15, by a finding of no probable risk to life, health, property or public welfare.

Under this statute, the Board has the necessary statutory authority to adopt the proposed rules.

PART 1: HOUSEKEEPING

Each year, in compliance with Minnesota Statutes, section 14.05, subdivision 5, the Board submits a report to the Governor and legislators on obsolete, unnecessary and duplicative rules contained within Chapters 1800 and 1805. Many of the rules identified as housekeeping were noted in the Board's 2011 report.

REGULATORY ANALYSIS

“(1) a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule”

The classes of persons who will probably be affected by, as well as benefit from, the proposed housekeeping rule modifications are generally all applicants, licensees and certificate holders. The changes described in this section involve cleaning up existing language. Obsolete and duplicative rules are deleted making it easier for an applicant, licensee or certificate holder to understand the current requirements. No substantive changes are introduced. All users of the proposed rule will benefit in that the rules will be easier to understand and regulate.

“(2) the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues”

The probable costs to the Board include the costs associated with rule making in general. The Board does not anticipate any increase or decrease in the costs pertaining to the implementation of the proposed rules since the new rules will replace existing rules and will be administered in the same manner. Likewise, the probable cost of enforcing the proposed rules is not expected to increase or decrease for the same reason.

The Board is charged with the implementation and enforcement of the proposed rule. As such, it does not anticipate any probable costs to any other agency or any effect on state revenues.

“(3) a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule”

The purpose of the proposed rule modifications is to delete obsolete or duplicative language and to simplify existing language. No other methods exist for achieving these goals other than rule writing.

“(4) a description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule”

No alternative methods were seriously considered as no alternatives appear to exist.

“(5) the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals”

Costs associated with this rule will not change. Rule modifications are housekeeping in nature and therefore do not contain any substantive changes.

“(6) the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals”

The consequences of not adopting the proposed rules include keeping outdated and confusing language in the rule. Outdated and confusing language results in additional staff time spent explaining the rules to applicants, licensees, certificate holders and the public in general.

“(7) an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference”

No relationship exists between these rules and federal regulations.

“(8) an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule. . . . ‘[C]umulative effect’ means the impact that results from incremental impact of the proposed rule in addition to other rules, regardless of what state or federal agency has adopted the other rules. Cumulative effects can result from individually minor but collectively significant rules adopted over a period of time.”

The proposed rules cover areas that are not addressed by federal law or other Minnesota state laws. Therefore, this consideration is not applicable for this rule.

RULE-BY-RULE ANALYSIS

M.R. 1800.0200 CLASSES OF LICENSEES

The change to this rule eliminates obsolete language. The language refers to individuals who seek licensure as a professional geologist or professional soil scientist within one year of August 4, 1997. Since this deadline has long passed, the language is unnecessary.

M.R. 1800.0300 IN-TRAINING CLASSIFICATIONS

The addition of the words “examination of” in two places of this rule creates consistency for each of the four in-training classifications described within the rule.

M.R. 1800.0400 APPLICATION FOR LICENSURE AND CERTIFICATION

The first change to subpart 1 makes it clear that all applicants must pay the application fee whether they are applying to take an examination or not. Applicants can apply for licensure in two ways – by examination or by comity. The addition of the word “examination” makes it clear that by whichever method the applicant is applying, the application fee exists. This is not a new fee, but rather a clarification of the existing fees.

The second change to subpart 1 reflects the correct terminology for the fee applicants pay. Applicants for licensure or certification do not pay an "examination" fee as the rule currently states, but rather an "application" fee.

The third change ties the application fee to the proper statutory reference.

The final change improves sentence structure. Applicants are applying for *certification* as a certified interior designer - they are not already certified interior designers completing an application.

The first two changes to subpart 1a improve sentence structure. The third change reflects the updated name of the examination required for land surveyor applicants. The final change is in regard to the Rules of Professional Conduct. Subsequent rules for some professions, but not all professions, state the requirement for submission of a statement saying the applicant has read the Board Rules of Professional Conduct. The addition of the requirement to this particular rule makes it clear that a signed statement that the applicant has read the Rules of Professional Conduct is required for all applicants.

Changes to subpart 3, items A and B remove duplicative language regarding application deadlines for examinations. Application deadlines for examinations are identified in MR 1800.2900 for engineering applicants, MR 1800.3750 for land surveying applicants and MR 1800.3930 for geoscience applicants. Additionally, changes to items A and B remove the requirement that examination fees accompany the application. This modification is in line with the current practice of applicants paying examination fees following approval for the examination. The examination fees were previously submitted with an application, however, the Board then had to refund the examination fees of applicants who did not qualify for the examination. Additionally, many examinations are now administered by a third-party vendor and examination fees are paid by the applicant directly to the vendor.

M.R. 1800.0500 FEES

The changes to the first paragraph of subpart 1 clarify which fees need to be paid to which entity. The Board historically administered the majority of the licensing examinations for the professions. Many licensing examinations have either moved to third-party vendor administration in order to reduce states' liability for exam security or have moved from paper-and-pencil administrations to computer-based testing. The entity which administers the examination, whether it is the Board or a third-party vendor, is fluid. Changing the rule each time an exam administrator changes is not feasible, therefore, the rule needs to be written in a way that the fees get paid to the correct entity. The types of fees: the application fee, the examination fee and the examination monitoring fee don't necessarily change, however, the manner in which the fees are paid and to which entity do change.

All applicants for examination are required to pay an application fee to the Board. The Board accepts the applications, examines and verifies the supporting documentation, and determines whether or not the applicant's qualifications meet the minimum requirements to sit for the examination. The application fee covers this application analysis.

Currently the examinations for architecture, engineering and land surveying are administered through a third-party vendor. Once the applicant receives approval to take the examination from the Board, the applicant registers for the exam with the third-party vendor and pays the examination fee and the examination monitoring fee directly to the vendor. The Fundamentals of Engineering (FE) examination and the Fundamentals of Surveying (FS) examination will soon be computer-based and it has not yet been determined if the vendor will continue to administer the paper-and-pencil examinations for the professional engineer examination, the professional surveyor examination and the local surveying examination. It is possible that the exam administration will default back to the Board. If this is the case, the applicant would then need to pay the examination fee and the examination monitoring fee directly to the Board.

Similarly, the Board currently administers the examinations for geology and soil science, therefore, the fees are paid to the Board. In the future, the examinations could be administered by a third-party vendor and the applicant would then pay the examination fee and exam monitoring fee to the vendor.

The second paragraph in subpart 1 clarifies the procedure for applying for the actual license or certificate. An applicant typically completes his or her initial application either for an examination or for licensure by comity and submits the required supporting documentation. The applications are analyzed and a determination is made on whether or not the minimum requirements for licensure or certification have been met. Upon passage of the examination, or determination that a comity applicant meets the minimum requirements for licensure or certification, the Board notifies the applicant that he or she has been approved and is eligible for licensure or certification and supplies the applicant with a one-page application for licensure or certification. The applicant must then complete this final application and submit it with the initial licensure or certification fee as required by MN Statutes, section 326.105. Once the licensure or certification fee has been paid, the license or certificate is granted and a number is issued. For applications by comity, the paragraph has been modified to make it clear that ALL applications, regardless of the profession, must be accompanied by the application fee. The reference to 1800.0800, item J is obsolete. The reference to 1800.0800, item H for land surveyor by comity applicants is updated to item G based on rule changes adopted in March 2012 to M.R. 1800.0800.

The next paragraph refers to renewal applications. The only change is to move the statutory reference from the beginning of the sentence to the end of the sentence for better sentence structure and flow.

The next paragraph addresses applications for the in-training examinations. Again, the statutory reference is moved from the beginning of the sentence to the end for better sentence structure and flow. Additionally, as is the case with the professional examination described above, the in-training examinations may be administered by either the Board or a third-party vendor. Since the exam administrator is fluid, the rule language providing for the payment of the various fees must be written in a way that allows the payments to get to the correct entity without having to change the rule each time. The changes to this paragraph mimic the changes described above regarding the professional engineering examinations.

The next change separates the sentence regarding the examination fee required by the national testing agency from the sentences describing exam ineligibility or exam failure as they are two separate topics. The paragraph is further modified for clarity. Simply stating that a new

application for examination, "in such instances" is unclear and does not specify what "such instances" may be. The modifications make it clear that applicants found ineligible for admission to an examination or applicants who have failed an examination must submit a new application each time they apply to take the examination. The Board does not have a "reexamination" application for applicants who failed the examination. The credentials of an applicant (especially those who are applying for an in-training examination) or the minimum requirements for admission to an examination may change from exam administration to exam administration. A new application must be completed for each examination and the materials must be analyzed by the Board to determine whether or not the applicant is currently eligible for admission to the examination. Approval to take an examination is not automatic even if an applicant has taken the examination previously.

The first change to subpart 2 clarifies that application fees are not refundable. Each application submitted to the Board is thoroughly reviewed by staff and Board members. A determination of whether or not the minimum requirements have been met cannot be made until after the application and supporting documentation have been fully analyzed. Regardless of whether or not an application ultimately qualifies for the examination, the same amount of staff time is required to process and review the application. Examination fees, however, may be refunded if the applicant does not qualify for the examination and the examination fees have already been paid to the Board by the applicant. Similarly, if an applicant pays a licensure or certification fee and does not qualify for licensure or certification, the fees may be refunded. The elimination of the requirement of the Board to retain a \$20 administrative fee is unnecessary since the application fee itself is not refundable.

The second change to subpart 2 clarifies that each new application must include the appropriate fee for application, examination, licensure or certification depending on the type of application.

The first change to subpart 4 corrects the statutory reference to the correct subdivision. When the statute was updated, the rule was not.

The second change to subpart 4 removes the requirement for a licensee to retake the professional licensing examination if the license has been lapsed for more than two years. With the addition of the continuing education requirement in 1999, individuals with lapsed licenses must report continuing education in order to reinstate. Continuing education helps ensure the protection of the health, safety and welfare of the public by requiring licensees to continue to remain current and gain new knowledge in his or her area of licensure. It is unnecessary to require a licensee to retake the licensing examination to prove his or her competency in order to reinstate his or her license. Additionally, with the nationwide increase in exam security, the National Councils who create and own the licensing examinations do not allow candidates who have previously passed an examination to retake the examination. Individuals with licenses that have lapsed for more than two years would not be allowed to retake the licensing examination and would therefore have to be exempted by the board from that requirement in order to reinstate.

The changes to subpart 7 eliminate obsolete language. The Board no longer provides wall certificates for in-training certificate holders, so the fee for replacement of said certificate is obsolete (item B). Secondly, item F allowed applicants for licensure within a geoscience discipline to be "grandfathered" into licensure without taking the licensure examinations. The

"grandfather" period ended one year after the rules were adopted by the Board, a deadline which has long passed.

With the elimination of item F as described above, item G is renumbered to item F.

M.R. 1800.0800 PROOF OF QUALIFICATION TO PRACTICE

The changes to parts F, G, H and I create uniformity for the licensure or certification by comity provisions. Comity applicants must submit documentation showing completion of the requirements spelled out in statute regardless of the profession for which they are applying.

The last part of the sentence in part F is removed because it is unnecessary. MN Statutes, section 326.10, subdivision 1, paragraph (a), clause (2) requires documentation of experience and proof of current licensure.

Subpart G is modified to clearly state the additional examination requirement for licensure as a land surveyor in Minnesota by comity. Typically, professional practice examinations have already been completed by comity applicants, however, in the case of land surveying, a local examination is required. All land surveyor applicants must pass the Minnesota Land Surveyor Examination before becoming licensed.

The change to part H eliminates duplicative language that was identified in the Board's 2011 Obsolete Rule report. The comity provisions for licensure and certification are spelled out in MN Statute, section 326.10, subdivision 1.

The changes to part I eliminate obsolete language which refers to the "grandfathering" period of licensure for applicants within the geoscience discipline.

M.R. 1800.0900 QUALIFICATION PROCEDURES

Changes to subpart 3 reflect the fact that applicants for other professions besides professional engineering may apply for waiver of the fundamentals examination, such as within the geoscience discipline under MR 1800.3910. Currently, the rule is specific to waiver of the Fundamentals of Engineering examination for professional engineer applicants, however, it should include waiver of the Fundamentals of Geology and Fundamentals of Soil Science examinations for those professional applicants who meet the waiver qualifications.

Changes to subpart 4 make it clear that a new application must be submitted for each examination. The Board does not have "retake" applications or "reexamination fees." Applicants must complete a new application and submit updated supporting documentation because qualifications may change from one exam administration to the next, especially if a large number of years has passed since the applicant first took the examination. It is not uncommon for an applicant to fail an examination and wait a year or two, or even five, before taking the examination again. Within that time frame, Board rules may change and applicants must meet the new criteria. Similarly, the applicant's credentials may have changed (for example, he or she may have graduated from a degree program, etc.). The new application must be reviewed in the same way as any other application; therefore, a new application fee is required. Additionally, the new examination must be paid for through the applicable examination fee and examination monitoring fee as required for any application under MR 1800.0500, subpart 1.

The last sentence of subpart 4 is changed to require an applicant failing an examination three times, rather than four times, to submit evidence of improved qualifications before a new application for examination is approved. On a national level, the standard is changing from four exam retakes to three, in part to protect the security of the examinations. There are individuals throughout the country who try to take the examinations with no intent to pass them, solely to obtain the examination questions. By requiring an applicant who has failed the examination multiple times to submit additional evidence that they are indeed preparing to take and pass the examination reduces the probability that the applicant is simply trying to obtain the examination questions.

The current language in subpart 6 specifically refers to the use of a seal by a pending comity applicant for architecture or engineering. However, any of the professions under the Board may have an applicant practicing the profession while the application is pending pursuant to MN Statute, section 326.13. Therefore, the words "architect or engineer" have been replaced by the word "applicant" so that the rule applies to all professions equally.

M.R. 1800.1000 EDUCATION AND EXPERIENCE

Changes to this rule update the item references that correspond to changes adopted in March 2012 to M.R. 1800.0800.

M.R. 1800.1500 EDUCATION AND EXPERIENCE

Changes to this rule update the item references that correspond to changes adopted in March 2012 to M.R. 1800.0800.

M.R. 1800.2100 EDUCATION AND EXPERIENCE

Changes to this rule update the item references that correspond to changes adopted in March 2012 to M.R. 1800.0800.

M.R. 1800.4200 CERTIFICATION AND SIGNATURE ON PLANS

Changes to subpart 4 update the abbreviation for "Registered" to the abbreviation for "License" or "Certificate" (i.e. "Lic." or "Cert."). This rule was modified years ago to change the wording from "duly Registered" to "duly Licensed" for each profession (or "duly Certified" for Certified Interior Designers), however, the abbreviations were not changed.

The change to subpart 5 strengthens the language and makes it clear that once a document has been certified with the signature of the design professional, that signature must remain on the document forever.

M.R. 1800.4300 SEAL

Changes to this rule incorporate certified interior designers. Secondly, the Board does not approve designs for seals, so this requirement is removed. The Board requires the certification defined in M.R. 1800.4200, however, seals are optional.

M.R. 1800.4600 PROFESSIONAL CORPORATIONS

Minnesota Statute Chapter 319A was replaced years ago with Chapter 319B, therefore, the reference must be corrected in the rule. Additionally, Chapter 319B refers to professional "firms" which includes more than just "corporations" (i.e. LLCs and LLPs). The term "corporation" is corrected to "firm" to properly reflect the statute.

M.R. 1805.1600 RESPONSIBLE CHARGE AND DIRECT SUPERVISION

Changes to subpart 1 incorporate all of the professions under the Board. As the different professions were added to the Board, they were not added to this rule. Secondly, the word "questions" is changed to "aspects" for clarity.

As in subpart 1, changes to subpart 2 incorporate all of the professions under the Board as well as modify the grammar of the subpart making the intent clear.

PART 2: ENGINEERING

It has been many years since the engineering rules were updated and many of the changes to the engineering rules are for clarity and consistency. In regard to the education requirements, the rule modifications make it clear that an "accredited" degree is a degree which receives accreditation through the Engineering Accrediting Commission (EAC) of the Accreditation Board for Engineering and Technology (ABET). Degrees which are not EAC-ABET-accredited must be evaluated to ensure that an equivalent number of engineering science and engineering design credits have been completed (48 semester credits). Additional modifications to the education requirements clarify different scenarios of completing the education requirement, especially for those with a non-EAC-ABET-accredited bachelor's degree.

Changes to the experience requirement clarify the number of years of qualifying experience required of the applicant depending upon under which education scenario the applicant qualifies. The section defining the amount of the education requirement that can be fulfilled through "intern time" has been rewritten for clarity. Finally, the definition of qualifying experience has been updated and requires that engineering experience be verified by the applicant's supervisor.

Changes to the examination requirement mostly reflect updates to the procedure to allow for the conversion of the examinations from a paper-and-pencil administration offered on two specific dates per year to a computer-based examination administered on multiple dates and in multiple locations during "examination windows". Applicants will benefit from this new examination administration procedure and the flexibility it allows.

REGULATORY ANALYSIS

“(1) a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule”

The classes of persons who will probably be affected by the proposed rule are generally all licensees and, specifically, all potential and current applicants for engineering examinations and professional engineering licensure.

The changes to the education, examination and experience requirements will not increase, but may decrease, direct costs to applicants. With the rule modifications, certain applicants will no longer bear the cost of expensive domestic degree evaluations for non-ABET-accredited degrees (if meeting the requirements of the newly added education options). Applicants may find

the application process easier to understand and complete. The review of applications will be more timely and efficient for state staff. Direct costs to licensees and certificate holders will not change.

“(2) the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues”

The probable costs to the Board include the costs associated with rule making in general. The Board does not anticipate any increase or decrease in the costs pertaining to the implementation of the proposed rules since the new rules will replace existing rules and will be administered in the same manner. Likewise, the probable cost of enforcing the proposed rules is not expected to increase or decrease for the same reason.

The Board is charged with the implementation and enforcement of the proposed rule. As such, it does not anticipate any probable costs to any other agency or any effect on state revenues.

“(3) a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule”

The Board regulates six professions where granting a license to an individual to practice his or her profession is highly valued by that individual. Services provided by the licensees are also highly valued by the public because of the standards followed and the code of professional conduct observed by the licensees and regulated by the Board.

For the most part, the regulation of all of these professions and specifically the regulation of professional engineering in each of the licensing jurisdictions in the United States is substantially similar. It is imperative in today's marketplace that regulation between jurisdictions be as consistent as possible to avoid roadblocks to licensure. There does not appear to be any viable alternatives to changing Minnesota Rules, other than simplifying the education and experience requirements for professional engineering licensure, which will not result in a negative effect on Minnesota applicants. The changes to this rule result in a positive impact on qualified applicants to show his or her completion of meeting the education, examination and experience requirements for licensure.

“(4) a description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule”

No alternative methods were seriously considered as no alternatives appear to exist.

“(5) the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals”

The costs associated with the education and experience requirements, as well as the application requirements, will not change for most applicants because similar requirements were contained in the previous rule. Some applicants will see a reduction in cost by not requiring a degree evaluation for those applicants in certain situations.

“(6) the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals”

Not adopting the proposed rule results in keeping a confusing set of education and experience requirements, as well as a roadblock for applicants applying for computer-based examinations. The current rules are out-of-date with the practices of ABET-accreditation (graduate and undergraduate programs) and require expensive degree evaluations for certain applicants. The examination procedures for computer-based testing are also out-of-date. The current rule makes it more difficult for Minnesota applicants to apply and sit for examinations and reduces the window of opportunity for computer-based examinations by requiring a 75 day application deadline.

The proposed changes should be less costly for state staff to administer and less costly for the applicant.

“(7) an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference”

No relationship exists between these rules and federal regulations.

“(8) an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule. . . . ‘[C]umulative effect’ means the impact that results from incremental impact of the proposed rule in addition to other rules, regardless of what state or federal agency has adopted the other rules. Cumulative effects can result from individually minor but collectively significant rules adopted over a period of time.”

The proposed rules cover areas that are not addressed by federal law or other Minnesota state laws. Therefore, this consideration is not applicable for this rule.

RULE-BY-RULE ANALYSIS

M.R. 1800.2500 EDUCATION AND EXPERIENCE

Written examinations are required of all applicants, including applicants under part 1800.0800 (comity applicants). Comity applicants must satisfy the requirements at the time of his or her original licensure and Minnesota has required the examinations for many, many years. Therefore, the sentence with the “exception” for the examination is unnecessary. The reference to part 1800.0800 for an engineering applicant by comity has been updated to reflect the changes to part 1800.0800 adopted in March 2012.

The first change to subpart 2 makes it clear in the actual rule language what examination the qualifications are for rather than relying on the heading of the subpart. Secondly, changes to subpart 2, items B, C and D add the abbreviation “EAC” before each abbreviation for “ABET.” The Accreditation Board for Engineering and Technology (ABET) accredits degrees through several different programs (such as engineering degrees through the Engineering Accrediting

Commission (EAC) as referenced in item A, as well as computing degrees (CAC), technology degrees (TAC) and applied science degrees). Only EAC-ABET accredited degrees require a minimum number of credits in engineering science and design which are an important education component for ensuring the protection of the public health, safety and welfare by licensees. When an applicant does not have a degree from an EAC-ABET-accredited program, the degree must be evaluated against the EAC-ABET standards to ensure that a minimum number of credits in engineering science and design have been completed. In items B, C and D, merely referring to an "ABET-accredited" degree could mean any number of different ABET accreditations, however, in order to ensure the minimum education standard has been completed, these references must be to "EAC-ABET-accredited" degrees.

The next change to item C is to include the word "engineering" before the word "design." This clarifies that applicants must have credits specifically in *engineering* design, not just any kind of design. The last change to item C is to update the credit reference to an EAC-ABET-accredited degree. The standard has changed on a national level from specifically requiring 32 semester credits in engineering science and 16 semester credits in engineering design to a *total* of 48 semester credits in engineering science and engineering design combined (therefore an applicant could have 30 credits of engineering science and 18 of engineering design or some other combination thereof equaling 48 credits).

The change to item D clarifies that an applicant qualifying under this scenario must be enrolled in a graduate program *in engineering*, not just any graduate program. The way the rule is currently written, an applicant could conceivably argue that being enrolled in a graduate program in psychology working toward a graduate degree and having completed 24 semester credit hours would qualify them to take the Fundamentals of Engineering examination even if the applicant had a bachelor's degree from a non-engineering program.

Subpart 2a is changed to reference the correct title for the professional engineering examination, similar to the reference in subpart 2 to the Fundamentals of Engineering examination.

Changes to subpart 2a, item A, sub-items (1) through (5) again add the reference to an "EAC" accredited degree for the same reasons as described above.

Adding the word "bachelor's" to describe the engineering curriculum in sub-items (1) and (2) more accurately corresponds to the experience requirement spelled out in item B, sub-item (1). Applicants with a bachelor's degree in engineering require four years of qualifying engineering experience, whereas an applicant with a graduate degree in engineering requires less engineering experience. Additionally, graduate degrees are specifically discussed in item A, sub-items (4), (5) and (6).

In sub-items (4) and (5), adding the phrase "or related discipline of engineering in the opinion of the board" gives a bit of leeway for changes in program names. It is not uncommon for a degree program to be renamed for marketing purposes, though the actual content of the program remains the same. Additionally, in some disciplines of engineering there are several subcategories. For example, the disciplines of environmental engineering, structural engineering, water resource engineering and water treatment engineering fall under the larger category of civil engineering. The requirement that the name of the graduate degree program be exactly the same as the name of the EAC-ABET-accredited undergraduate program has caused

problems for Minnesota applicants on multiple occasions. For example, a school may have an EAC-ABET-accredited civil engineering bachelor's program and a graduate-level environmental engineering program. Without leeway for the program name, the applicant with a non-engineering bachelor's degree and a graduate degree in the environmental engineering degree program would not be admitted to the examination without a costly degree evaluation.

The addition of the phrase "non-EAC-ABET accredited" in reference to the applicant's bachelor's degree program in sub-item (4) clarifies that applicants with an undergraduate degree in an engineering program that is not EAC-ABET accredited may still qualify under this sub-item. For example, a "non-engineering program," as described in the current language, could be interpreted to mean only a degree program that is not related to engineering (e.g. Psychology). Without modifying the language, an applicant with a non-EAC-ABET accredited engineering degree and a graduate degree from an engineering program where the bachelor's degree is EAC-ABET accredited would be in a conundrum, whereas an applicant with a bachelor's degree in psychology and the same graduate degree from an engineering program where the bachelor's degree is EAC-ABET accredited as the first applicant would qualify.

Sub-items (6) and (7) have been added to address EAC-ABET-accredited graduate engineering curricula. Prior to 2009, ABET accredited one degree program per discipline at each school (either the bachelor's or graduate level), but not both. A school could have an EAC-ABET-accredited civil engineering bachelor's program and a graduate program in civil engineering that is not specifically EAC-ABET-accredited, but would count for the education requirement under sub-item (4) or (5) because the school has an EAC-ABET-accredited bachelor's curriculum in that discipline of engineering. Schools have typically chosen to accredit the bachelor's curriculum, however, some chose to accredit the graduate curriculum. In the scenario above, if the school did not have an EAC-ABET-accredited bachelor's curriculum in civil engineering, but did have an EAC-ABET-accredited graduate curriculum in civil engineering, the graduate student would not qualify. Both sub-items (4) and (5) require that the graduate degree be from a school with an EAC-ABET-accredited bachelor's curriculum in that discipline of engineering. Sub-items (6) or (7) will allow an applicant with degree from an EAC-ABET-accredited graduate engineering curriculum to qualify for the exam.

The experience requirements for the two new education options (item A, sub-items (6) and (7)) have been incorporated into item B, sub-items (3) and (4). Item A, sub-items (4) and (6) contain similar requirements varying only in whether the graduate degree program itself is accredited or whether the graduate degree is from a school with an accredited bachelor's program in that discipline of engineering. In both cases, the applicant does not have an EAC-ABET-accredited bachelor's degree; therefore, an applicant with this education would require five years of qualifying experience. Item A, sub-items (5) and (7) are similar, varying only in which program is accredited, and in both cases the applicant has an EAC-ABET-accredited bachelor's degree; therefore an applicant with this education would require three years of qualifying engineering experience.

The next paragraph of item B is re-written to clarify the intent of the language. This paragraph is in regard to experience gained before graduation (intern time). It is clear that only 50% of the experience gained before graduation is allowed; however, the use of both of the phrases "two years credit" and "two years experience" within the rule makes it confusing. It is unclear whether an applicant can claim four years of experience for two years of credit, or is only allowed two

years of experience for one year of credit. The re-written language makes it clear that an applicant may use "intern time" toward half of his or her education requirement and that the "intern time" is credited at a rate of 50% up to a maximum of two years. Based on education, if an applicant requires 3 years of qualifying engineering experience, 1.5 years can be "intern time" and the remaining 1.5 years must be obtained after graduation. The "intern time" is calculated at a rate of 50%, so the applicant could use up to 3 years of "intern time" for 1.5 years of credit. If an applicant requires 5 years of experience based on his or her education, they would be allowed up to 2 years of credit for "intern time" (half of 5 years is 2.5, however the maximum allowed is 2 years). The applicant could claim 4 years of experience for 2 years of credit toward the experience requirement.

"Intern time" is credited at a rate of 50% because the applicant is still in the process of gaining understanding of the field and additional knowledge through his or her schooling.

M.R. 1800.2700 WRITTEN EXAMINATION

The change to subpart 1 is to state which entity prepares and furnishes the examinations. The titles for subparts 1a and 1b are changed to the actual names of the examinations.

The following changes to subpart 1a are to improve clarity and grammar:

1. The actual name of the examination is stated.
2. To qualify to take the exam, an applicant must meet the requirements of 1800.2500, subpart 2; however, an applicant may take the exam PRIOR to graduating, so the requirement for *graduation* before the exam is removed.
3. The applicant does not need to submit an official transcript with the application if he or she has not yet graduated, an unofficial transcript is sufficient for the application.
4. An applicant will always be notified of the score in writing. The sentence requiring the applicant to meet the criteria of this subpart before obtaining the score is unnecessary. Applicants would only be allowed to take the exam if they have met the requirements. Exam scores are not withheld.
5. Applicants who fail an examination cannot be *required* to take the examination again, but rather those who fail and *elect* to take the examination again must take the entire examination.
6. Throughout the rules, the phrase regarding transcripts has been changed to "the degree awarded and date of graduation" for consistency and clarity.
7. Due to budget constraints, the Board no longer prints Engineer-In-Training certificates. Once the applicant passes the examination and submits the final, official transcript, the Board issues an Engineer-In-Training number and notifies the applicant of that number.
8. The sentence "the applicant shall not again be required to take this examination" is unnecessary. Once the applicant has passed the Fundamentals of Engineering examination, for security reasons, the National Council will not allow additional retakes.
9. Applicants must take and pass the FE examination before they may take the professional examination, however, in certain cases, the FE examination is waived as described in part 1800.2800.

Changes to subpart 2 mirror subpart 1a for consistency and clarity:

1. The subpart begins with stating that this is Part II of the written examination requirement as the previous subpart indicated that the fundamentals examination was Part I.

2. The next sentence is re-worded to clarify that the applicant must meet the requirements of 1800.2500, subpart 2a, as well as take and pass the FE examination unless the FE examination is waived, before taking the PE examination.
3. References to the "professional" examination are changed to the "PE" examination.
4. Rather than list each field of major practice in engineering in which examinations are offered (which change over time), the phrase "consistent with the examinations prepared and furnished by NCEES" is inserted.
5. Applicants who fail an examination cannot be *required* to take the examination again, but rather those who fail and *elect* to take the examination again must take the entire examination.

In subpart 3, the title for the Principles and Practice of Engineering (PE) examination is capitalized since it is the proper name of the examination.

Items A and B are modified in order to make complete sentences rather than lists. The "allotted time" is removed. The examinations are moving toward a computer-based testing model which may result in a different time allotment.

Rather than listing the materials permitted for use during the examination, which do change, the paragraph is replaced with a notification that the Board will advise applicants at the time of approval for admission to the examination which equipment and materials are permitted. This allows the Board to give the candidates the most up-to-date information from the National Council.

M.R. 1800.2800 ENGINEERS QUALIFIED BY GRADUATION, LONG EXPERIENCE, AND EXAMINATION

Minor grammatical changes are made to the first sentence and item C.

The second paragraph of item C is modified as follows:

1. The actual name of the professional examination is included consistent with the other rules regarding engineering licensure and examination.
2. The duration of the professional practice examination is removed to allow for variability (i.e. most disciplines of the exam currently have a duration of eight hours, but recently the structural engineering exam moved to a sixteen hour exam. In the future, when the exam transitions to a computer-based exam, the duration may change again).
3. Experience must be gained after the age of 20. EAC-ABET education (or any education) will not count toward the experience requirement. All applicants qualifying under this rule must have 20 years of qualifying experience. There are many different education options available to all applicants for licensure, therefore, applicants with an EAC-ABET accredited bachelor's degree should not get special treatment under this rule and get his or her experience requirement reduced to 16 years.

M.R. 1800.2805 QUALIFYING EXPERIENCE DEFINED.

The requirement that qualifying engineering experience be verified by the applicant's supervisor has been added to this rule. The references to other rule parts have been updated.

M.R. 1800.2900 PROCEDURES

The titles for subparts 1 and 2 have been modified for clarity. The applicant is applying for admission to a particular examination - the Fundamentals of Engineering examination in subpart 1 and the Principles and Practice of Engineering examination in subpart 2 and the procedures outlined in each subpart are for that specific examination.

The following changes have been made to subpart 1 to improve grammar and clarity:

1. The proper name of the examination has been capitalized.
2. The examination application deadline has been removed from this subpart and has been added to subpart 5.
3. The addition of the word "application" clarifies which fee must be submitted with the application and the statutory reference to the fee is corrected.
4. Applicants who have not yet graduated may submit unofficial transcripts of grades as long as the transcript shows the applicant's name, the name of the college/university and the number of credits completed. It is unnecessary for an applicant to go to the expense of obtaining an official transcript from the university if he or she has not yet graduated.
5. The "final official transcript" language has been updated for consistency throughout the rules.
6. Applicants who have graduated must submit his or her final official transcript with his or her application.

The changes to subpart 2 are as follows:

1. The proper name of the examination has been capitalized.
2. The examination application deadline has been removed from this subpart and has been added to subpart 5.
3. The addition of the word "application" clarifies which fee must be submitted with the application and the statutory reference to the fee is corrected.
4. The final official transcript language has been updated for consistency throughout the rules.
5. Consistent with MR 1800.0400, the applicant must submit a signed statement that the applicant has met the Board Rules of Professional Conduct.
6. The statement must be received prior to licensure. This section is in reference to engineering licensure; therefore, "certificate" is irrelevant. Certificates are only issued for Certified Interior Design.

Subpart 4 has been updated to reflect current procedures for obtaining application material. Applicant materials are available on the Board's website. Applicants no longer have to request paper applications from the Board office.

The additions of subparts 5 and 6 are to handle computer-based testing scenarios. Currently, the Fundamentals of Engineering (FE) examination and the Principles and Practice of Engineering (PE) examination are offered on specific dates at one or two specific locations within Minnesota two times per year. These examinations are proctored by an examination delivery vendor. The current deadline for application is 75 days prior to the examination date so the Board has enough time to review the application to ensure that the education and experience requirements have been met and to notify the applicant of approval to take the examination so

that the applicant can register with the examination delivery vendor before the registration deadline.

All applicants for both the FE and PE examinations will still be required to submit applications with supporting documentation of education and experience and will receive notification of approval by the Board prior to taking the examination.

The FE and PE examinations will continue to be offered at least twice per year. However, in January of 2014, the Fundamentals of Engineering examination will become a computer-based examination and will be offered multiple times per year within "examination windows" at many testing centers in Minnesota. The PE examination will continue to be offered on the same schedule it is currently offered until its transition to a computer-based examination. The PE examination will continue to be administered on a *specific* date and the application deadline will continue to be 75 days prior to the examination date.

Applicants for the FE examination will no longer be required to submit his or her application 75 days prior to the examination date. They may submit an application at any time and following approval by the Board may schedule the examination with the vendor. The Board will notify the examination deliver vendor of each applicant's eligibility.

Either the Board or the examination delivery vendor will provide the applicant with the examination results. The passing score must be based on psychometrically acceptable standards.

Subpart 6 details the examination windows and examination attempts. An applicant must submit a new application to the Board prior to each examination attempt so the Board may ensure that the applicant still meets the requirements to sit for the examination (i.e. a rule has not been changed since the applicant's previous attempt). Once an applicant has been approved to take the examination, the applicant must do so within one year. The eligibility expires after one year and the applicant must submit a new application to the Board prior to sitting for the examination. Again, this ensures that the applicant has met the most up-to-date requirements for examination.

Examination windows will be defined by the National Testing Agency and an applicant will only be allowed to take the examination one time within an examination window. Therefore, if an applicant fails the examination at the beginning of an examination window, he or she will not be able to hurry and submit a new application to take the examination again within the same window. The applicant would be required to wait for the beginning of the next examination window. Additionally, the applicant will only be allowed three attempts within a rolling one-year period. Both of these restrictions help maintain exam security by limiting an applicant's exposure to the examination questions.

PART 3: LAND SURVEYING

Changes to the land surveying rules are mostly to the examination requirement. Similar to the engineering rules, the surveying examinations are converting from a paper-and-pencil administration offered on two specific dates per year to a computer-based examination administered on multiple dates and in multiple locations during "examination windows"

throughout the year. Modifications to the rules will allow applicants to benefit from this new examination administration procedure and the flexibility it allows. Additional modifications to these rules are for clarity and consistency.

REGULATORY ANALYSIS

“(1) a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule”

The classes of persons who will probably be affected by the proposed rule are generally all licensees and, specifically, all potential and current applicants for surveying examinations and land surveying licensure.

Changes to this rule will not increase or decrease direct costs to applicants. All applicants for surveying examinations will benefit from the rule modifications because they will be able to submit applications at any time to take examinations which are offered more frequently than they are currently offered.

“(2) the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues”

The probable costs to the Board include the costs associated with rule making in general. The Board does not anticipate any increase or decrease in the costs pertaining to the implementation of the proposed rules since the new rules will replace existing rules and will be administered in the same manner. Likewise, the probable costs of enforcing the proposed rules is not expected to increase or decrease for the same reason.

The Board is charged with the implementation and enforcement of the proposed rule. As such, it does not anticipate any probable costs to any other agency or any effect on state revenues.

“(3) a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule”

The purpose of modifying these rules is to update the examination procedure. No other option to rule writing exists to achieve this goal. The changes to this rule result in a positive impact on applicants for surveying examinations. Additionally, the grammar and clarity modifications will positively benefit all applicants for ease in understanding the requirements and application procedures.

“(4) a description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule”

No alternative methods were seriously considered as no alternatives appear to exist.

“(5) the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals”

The costs associated with the application and examination requirements will not change for applicants because similar requirements were contained in the previous rule.

“(6) the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals”

Not adopting the proposed rule results in a roadblock for applicants for computer-based examinations. The current rule makes it more difficult for Minnesota applicants to apply and sit for examinations and reduces the window of opportunity for computer-based examinations by requiring a 75 day application deadline.

The proposed changes should be less costly for state staff to administer and less costly for the applicant.

“(7) an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference”

No relationship exists between these rules and federal regulations.

“(8) an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule. . . . [C]umulative effect’ means the impact that results from incremental impact of the proposed rule in addition to other rules, regardless of what state or federal agency has adopted the other rules. Cumulative effects can result from individually minor but collectively significant rules adopted over a period of time.”

The proposed rules cover areas that are not addressed by federal law or other Minnesota state laws. Therefore, this consideration is not applicable for this rule.

RULE-BY-RULE ANALYSIS

M.R. 1800.3505 EDUCATION AND EXPERIENCE

Changes to subpart 1 update the item reference that corresponds to changes adopted in March 2012 to M.R. 1800.0800.

Changes to subparts 2 and 3 remove the word “land” from names of the examinations and add the abbreviations for the exams. The National Council of Examiners for Engineering and Surveying (NCEES) changed the names of the examinations to “Fundamentals of Surveying” and “Principles and Practice of Surveying” several years ago.

M.R. 1800.3600 REQUIREMENTS FOR ADMISSION TO EXAMINATION

The change to subpart 1 removes the word "written" as a requirement for the examination to more easily allow for computer-based examinations.

The changes to subpart 2 are to improve clarity and grammar:

1. The actual name of the examination is stated.
2. The applicant does not need to submit an official transcript with the application if he or she has not yet graduated.
3. Applicants who fail an examination cannot be *required* to take the examination again, but rather those who fail and *elect* to take the examination again must take the entire examination.
4. Throughout the rules, the phrase regarding transcripts has been changed to "the degree awarded and date of graduation" for consistency and clarity.
5. Simply passing the examination does not give the applicant the status of land surveyor-in-training. The applicant must also supply the Board with proof of the degree awarded and date of graduation.
6. Once the applicant passes the examination and submits the final, official transcript, the Board issues a Land Surveyor-In-Training number and notifies the applicant of that number.

The first change to subpart 3 is in the title, making it clear that two professional practice examinations are required for licensure as a Land Surveyor. The two examinations are the Principles and Practice of Surveying (PS) examination and the Minnesota Land Surveying Examination (MNLS). The applicant must pass the Fundamentals of Surveying examination and meet the education and experience requirements before qualifying to take the professional practice examinations. The two professional examinations may be taken in any order and do not need to be passed at the same time. If one is passed and the other is failed, the applicant only needs to take the failed examination again.

M.R. 1800.3700 EXAMINATIONS

Changes to subpart 1 define the fundamentals examination, similar to the definition of the fundamentals examination for engineering in M.R. 1800.2700. The time allotment has been removed as the length of the examination may change with the institution of computer-based testing. The requirement to retake the entire examination has been removed from this section and is handled in M.R. 1800.3600, subpart 2.

Subpart 2 again makes it clear that there are two professional practice examinations required for licensure as a land surveyor. The examinations are listed and passage of both is required for licensure. The requirement to retake the entire failed examination has been removed and is handled in 1800.3600, subpart 3.

Subpart 3 has been updated to make it clear that the Board will let the applicant know what materials are permitted during the examination. These materials may change over time.

M.R. 1800.3750 PROCEDURES

This rule has been added to mirror the procedures spelled out in M.R. 1800.2900 for engineering applicants. Subparts 1 through 3 detail the application requirements and supporting

documentation needed for admission to each of the examinations for land surveying. Spelling out the requirements makes it clear what the applicant must submit to the Board.

Subparts 4 and 5 detail the examination administration and examination windows and mirror M.R. 1800.2900, subparts 5 and 6. The rationale for these subparts is the same as described in "Part 3: Engineering" above.

M.R. 1800.3850 TRANSITIONAL PERIOD

The word "Land" has been removed from the name of the examination to reflect the proper title.

PART 4: GEOSCIENCE

The geoscience rules were first adopted in 1997 after the regulation of geology and soil science was added to the Board's jurisdiction. The rules have not been updated since the original adoption and many changes have occurred over the past 15 years. Most notably, there are now licensed professional geologists and licensed professional soil scientists under whom professional experience may be gained. The original rules did not require qualifying experience to be under a licensed professional because there were no licensed professionals in Minnesota at the time. The education and experience requirements have been codified to improve understanding. This codification has been modeled after the engineering rules and specifies the different education options available and the corresponding experience required for licensure. Most of the modifications are not substantive changes, but rather are changes in format and procedure.

REGULATORY ANALYSIS

“(1) a description of the classes of persons who probably will be affected by the proposed rule, including classes that will bear the costs of the proposed rule and classes that will benefit from the proposed rule”

The classes of persons who will probably be affected by the proposed rule are generally all licensees and, specifically, all potential and current applicants for geology and soil science examinations and professional geology and professional soil science licensure.

The changes to the education, examination and experience requirements will not increase or decrease direct costs to applicants. Applicants may find the application process easier to understand and complete. The review of applications will be more timely and efficient for state staff. Direct costs to licensees and certificate holders will not change.

“(2) the probable costs to the agency and to any other agency of the implementation and enforcement of the proposed rule and any anticipated effect on state revenues”

The probable costs to the Board include the costs associated with rule making in general. The Board does not anticipate any increase or decrease in the costs pertaining to the implementation of the proposed rules since the new rules will replace existing rules and will be administered in the same manner. Likewise, the probable cause of enforcing the proposed rules is not expected to increase or decrease for the same reason.

The Board is charged with the implementation and enforcement of the proposed rule. As such, it does not anticipate any probable costs to any other agency or any effect on state revenues.

“(3) a determination of whether there are less costly methods or less intrusive methods for achieving the purpose of the proposed rule”

The Board regulates six professions where granting a license to an individual to practice his or her profession is highly valued by that individual. Services provided by the licensees are also highly valued by the public because of the standards followed and the code of professional conduct observed by the licensees and regulated by the Board.

There does not appear to exist any viable alternatives to changing Minnesota Rules, other than simplifying the education and experience requirements for professional geology and profession soil science licensure, which will not result in a negative effect on Minnesota applicants. The changes to this rule result in a positive impact on qualified applicants to show his or her completion of meeting the education, examination and experience requirements for licensure.

“(4) a description of any alternative methods for achieving the purpose of the proposed rule that were seriously considered by the agency and the reasons why they were rejected in favor of the proposed rule”

No alternative methods were seriously considered as no alternatives appear to exist.

“(5) the probable costs of complying with the proposed rule, including the portion of the total costs that will be borne by identifiable categories of affected parties, such as separate classes of governmental units, businesses, or individuals”

The costs associated with the education and experience requirements, as well as the application requirements, will not change for applicants because similar requirements were contained in the previous rule.

“(6) the probable costs or consequences of not adopting the proposed rule, including those costs or consequences borne by identifiable categories of affected parties, such as separate classes of government units, businesses, or individuals”

Not adopting the proposed rule results in keeping a confusing set of education and experience requirements. Additionally, modifications strengthen licensure of the geoscience professions and increase protection of the health, safety and welfare of the public by requiring qualifying experience to be obtained under the direct supervision of properly licensed professionals. This was not a viable option when the rules were written in 1997 when regulation of geology and soil science was added to the Board’s jurisdiction. Many changes have occurred over the last 15 years and the rules must be updated to ensure public protection.

“(7) an assessment of any differences between the proposed rule and existing federal regulations and a specific analysis of the need for and reasonableness of each difference”

No relationship exists between these rules and federal regulations.

“(8) an assessment of the cumulative effect of the rule with other federal and state regulations related to the specific purpose of the rule. . . . ‘[C]umulative effect’ means the impact that results from incremental impact of the proposed rule in addition to other rules, regardless of what state or federal agency has adopted the other rules. Cumulative effects can result from individually minor but collectively significant rules adopted over a period of time.”

The proposed rules cover areas that are not addressed by federal law or other Minnesota state laws. Therefore, this consideration is not applicable for this rule.

RULE-BY-RULE ANALYSIS

M.R. 1800.3905 GEOSCIENCE PRACTICE

The provisions in this rule part are required by statute; therefore this rule part is unnecessary.

M.R. 1800.3910 EDUCATION AND EXPERIENCE

The changes to subpart 1 are in reference to not requiring an examination for comity applicants. When Minnesota first began its licensure program, applicants by comity during the grandfathering period were not required to take the examination. MN Statute, section 326.10 states that applicants shall meet the requirements in place at the time of his or her original licensure in his or her base state. Since the grandfathering period is over, examinations that were required in Minnesota at the time of the applicant’s original licensure are required of the applicant.

Additional changes to subpart 1 include: updating the references to M.R. 1800.0800 to reflect changes adopted in March 2012, adding the abbreviations for the examinations and improving sentence structure.

The changes to subpart 2 clarify the educational requirements for the fundamentals examination in a geoscience discipline. Approved geoscience curriculum is defined in subpart 5 and the education options reference this. The addition of items B and C (moved from subpart 4) are for non-board-approved curricula (equivalent education). This is similar to the multiple education options available to qualify for admittance to the Fundamentals of Engineering examination.

The changes to subpart 3 clarify the education and experience requirements for the professional examination in a geoscience discipline and relate the two sets of requirements to each other, similar to the relationships in the engineering rules.

In item A, three options for meeting the education requirement are defined, including the addition of equivalent education for non-board-approved curricula.

Four options for meeting the experience requirement are defined in item B. Applicants graduating with a bachelor’s degree from a geoscience curriculum approved by the Board are required to obtain 5 years of experience. Applicants with a graduate degree from a geoscience curriculum approved by the Board are required to complete 4 years of experience. Applicants with a bachelor’s degree from a non-board-approved geoscience curriculum must obtain 6 years

of experience while applicants with a graduate degree from a non-board-approved geoscience curriculum must obtain 5 years of experience. These experience requirements are similar to the engineering rules where a graduate degree reduces the experience requirement by one year.

The paragraph regarding "intern time" has been modified to mirror the language in the engineering rules (1800.2500) for the same reasons referenced in that area of the SONAR above.

Subpart 4, the exceptions for non-approved education, have been incorporated into subparts 2 and 3.

The first change to subpart 5 is codification of the education requirement for clarity. The actual requirements haven't changed, just the presentation. In the newly codified item A, subitem 1, the phrase "accredited institution of higher learning or an" is removed because it is redundant. Simply stating that the degree must be from an institution of higher learning approved by the Board covers both accredited (of which there are none at this time but could be in the future) as well as non-accredited programs.

The newly codified item A, subitem 2 is revised to clearly state that the applicant must show a minimum of 30 semester hours in geology, and of those 30 hours, a minimum of 24 must be from particular core geology subjects. The current rule could be interpreted as a minimum of 30 semester hours in geology plus an *additional* 24 semester hours in the core subjects. Additionally, the requirement that the 24 hours in core subjects be divided among three subject areas ensures a more varied educational program. There are 13 core subject areas that applicants may use toward the 24 semester hour requirement and these 13 subjects are codified and listed in the rule under subitem 2.

Finally, the sentence "A description of the core geology subjects..." has been moved from the paragraph in the newly codified item A, subitem 2, to a new paragraph at the end of the list of the 13 core subject areas for better sentence flow.

Changes to item B, subitem 3, include the addition of two subjects in the description of courses meeting the basic soil science requirement.

The new item C is in regard to the number of masters or doctorate these credits that may be applied to the total credit hours. As currently written, it could be interpreted to only apply to soil science; however the intent is for the limitation to apply to geology as well. The sentence has been deleted from item B which describes soil science and moved to item C so that it clearly covers both geology and soil science.

Subpart 6 has been updated to require qualifying experience to be obtained under the direct supervision of licensed professionals. Qualifying geology experience must be obtained under a licensed geologist while qualifying soil science experience may be obtained under the direct supervision of a licensed geologist, licensed soil scientist, or licensed professional engineer with education and experience in soil science. Geology and soil science licensure became effective in 1997. At the time, there were no licensed professionals under whom applicants could gain experience. Now that regulation has been in place for nearly 15 years, it is feasible for applicants to gain experience under licensed professionals.

Soil science experience may be gained under a licensed professional engineer because MN Statute, section 326.02, subdivision 3a gives a definition of the practice of professional geoscience and includes the identification of a professional engineer as qualified to acquire, analyze and utilize the physical and chemical properties of soil. Excluding a licensed professional engineer who can attest to an applicant receiving qualifying soil science experience would be in conflict with the statute.

The other change to subpart 6 is the inclusion of the requirement for qualifying experience to be verified by the applicant's supervisor. This is consistent with the requirements of the other professions under the Board's jurisdiction.

Finally, changing the phrase "in the discipline of geosciene the applicant is seeking licensure is" to "in the discipline of geoscience in which the applicant is seeking licensure" throughout the rule improves grammar.

Subpart 7 has been deleted because it is obsolete. The grandfathering period is long past.

M.R. 1800.3915 ORAL INTERVIEW

This rule has been deleted because the Board does not conduct oral interviews. If the Board finds that an applicant has not meet the education, examination and experience requirements in this chapter, the applicant is informed and afforded his or her rights to due process under MN Statutes chapter 14 and Minnesota Rules 1400.

M.R. 1800.3920 WRITTEN EXAMINATION

Subpart 1 currently states that the geoscience examinations are administered by the Board. This sentence has been removed. Many national examinations are either moving toward exam administration through a contracted testing center in order to increase examination security and decrease state board liability for examination breaches, or they are moving toward computer-based testing. In either case, it is conceivable that in the near future, the Board will no longer administer the actual examination, but rather approve candidates for the examination based on the education, examination and experience requirements and then notify the testing company of the applicants who have been approved.

The changes to subpart 2 are mostly for improved sentence structure, clarity and consistency in phrasing throughout all of the Board's rules. The deletion of the sentence "The applicant shall not again be required to take this examination" is for the same reasons described earlier in the SONAR regarding the engineering rules. The same sentence was also removed from the engineering rules.

The change to subpart 3 requires that an applicant receive confirmation of passing the fundamentals examination prior to being allowed to take the professional examination. The fundamentals examination and the professional examination are offered on the same day with the fundamentals examination in the morning and the professional examination in the afternoon. Some states allow an applicant to take both examinations in the same day; however, if that is allowed, it is conceivable that an applicant could fail the fundamentals examination but pass the professional examination. In order to eliminate this possibility and the problems that go along with it, Minnesota requires confirmation of passing the fundamentals examination prior to taking

the professional examination. An applicant will not receive the result of the fundamentals examination for several weeks following testing; therefore, they could not take the professional examination on the same day.

Subpart 4, item A, subitems (1) and (2) and item B, subitems (1) and (2) include the scope and description of the examinations. The sentences regarding the status of the applicant after passing the examination have been deleted because they are incorrect as well as redundant. For the fundamentals examination, subpart 2 describes the requirements for obtaining the in-training status. After passing the professional examination, applicants must follow the procedures outlined in MR 1800.0500 and pay the fees in Minnesota Statutes, section 326.105 to obtain a license.

M.R. 1800.3930 PROCEDURES

The titles to subparts 1 and 2 have been modified for clarity, similar to the titles in M.R. 1800.2900 described in Part 2 "Engineering" above.

The change to subpart 1 clarifies that the application deadline is 60 days prior to the date of the examination. The examination is on one day; therefore, there is no "first day of the date set," only the actual date of the examination.

Clarifications for "reference" forms and "verification" forms have been added to subpart 2. Verification forms are for verifying the experience the applicant has gained and are submitted by the employer. Additionally the Board requires 3 references from supervisors, coworkers, clients, etc. regarding the applicant's work.

Finally, the current rules refer to an applicant obtaining a certificate *and* license. The term "certificate" is redundant. The applicant receives a license.

PERFORMANCE-BASED RULES

Minnesota Statutes, sections 14.002 and 14.131, require that the SONAR describe how the agency, in developing the rules, considered and implemented performance-based standards that emphasize superior achievement in meeting the agency's regulatory objectives and maximum flexibility for the regulated party and the agency in meeting those goals.

To safeguard life, health and property, and promote the public welfare, the Board provides reasonable assurance that persons practicing within the Board's regulated professions are competent, ethical practitioners qualified through education, examination and experience as appropriate to his or her title and role. Additionally, as an official state licensing agency, the Board is charged with the responsibility of implementing those statutes and rules which specifically regulate the professions of architecture, engineering, land surveying, landscape architecture, geology, soil science and the title use of certified interior design.

The proposed rule amendments embodied in this Statement of Need and Reasonableness emphasize superior achievement in meeting the Board's regulatory objectives with maximum flexibility for the regulated party and the Board in meeting those goals. The Board has identified areas that are outdated and confusing for applicants applying for licensure as professional engineers, land surveyors, professional geologists or professional soil scientists. It is critical that

the Board identifies actual or potential areas of confusion on the path to licensure within its jurisdiction in order to meet its obligations to the public and regulated parties. To do otherwise creates difficulties for all interested parties – the public, members of the regulated professions, and the Board.

The proposed amendments allow for maximum flexibility to the regulated parties. Education, examination and experience requirements for licensure have been simplified and aligned to the requirements to those of the National Council and other state jurisdictions. Aligned requirements allow candidates to more easily gain licensure in additional jurisdictions, both for Minnesota licensees applying to other states and licensees of other states applying for licensure in Minnesota.

The proposed amendments allow for maximum flexibility to the Board in meeting its goals. The proposed amendments to the education, examination and experience requirements simplify the application review process. With clear requirements for education, examination and experience the Board can efficiently review the applications and supporting documentation to determine whether or not the minimum requirements have been met.

The housekeeping updates ensure that the Board's general rules remain current and understandable. It is required in the "Obsolete Rules Report" to indicate when the out-of-date rules are scheduled to be updated. Including these updates in this packages fulfills the Board's requirement to update its rules.

ADDITIONAL NOTICE

This Additional Notice Plan was reviewed by the Office of Administrative Hearings and approved in a letter by Administrative Law Judge Manuel Cervantes, dated February 25, 2013.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the Minnesota Chapter of the American Institute of Architects ("AIA"), the professional society representing architects regulated by this Board.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the Minnesota Society of Professional Engineers ("MSPE") and the American Council of Engineering Companies of Minnesota ("ACEC/MN"), the two largest professional societies representing professional engineers regulated by this Board.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the Minnesota Society of Professional Surveyors ("MSPS"), the professional society representing land surveyors regulated by this Board.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the Minnesota Association of County Surveyors ("MACS"), the group that represents land surveyors regulated by this Board who are working for Minnesota local county governments.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the Minnesota Chapter of the American Society of Landscape Architects ("MASLA"), the professional society representing landscape architects regulated by this Board.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the Minnesota Section of the American Institute of Professional Geologists ("AIPGMN"), the professional society representing professional geologists regulated by this Board.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the Minnesota Association of Professional Soil Scientists ("MAPSS"), the professional society representing professional soil scientists regulated by this Board.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the Northland Chapter of the International Interior Design Association ("IIDA") and the Minnesota Chapter of the American Society of Interior Designers ("ASID"), the two professional societies representing certified interior designers regulated by this Board.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to Minnesota academic institutions that offer engineering degree programs accredited by the Accreditation Board for Engineering and Technology, Inc. (ABET):

- MN State University – Mankato: Department of Mechanical and Civil Engineering
- MN State University – Mankato: Department of Electrical and Computer Engineering
- St. Cloud State University: Department of Electrical and Computer Engineering
- St. Cloud State University: Department of Mechanical and Manufacturing Engineering
- Univ. of MN – Duluth: Department of Electrical and Computer Engineering
- Univ. of MN – Duluth: Department of Chemical Engineering
- Univ. of MN – Duluth: Department of Mechanical and Industrial Engineering
- Univ. of MN – Twin Cities: Aerospace Engineering and Mechanics Department
- Univ. of MN – Twin Cities: Biomedical Engineering Department
- Univ. of MN – Twin Cities: Department of Chemical Engineering
- Univ. of MN – Twin Cities: Department of Civil Engineering
- Univ. of MN – Twin Cities: Department of Electrical and Computer Engineering
- Univ. of MN – Twin Cities: Department of Mechanical Engineering
- University of St. Thomas: School of Engineering
- Winona State University: Composite Materials Engineering Department

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to Minnesota institutions that offer diploma or certificate level courses in land surveying, and to Minnesota academic institutions that offer college level courses in land surveying:

- Dunwoody College of Technology: Land Surveying Program
- St. Cloud State University: College of Social Sciences – Land Surveying and Mapping
- St. Paul College: Land Surveying Technology

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to Minnesota academic institutions that offer geology degree programs approved by the Board:

- Carleton College: Department of Geology
- Macalester College: Geology Department
- St. Cloud State University: College of Science and Engineering
- Univ. of MN – Duluth: Department of Geological Sciences
- Univ. of MN – Morris: Division of Science and Mathematics; Geology Discipline
- Univ. of MN – Twin Cities: Department of Geology and Geophysics

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to Minnesota academic institutions that offer soil science degree programs approved by the Board:
Univ. of MN – Twin Cities: College of Food, Agricultural and Natural Resource Sciences

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the National Council of Examiners for Engineering and Surveying (“NCEES”), the national council representing professional engineering and land surveyors regulated by this Board.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the National Association of State Boards of Geology (“ASBOG”), the national council representing professional geologists regulated by this Board.

Copies of the Dual Notice of Intent to Adopt and the proposed rule change will be mailed to the National Council of Soil Science Examiners (“CSSE”), the national council representing professional soil scientists regulated by this Board.

The Board will also post the Dual Notice of Intent to Adopt and the proposed rule change on the Board’s website.

A postcard notification of the proposed rule changes with the website address where recipients will find the Dual Notice of Intent to Adopt, official language of the proposed rule and SONAR will be mailed to all current licensees and certificate holders. (The Board no longer prints in hard-copy its newsletter, *The Communicator* as it has in the past, but rather posts the newsletter online and notifies licensees and certificate holders via postcard of the availability.)

Our Notice Plan also includes giving notice required by statute. We will mail the proposed rules and the Notice of Intent to Adopt to everyone who has registered to be on the Board’s rulemaking mailing list under Minnesota Statutes, section 14.14, subdivision 1a. We will also give notice to the Legislature per Minnesota Statutes, section 14.116.

Our Notice Plan did not include notifying the Commissioner of Agriculture because the rules do not affect farming operations per Minnesota Statutes, section 14.111.

Our Notice Plan does not including notifying the Council on Affairs of Chicano/Latino People because the rules do not have a primary effect on Chicano/Latino people per Minnesota Statutes, section 3.922.

CONSULTATION WITH MMB ON LOCAL GOVERNMENT IMPACT

As required by Minnesota Statutes, section 14.131, the Board will consult with Minnesota Management and Budget (MMB). We will do this by sending MMB copies of the documents that we send to the Governor’s Office for review and approval on the same day we send them to the Governor’s office. We will do this before the Board’s publishing the Notice of Intent to Adopt. The documents will include: the Governor’s Office Proposed Rule and SONAR Form; the proposed rules; and the SONAR. The Board will submit a copy of the cover correspondence and any response received from Minnesota Management and Budget to OAH at the hearing or with the documents it submits for ALJ review.

DETERMINATION ABOUT RULES REQUIRING LOCAL IMPLEMENTATION

As required by Minnesota Statutes, section 14.128, subdivision 1, the Board has considered whether these proposed rules will require a local government to adopt or amend any ordinance or other regulation in order to comply with these rules. The Board has determined that they do not because the rules pertain to individuals applying for licensure or certification by this Board and to individuals who are already licensed or certified by this Board, not to entities. Compliance with the rules falls on these individuals and enforcement of the rules falls solely on the Board.

COST OF COMPLYING FOR SMALL BUSINESS OR CITY

Agency Determination of Cost

As required by Minnesota Statutes, section 14.127, the Board has considered whether the cost of complying with the proposed rules in the first year after the rules take effect will exceed \$25,000 for any small business or small city. The Board has determined that the cost of complying with the proposed rules in the first year after the rules take effect will not exceed \$25,000 for any small business or small city.

The Board has made this determination based on the probable costs of complying with the proposed rule, as described in the Regulatory Analysis sections on pages: 3-4, 11-13, 19-21, and 23-24 of this SONAR.

LIST OF WITNESSES

If these rules go to a public hearing, the Board anticipates the following potential witnesses for testimony in support of the need for and reasonableness of the rules.

The following individuals may testify to the value of the amendments to the engineering rules:

- Mr. Doug Cooley, Professional Engineer
- Mr. James Grube, Professional Engineer
- Mr. David Krech, Professional Engineer
- Mr. Dennis Martenson, Professional Engineer
- Mr. Daniel Murphy, Professional Engineer

The following individuals may testify to the value of the amendments to the land surveying rules:

- Ms. Lisa Hanni, Land Surveyor, Board Chair
- Mr. David Landecker, Land Surveyor

The following individuals may testify to the value of the amendments to the geoscience rules:

- Mr. Bruce Johnson, Professional Geologist
- Mr. Peter Miller, Professional Soil Scientist

The following individuals may testify as to the need and reasonableness of the changes embodied in the proposed rules:

- Mr. Carl Peterson, CPA, Public Member, Board Vice Chair
- Mr. Robert Seeger, Architect, Board Secretary

Ms. Marjorie Pitz, Landscape Architect, Board Treasurer
Ms. Lyn Berglund, Certified Interior Designer
Ms. Mary Deeg, Certified Interior Designer
Mr. David Fisher, CBO, Public Member
Mr. Terry Groshong, Architect
Mr. Robert Gunderson, Landscape Architect
Mr. William Kuretsky, BS, MME, JD, Public Member
Mr. Paul May, Architect

CONCLUSION

Based on the foregoing, the proposed rules are both needed and reasonable.

3-13-13
Date

Doreen Frost
Doreen Frost
Executive Director