NEBRASKA EDUCATIONAL REQUIREMENTS

PAST, PRESENT & FUTURE

Formation of Committee

PSAN / SENLSA
EDUCATIONAL COMMITTEE

Steve Cobb
Nebraska State Surveyor

PSAN

SENLSA

Intent of Committee

NEBRASKA UNICAMERAL LEGISLATURE

NEBRASKA PUBLIC POPULATION

NEBRASKA STATE BOARD OF EXAMINEERS FOR REGISTERED LAND SURVEYORS

PSAN / SENLSA EDUCATIONAL COMMITTEE

PSAN

SENLSA

NEBRASKA
EDUCATION

Movement To Education

- INDIVIDUAL CONCERNS
- GOOD FOR NEBRASKA & GENERAL PUBLIC
  - Standard of Care
- RESPONSIBLE LAND SURVEYORS
  - Preserve & Restore History but Create Future
- LAND SURVEYING IN NEBRASKA - 20 or 30 YEARS
  - Trade Skill or Profession
- RECIPROCITY
- PRESENT INFORMATION ON
  - “FUNDAMENTALS OF LAND SURVEYING”
- PRESENT INFORMATION ON
  - “PRINCIPLES & PRCTICES OF LAND SURVEYING”

Preview

NATIONAL ORGANIZATION

SURROUNDING STATE REQUIREMENTS

AREA EDUCATORS

PROPOSED NEBRASKA REQUIREMENTS

PROFESSIONAL SURVEYORS ASSOCIATION OF NEBRASKA ® FOUNDED 1964

SOUTHEAST NEBRASKA LAND SURVEYORS ASSOCIATION SENLSA

NCEES Model Law for Surveying

NATIONAL COUNCIL OF EXAMINERS FOR ENGINEERS AND SURVEYORS

Duane A. Katt, LS 506(1993)

Work Experience:
- Owner Katt Surveying 1993
- Hamilton County Surveyor since 1997

Associations:
- PSAN – Current President

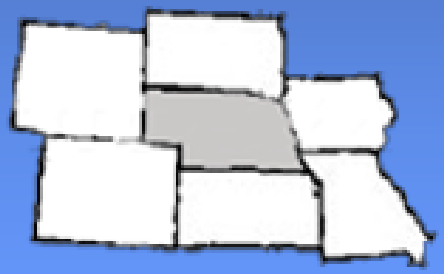
Surrounding State Requirements

IOWA, MISSOURI, KANSAS, COLORADO, WYOMING, SOUTH DAKOTA

Douglas J. Stevenson, LS 485(1992)

Work Experience:

- Owned Stevenson Land Surveying
  6 Years
- Employed with Olsson Associates
  Holdrege since 2008



Associations:

- PSAN-President Elect

Proposed Nebraska Requirements

EDUCATIONAL LEVELS AND TIMELINE

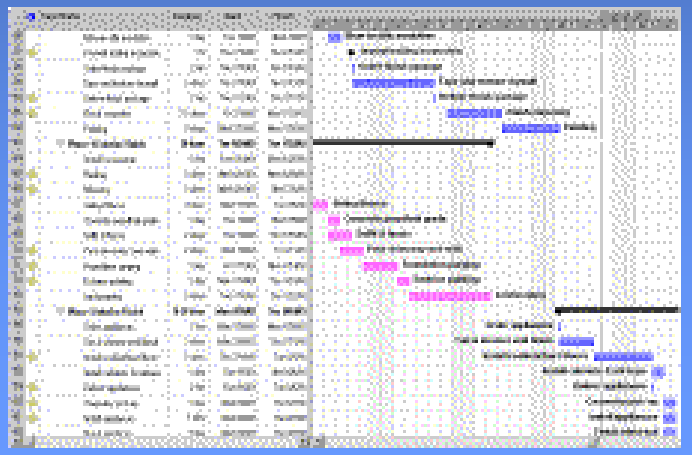
Dennis L. Whitfield, LS 449(1986), PE 7163(1991)

Work Experience:

- Retired 21 yrs. Building construction
- Owner DWS Land Surveying & Construction Management

Associations:

- SENLSA – President
- PSAN



Area Educators

TRADE SCHOOLS, COLLEGES, UNIVERSITIES

VIRLYN S. BOLTE, LS 631(2004)

Work Experience:

- Owner Land Services, LLC 2004
- Nebraska Game & Parks since 1992

Associations:

- SENLSA – Member at large
- PSAN

Questions & Answers

Questions Related to Educational Requirements for Land Surveyors

Not a time for Soap Box, Editorials or Personal Opinion Lecture

NEBRASKA EDUCATION

Questionnaire

NEBRASKA
EDUCATION

NCEES Model Law for Surveying

NATIONAL COUNCIL OF EXAMINERS FOR ENGINEERS AND SURVEYORS

Duane A. Katt, LS 506

Registration guidelines in lieu of Model Law should be flexible for our changing professional environment as opposed to prescriptive

NEBRASKA EDUCATION

Today's Outline

- History/Background
- Who Has Been Involved
- Review Initial Report Outcomes
- Current Status

Before We Begin - Some Initial Thoughts

- Words Are Important - And There are Many Words With Many Meanings to Many People Embedded in These Issues
- Skilled Professionals - Respect Others' Skills and Unique Knowledge
- Fear of the Unknown is Natural - And There is Much Unknown
- Licensing - First Priority is Public Health, Safety and Welfare
- Sessions Such as These are Very Valuable
- Communication is Very Important - and the Only Solution

More (Difficult) Thoughts

- Where Does the Profession Want to Be in the Next 20 - 30 Years?
- Should the “Profession” be a Niche or Expand in Coverage and Impact?
- Will Our Educational Institutions Be Able to Develop Adequate Talent - or Will the Profession Need to Look Outside Traditional Sources and Venues for Talent?
- If the Profession Doesn’t Embrace the Broader Geospatial Practitioner - Who Will?
- Communication is Very Important - and the Only Solution

Task Force History

- 1995 - NCEES Modifies Model Law to Include Photogrammetry and GIS/LIS
- 1996 - Concerns Raised/Letters Written by ASPRS, MAPPS, ASCE. Discussion at Winter NCEES/POLC Meeting
- 1997 - Five Organization Summit Meeting (ACSM, NSPS, MAPPS, ASPRS, ASCE)
- 1997 - Task Force Begins to Address Photogrammetric Issues
- 1998 - First Task Force Report to NCEES

Task Force History

- 1998 - NCEES Modifies Model Law to Include Savings Clause (Grandfather Language) per Task Force Recommendation
- 1999 - NCEES Modifies Model Law to Address Issues Related to Reciprocity/Comity and Ease of Mobility
- 1999 - Three GIS Organization Invited to Participate in Extension of Task Force to Address GIS/LIS Issues (URISA, NSGIC, UCGIS)
- 1999 - 2000 - Task Force Addresses GIS/LIS Issues

NCEES Model Law:

(4)Practice of Land Surveying **- The term "Practice of Land Surveying" within the intent of this Act shall mean providing professional services such as consultation, investigation, testimony evaluation, expert technical testimony, planning, mapping, assembling, and interpreting reliable scientific measurements and information relative to the location, size, shape, or physical features of the earth, improvements on the earth, the space above the earth, or any part of the earth, and utilization and development of these facts and interpretation into an orderly survey map, plan, report, description, or project. The practice of land surveying includes, but is not limited to, any one or more of the following:**

NCEES Model Law:

Practice of Land Surveying includes… any one or more of the following:

- (a) Locates, relocates, establishes, reestablishes, lays out, or retraces any property line or boundary of any tract of land or any road, right of way, easement, alignment, or elevation of any of the fixed works embraced within the practice of land surveying.

NCEES Model Law:

Practice of Land Surveying includes… any one or more of the following:

- (b) Makes any survey for the subdivision of any tract of land.
- (c) Determines, by the use of principles of land surveying, the position for any survey monument or reference point; or sets, resets, or replaces any such monument or reference point.

NCEES Model Law:

Practice of Land Surveying includes… any one or more of the following:

- (d) Determines the configuration or contour of the earth's surface or the position of fixed objects thereon by measuring lines and angles and applying the principles of mathematics or *photogrammetry*.

NCEES Model Law:

Practice of Land Surveying includes… any one or more of the following:

- (e) Geodetic surveying which includes surveying for determination of the size and shape of the earth utilizing angular and linear measurements through spatially oriented spherical geometry.

NCEES Model Law:

Practice of Land Surveying includes… any one or more of the following:

- (f) Creates, prepares, or modifies electronic or computerized data, including *land formation (sic) systems, and geographic information systems*, relative to the performance of the activities in the above described items (a) through (e).

Original Task Force Members

- American Congress on Surveying and Mapping (ACSM)
- American Society of Civil Engineers - Geomatics Division (ASCE)
- American Society for Photogrammetry and Remote Sensing (ASPRS)
- Management Association for Private Photogrammetric Surveyors (MAPPS)
- National Society of Professional Surveyors (NSPS)

Original Task Force Representatives

ACSM	John Dailey (P) Cleveland, Ohio David Gibson (A) Gainesville, Florida	ASCE	Robert C. Burtch (A) Big Rapids, Michigan Steven D. Johnson (A) West Lafayette, Indiana
MAPPS	George Gross (P) Portland, Oregon Mike Ritchie (P) Lexington, Kentucky	NSPS	Al Matherly (P) Louisville, Kentucky Greg Johnson (P) Marietta, Georgia
ASPRS	Karen Schuckman (P) High Point, N. Carolina Doug Fuller (P) Sheboygan, Wisconsin	Facilitator	Jim Plasker (G/NP) Oak Hill, Virginia

Original Issues

- Grandfathering
- Reciprocity/Comity
- Examinations
- Identity of the Profession

Original Issues (cont)

- Exclusion of Practice
- Education requirements
- Continuing Education/Professional Development

Recommendations - Grandfathering

- Adopt Uniform Guidelines
- Accomplished During 1998 Annual Meeting

Recommendations - Reciprocity/Comity

- Recognize Generic Professional Practice, Especially in the Non-Boundary Arena
- Simplify mobility
- Responsive to NAFTA Goals

Recommendations - Examinations

- NCEES Exam Inclusive of All Covered Disciplines
- Three Part Examination
  - 1. Fundamentals of Measurement Science
  - 2. Principles and Practice (Discipline-based)
  - 3. Legal and Boundary Practice (Jurisdiction-specific)

Recommendations - Examinations (cont)

- Principles and Practice Exam Provide Wide Choice of Discipline-specific Items
- Easy Transfer of Exam Credit Among Jurisdictions
- NCEES Utilize ASPRS Exam Resources

Recommendations - Identity of the Profession

- Use Generic Language
- Reserve Term “Professional Land Surveyor”

Regulatory Interest Levels

	High Interest	Low Interest
Theme Displayed	Regulated resources affecting property rights, property development, value of land, and boundaries.	Items of a resource management or inventory nature done for development of management programs/plans.
Base Data or Theme	Base layers such as parcels, roads, water courses, contours, geodetic grids, geodetic control, structures.	Theme data such as botany, soils, other resources, habitats that are adjusted to base layers.

Regulatory Interest Levels (cont)

	High Interest	Low Interest
Use of absolute coordinates	Publishing in state plane, latitude and longitude, UTM or other officially approved coordinate systems.	No published coordinates or coordinate grids, or use of an assumed coordinate datum.
Primary Measure-ment vs. Secondary Mapping	Original view/original meas-urement (by conventional ground survey, aerial photo-grammetry, image mapping (the mapping part of remote sensing), or positioning systems such as the Global Positioning System).	Mapping from archival sources, data conversion, simple cartographic and image manipulation.

Regulatory Interest Levels (cont)

	High Interest	Low Interest
Relative Expertise of Producer vs. Receiver of Spatial Data	Innocent funder or purchaser of spatial data from a person/firm holding themselves out as having surveying/mapping expertise.	Measurement and mapping within an agency or firm for in-house purposes where users are the measurers.
Availability of Product or Outcome	Public Domain, innocent users exist.	Private use, no direct secondary (innocent) user.

Recommendations –
Education Requirements
Surveyor Intern

- Four Year Degree
  from EAC or ASAC program of 4 years or more
- Graduate of a program related to surveying of 4 years or more with specified record of 2 years of progressive experience in surveying.
- Graduate of 4-year program acceptable to the board with specific record of 4 years of progressive experience

Recommendations - Education Requirements Professional Surveyor

- Survey intern with additional 4 years of combined office and field experience
- Minimum of 3 years progressive experience on survey projects under supervision of surveyor

Recommendations - Continuing Education

- Standardize Criteria
- Streamline Recording of Credits
  - CEU's
  - PDU's

Thoughts

1- NCEES Model Law/Model Rules, if adopted, define the scope of the profession within that jurisdiction

2-Education programs *must* address the scope of definition.

3-Educator must realize that most of our students are getting degrees to become licensed.

4-All faculty within the surveying program should become licensed – *set example for students*

Finally

Each state has the opportunity to evaluate the NCEES Model Law to determine it all, parts or none of the document is suitable for adoption within the individual state statute.

Surrounding State Requirements

IOWA, MISSOURI, KANSAS, COLORADO, WYOMING, SOUTH DAKOTA

Douglas J. Stevenson, LS 485

Educational Requirements should be obtainable so as to allow for common acceptance among surrounding states.

Outside the Borders

The following information was compiled from information prepared by Nebraska State Surveyor, Steven A Cobb evaluating the requirements of States in the proximity to Nebraska. This information was compiled using these States published requirements at the request of the Board of Examiners for Land Surveyors as a condensed version of these requirements for Land Surveyors of States near the boarders of Nebraska. The purpose of this was to arrive at a clear view of their requirements and how best to address the upcoming issue of

EDUCATION REQUIREMENTS

to best serve the

Past, Present, & Future Land Surveyors of this

Great State of Nebraska.

Progressive & Basic LS ????

Progressive land surveying experience may include the following eight (8) elements of professional land surveying: project management; research; measurements and locations; computations and analysis; legal principles and reconciliation, land planning and design; monumentation; and documentation and land information systems. These guidelines closely follow the NCEES guidelines which were developed from a comprehensive task analysis of work performed by licensed professional land surveyors throughout the country. NOTE: it is not necessary to have experience in all eight (8) elements to qualify for the FLS.

Basic land surveying experience is considered by the Board to include land surveying experience which is normally indentified with engineering projects. This would include construction staking, curb and gutter projects, sanitary sewers, and design surveys for highways or bridges other than those that relate to the right-of-way surveys.

Kansas

4 yr Degree Land Surveying Curriculum

+ 4 yrs Progressive Surveying Experience

Or

2 yrs Associate Degree in Accredited Surveying Curriculum

+ 6 yrs Surveying Experience (4yrs Progressive Surveying)

Or

4 yr Degree in Curriculum related to Land Surveying

(Geology, Mathematics, or Physics)

+ 6 yrs Surveying Experience (4yrs Progressive Surveying)

Or

No Formal Education Required but needs 8 yrs surveying experience

- 6 yrs need to be Progressive Surveying
- Remainder can be Progressive or Basic Surveying till June 30, 2012

Colorado

Graduated from Board-approved Surveying Curriculum of 4 or more yrs

+ 2 yrs Progressive Land Surveying under PLS Supervision

Or

Graduated from **NON** Board-approved Surveying Curriculum of 4 or more yrs

+ 4 yrs Progressive Land Surveying of which 2 yrs are under PLS Supervision

Or

Graduated from Board-approved 2yr Surveying Curriculum or 4 yr Engineering Curriculum that includes 24 Equivalent Semester Hours of Surveying Course Work approved by the Board

+ 6 yrs Progressive Land Surveying of which 4 yrs are under PLS Supervision

Or

Graduated from High School or Equivalent

+10yrs Progressive Land Surveying Experience of which 6 yrs under PLS Supervision

Wyoming

SIT – Bachelor of Science in Land Surveying or Engineering Accredited Curriculum which includes at least 30 Semester Credit Hours in Surveying, Mapping, and other approved courses.

Or

Associate Degree in Surveying Technology in a Curriculum accredited + 4yrs of combined Office and Field Experience of which 2yrs shall be in Boundary Land Surveying projects under the supervision of a Licensed Surveyor

LS – Actively engaged in the practice of Land Surveying for at least 4yrs beyond SIT. These 4yrs shall be of a character satisfactory to the Board and under the direct Supervision of a Licensed Surveyor

South Dakota

Professional Degree in Surveying or Engineering from an Accredited Program or other education assessed by the Board as Equivalent

+ 4yrs Surveying Experience under direct Supervision of LS

Or

Technical Degree in Surveying or Engineering from an Accredited Program or other education assessed by the Board as Equivalent

+ 4yrs Surveying Experience under direct Supervision of LS

Or

Vocational Degree in Surveying or Engineering

+ 7yrs Experience under the direct Supervision of LS

Or

No Formal Education

+ 11yrs Experience under the direct Supervision of LS

North Dakota

Graduate of a 4yrs or more Land Surveying or Engineering Accredited Program

+ Minimum of 4yrs Land Surveying experience of a character satisfactory to the Board

Or

Graduate from a Land Surveying or Engineering Program not accredited by the Accreditation Board for Engineering & Technology and approved by the Board

+ Minimum of 6yrs Land Surveying experience of a character satisfactory to the Board

Or

Minimum of 8yrs Land Surveying experience of a character satisfactory to the Board.

Iowa

SIT – Graduate from a 2 or more yrs in Mathematics, Physical Sciences, Mapping, and Surveying or Engineering, all of which, in the opinion of the Board, will properly prepare the applicant for the examination in the Fundamental Land Surveying subjects.

LS – Must have 4yrs or more Experience in Practical Experience in Land Surveying which is of a character satisfactory to the Board. This Experience must have been obtained after the receipt of the qualifying education requirements and prior to the application due date for the examination. This practical experience is in addition to the initial required experience required to taking the Fundamentals of Land Surveying examination.

Comments from these States

Questions asked other State at the request of PSAN/SENLSA

What is the pass/fail rate on the FS and PS before you implemented the Education requirements and after?

What trends are you seeing in the profession or applicants?

What is the age groups of your present Surveyors – 20-30, 30-40, 40-50, 50-60, and 60 and older?

North Dakota

"One major trend we are seeing in North Dakota is an increased interest in land surveying. Part of the increase is due to the increased volume of surveying work in North Dakota at the present time. This has resulted in increased numbers of individuals taking both the FS and PS examinations. For the most part, we are seeing a younger average age for these examinees. We are also seeing a great increase in land surveyor registrations, by endorsement, at the present time. I would say that the following represents a breakdown of our surveyor population:"

20 – 30	10%
30 - 40	15%
40 – 50	25%
50 – 60	30%
60 and older	20%

Wyoming

"There is a definite, undeniable climb in degree seeking Surveyors. The climb is very apparent with our LSIT's. The LS registrants without an education stayed strong until about 2001 when their numbers almost dropped completely and the education (associates and baccalaureates) seeking surveyors took over.

Our largest amount of Surveyors are in the 55-65 age group, however the chart does begin to grow at age 45."

Proposed Nebraska Requirements

EDUCATIONAL LEVELS AND TIMELINE

Dennis L. Whitfield, LS 449(1986), PE 7163(1991)

GOOD FOR NEBRASKA

Fundamentals of Land Surveying
Nebraska Proposed

	A	B	C	D
Years of general survey/engineering experience	8	4		
Years of land surveying and responsible charge				
Years of land surveying	2	1	1	
No education				
High School				
2 yr. assoc. deg.				
2 yr. assoc. deg. In land surveying				
Bachelor of Science				
Bachelor of Science w/ 30 cr. hrs. in land surveying				
Total years to acquire Fundamentals	8	6	5	4

NEBRASKA
EDUCATION

Fundamentals of Land Surveying
Surrounding States

	KS		CO			SD			ND			WY		IA	
	A	B	A	B	C	A	B	C	A	B	C	A	B	A	B
Years of general survey/engineering experience	S4	S4								2	4			6	
Years of survey experience				4	2		2	4					4		
No formal education								■			■				
High School				■											
Variable credit hours in approved courses															
2 yr. Associated Degree															
2 yr. Associated Degree in Land surveying															
2 yr. Associated Degree in survey/engineering					■		■			■				■	
2 yr. Associated Degree in accredited survey/engineering	■												■		
Bachelor of Science (cr. hrs. in surveying)															
4 yr Degree in surveying															
4 yr. Degree in accredited survey/engineering		■	■			■			■						■
4 yr. Degree in accredited surv./eng. (cr. hrs. in surveying)												■			
Degree in non accredited survey/engineering															
Years under direct supervision of a land surveyor															

NEBRASKA
EDUCATION

Fundamentals of Land Surveying
Add Proposed Nebraska

	KS		CO			SD			ND			WY		IA	
	A	B	A	B	C	A	B	C	A	B	C	A	B	A	B
Years of general survey/engineering experience	S4	S4								2	4			6	
Years of general survey/engineering experience	4			8	4		4	8		4	8		4	4	
Years of survey experience				4	2		2	4					4		
No formal education															
High School															
Variable credit hours in approved courses															
2 yr. Associated Degree															
2 yr. Associated Degree in Land Surveying															
2 yr. Associated Degree in survey/engineering															
2 yr. Associated Degree in accredited survey/engineering															
Bachelor of Science (cr. hrs. in surveying)		30	30			30			30			30			30
4 yr Degree in surveying															
4 yr. Degree in accredited survey/engineering															
4 yr. Degree in accredited surv./eng. (cr. hrs. in surveying)															
Degree in non accredited survey/engineering															
Years of land surveying	1	or 1	or 1	2	1	or 1	1	2	or 1	1	2	or 1	1	1	or 1
Years under direct supervision of a land surveyor															

NEBRASKA EDUCATION

Principles and Practices of Land Surveying Proposed Nebraska

	A	B	C	D
Years of general survey/engineering experience	10	6		
Years of land surveying and responsible charge	6	5	4	2
Years of land surveying				
No education				
High School				
2 yr. assoc. deg.				
2 yr. assoc. deg. In land surveying				
Bachelor of Science				
Bachelor of Science w/ 30 cr. hrs. in land surveying				
Total years to aquire LS	10	8	8	6

NEBRASKA EDUCATION

Principles and Practices of Land Surveying Surrounding States

	KS				CO				SD				ND			WY	IA	MO
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C			
Years of general survey/engineering experience				8														
Years of survey experience		6	6			4	6	10										
No formal education				■								■			■			
High School								■										
Variable credit hours in approved courses																		
2 yr. Associated Degree																		
2 yr. Associated Degree in survey/engineering											■							
2 yr. Associated Degree in accredited survey/engineering		■					■			■								
Bachelor of Science																		
4 yr Degree in surveying (or related field - KS)			■			■												
4 yr. Degree in accredited survey/engineering	■				■				■				■					
Degree in non accredited survey/engineering														■				
Years under direct supervision of a land surveyor	4	4	4	6	2	2	4	6	4	4	7	11	4	6	8	4 after FLS	4 after FLS	4 after FLS

NEBRASKA EDUCATION

Principles and Practices of Land Surveying
Add Proposed Nebraska

	KS				CO				SD				ND			WY	IA	MO
	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C			
Years of general survey/engineering experience				8														
Years of general survey/engineering experience		6		10			6	10			6	10			10			
Years of survey experience		6	6			4	6	10										
No formal education																		
High School																		
Variable credit hours in approved courses																		
2 yr. Associated Degree																		
2 yr. Associated Degree in survey/engineering																		
2 yr. Associated Degree in accredited survey/engineering																		
Bachelor of Science (cr. hrs. in surveying)	30				30				30				30					
Bachelor of Science																		
4 yr Degree in surveying (or related field - KS)																		
4 yr. Degree in accredited survey/engineering																		
Degree in non accredited survey/engineering																		
Years of land surveying and responsible charge	2	5	4	6	2	4	5	6	2	4	5	6	2	4	6			
Years under direct supervision of a land surveyor	4	4	4	6	2	2	4	6	4	4	7	11	4	6	8	4 after FLS	4 after FLS	4 after FLS

NEBRASKA EDUCATION

Nebraska Law Exam

- Upon completion of the NCEES Fundamentals and Principles & Practice exams, applicant will be allowed to sit for the Nebraska Law exam.
  - Current – 6 hour NCEES then 2 hours State exam in one day.
  - Future - 6 hour NCEES in one day then ? hours State
    - W/ oral interview on second day

- Final step to a Nebraska Land Surveyors License will be an oral interview in front of the Nebraska Board of Examiners.

Board of Examiners Implementation Timeline Proposed

Dec. 2009 – Feb. 2010, Presentation to SENLSA & PSAN

Summer- Fall 2010, Incorporate changes, Legal review, Finalize bill, Bill sponsor, Bill Writer, Prepare PR plan

Jan. 2011, Bill introduced into the Legislative session

Jan. 2012, Bill takes effect

Jan. 2022, Education requirements in full effect

State Law Revisions

- Governing laws for Land Surveyors in Nebraska are defined in State Statues and Rules and Regulations
- Statue changes require legislative approval, Rules and Regulations can be changed by the Board of Examiners
- Most of the changes will be changed by Rules and Regulations

Area Educators

TRADE SCHOOLS, COLLEGES, UNIVERSITIES

VIRLYN S. BOLTE, LS 631

Area Educators should be flexible and diverse as opposed to restrictive and limited so as to be of greater value to Nebraska land surveyors of the present and future

ed·u·ca·tion

[ej-*oo*-key-sh*uh* n] (www.dictionary.com)

- ***–noun***
- **1.**the act or process of imparting or acquiring general knowledge, developing the powers of reasoning and judgment, and generally of preparing oneself or others intellectually for mature life
- **2.**the act or process of imparting or acquiring particular knowledge or skills, as for a profession.
- **3.**a degree, level, or kind of schooling: *a university education.*
- **4.**the result produced by instruction, training, or study: ***to show one's education.***
- **5.**the science or art of teaching

- ***Synonyms:***
  1. instruction, schooling, learning. **Education, training** imply a discipline and development by means of study and learning.
- **2.Education** is the development of the abilities of the mind (learning to know): *a liberal education.*
- **3.Training** is practical education (learning to do) or practice, usually under supervision, in some art, trade, or profession: *training in art, teacher training.*
- **4.** learning, knowledge, enlightenment. **Education, culture** are often used interchangeably to mean the results of schooling. **Education,** however, suggests chiefly the information acquired.

SURVEYOR-IN-TRAINING
REGISTRATION REQUIREMENTS

www.sso.state.ne.us

- **Requirements**

- Surveyor-in-training shall mean a **person who is a graduate in an approved surveying or engineering curriculum of four years or more or who has had four or more years of experience in surveying work of a character satisfactory to the examining board and who has successfully passed the examination in the fundamental surveying subjects and has received from the examining board a certificate stating that that portion of the examination has been successfully passed.** All applicants applying for registration as a surveyor-in-training under Section 81-8,109, (3), R.R.S., may be eligible for examination on the basis of four years practice or training, satisfactory to the Board, and proof of educational and professional qualifications. **This shall also include applicants who may be eligible for examination on the basis of graduation, after a course of not less than four years in surveying, engineering or other approved curriculum, with proportionate credit for lesser time, from a school or college approved by the Board as of satisfactory standing.**

LAND SURVEYOR REGISTRATION REQUIREMENTS

www.sso.state.ne.us

- **Requirements**

- Land surveyor shall mean a person who engages in the practice of land surveying. All applicants applying for registration as a land surveyor under Section 81-8,117, R.R.S., **who may be eligible for examination on the basis of registration as a surveyor-in-training in Nebraska or another state which maintains standards equal to or greater than those of Nebraska, 6 years of practice, satisfactory to the Board, and proof of educational and professional qualifications, 5 of such 6 years must be in land surveying as defined in Section 81-8,109, R.R.S. and 3 of such 5 years must be in a responsible position as a subordinate to a licensed land surveyor**. Responsible position shall mean a position that requires initiative skill and independent judgment; this term excludes chainman, rodman, instrument person, ordinary drafter and others doing routine work. **This shall also include applicants who may be eligible for examination on the basis of graduation, after a course of not less than four years in surveying, engineering or other approved curriculum, with proportionate credit for lesser time, from a school or college approved by the Board as of satisfactory standing, an additional two years of practice in a responsible position and registration as a surveyor-in-training in Nebraska or another state which maintains standards equal to or greater than those of Nebraska.**

EDUCATION CREDIT

The two tables below are provided to help applicants determine the *education credit* the Board of Examiners for Land Surveyors will allow for vocational or college level courses. The conversions presented below should be used as a guide only and should not be interpreted as absolute. Each application will be individually evaluated.

ACCREDITED VOCATIONAL TECHNICAL SCHOOLS						
	SEMESTERS COMPLETED					
	1	2	3	4	5	6
	EDUCATION CREDIT IN MONTHS					
ENGINEERING	1	2	3	4	5	6
SURVEYING & DRAFTING	2	4	6	8	10	12

No credit shall be allowed for partial semesters of course study completed.
1 year of continuous vocational school education equals 3 semesters.
6 quarters of continuous vocational school education equals 4.5 semesters.

ACCREDITED COLLEGES OR UNIVERSITIES				
	YEARS COMPLETED			
	1	2	3	4
	EDUCATION CREDIT IN MONTHS			
SURVEYING	4	12	30	48
ENGINEERING	4	8	20	48
SCIENCES	4	8	16	20
ART	3	6	9	12

No credit shall be allowed for partial years of course study completed.

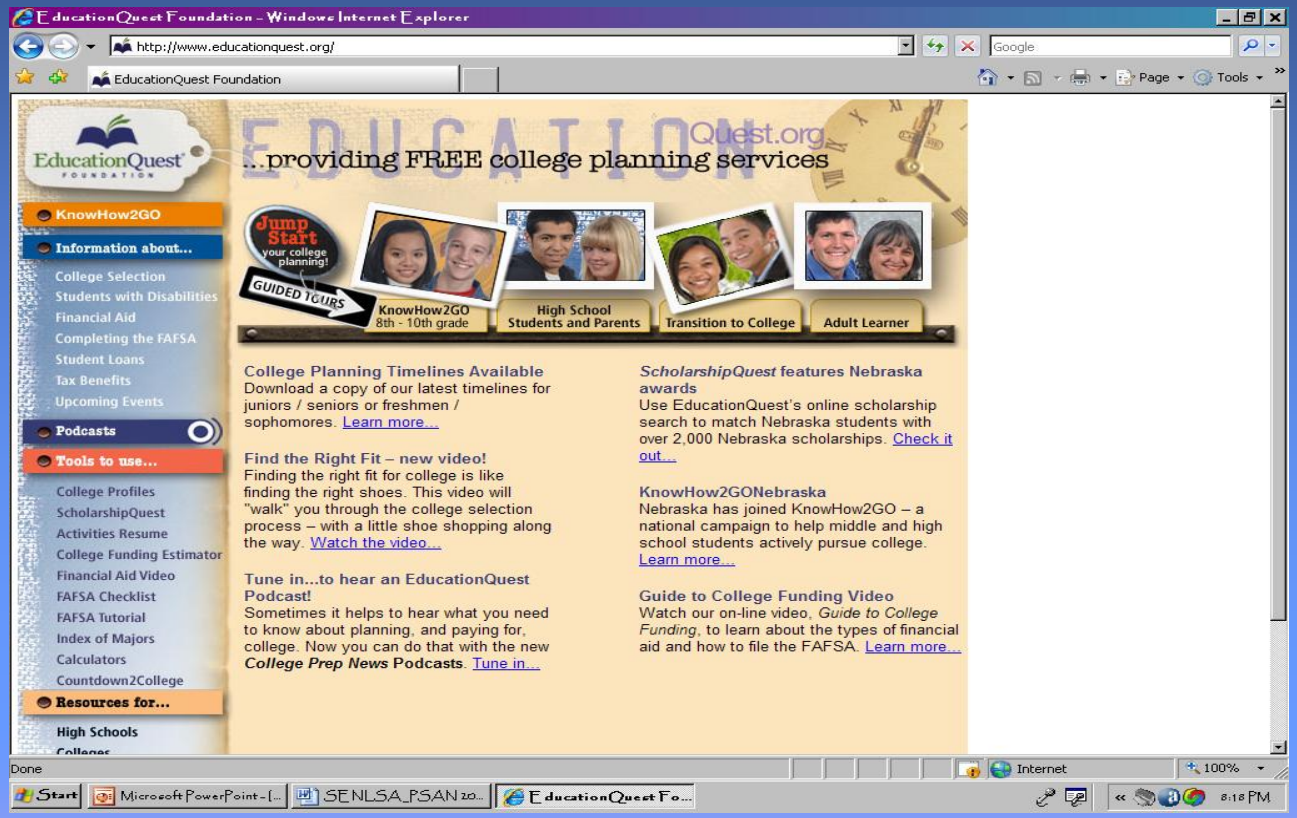
Educational Opportunities Available Currently *in Nebraska* to the aspiring Nebraska Land Surveyor to Qualify for Application to take the Examination

- Experience and Home Study
  - Day to Day experience working directly with a Nebraska Registered Land Surveyor
  - Evening Study or Employer-approved scheduled study on the job
  - Participating in scheduled PSAN or SENLSA organized workshops
  - Online course study of a Board of Examiners approved program*

- Southeast Community College, Milford, NE*
  - Associate of Applied Science, Land Surveying and Civil Engineering Technology
    - 18 month course
    - 8-9 months of credit toward licensure (Upon successful completion of the program of study)
  - *Programs of Study are NOT currently MONITORED by the Board of Examiners

How to Begin

www.educationquest.org



PROFESSIONAL SURVEYORS ASSOCIATION OF NEBRASKA ® FOUNDED 1964

SOUTHEAST NEBRASKA LAND SURVEYORS ASSOCIATION SENLSA

NEBRASKA EDUCATION

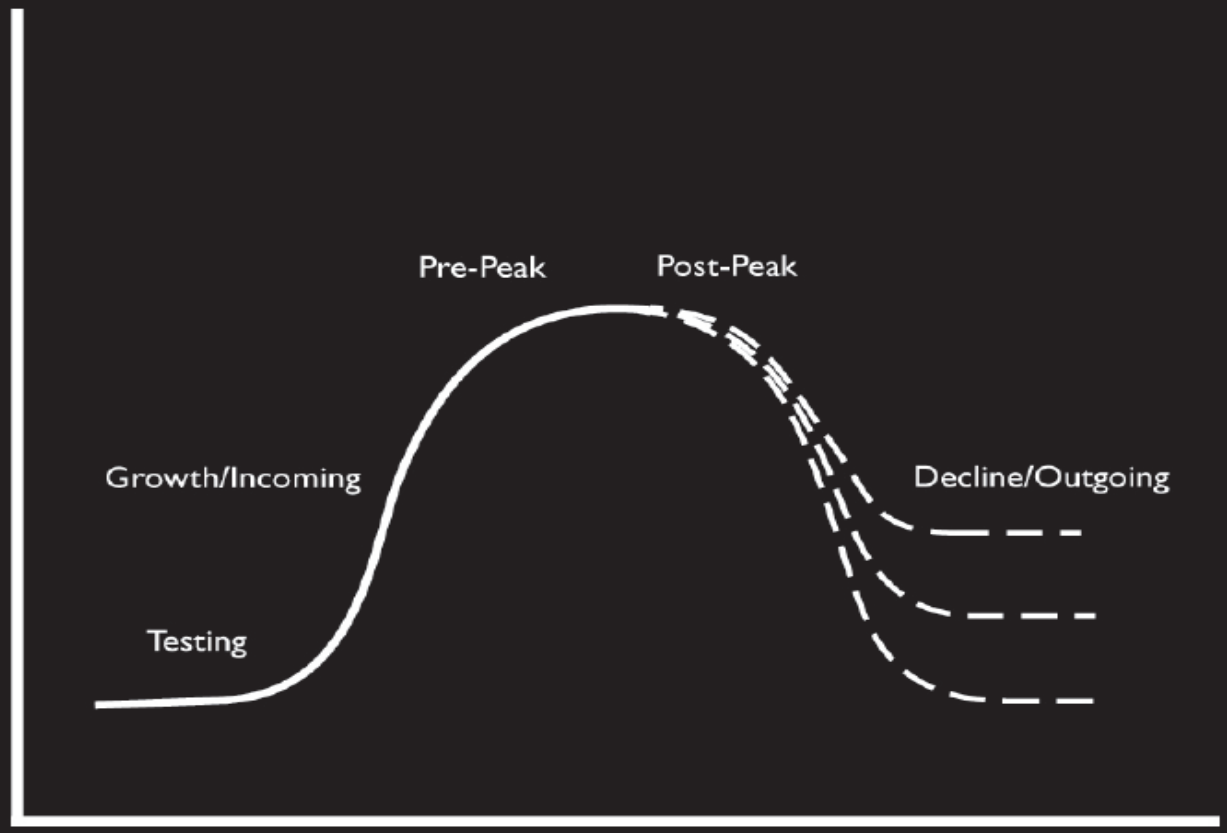
Future Educational Considerations

- How will the providers grow and contribute?
  - Programs will develop as a need increases. Education is a business.
  - Educational forums create a testing ground for new technologies and ideas.
- Will there be a coalition between providers, allowing for the possibility of ‘in state’ tuition for cooperating partners?
  - A multi-state offering would need to be supported by Nebraska as well as neighboring states. Organizations of professional surveyors across the region would play a role toward success.
- How do we monitor these programs to see if they meet a minimum standard?
  - Formal review committees would need to be established with scheduled efforts to monitor existing programs as well as any new offerings. These committees (individual states each forming separate committees) could be composed of members of professional societies.

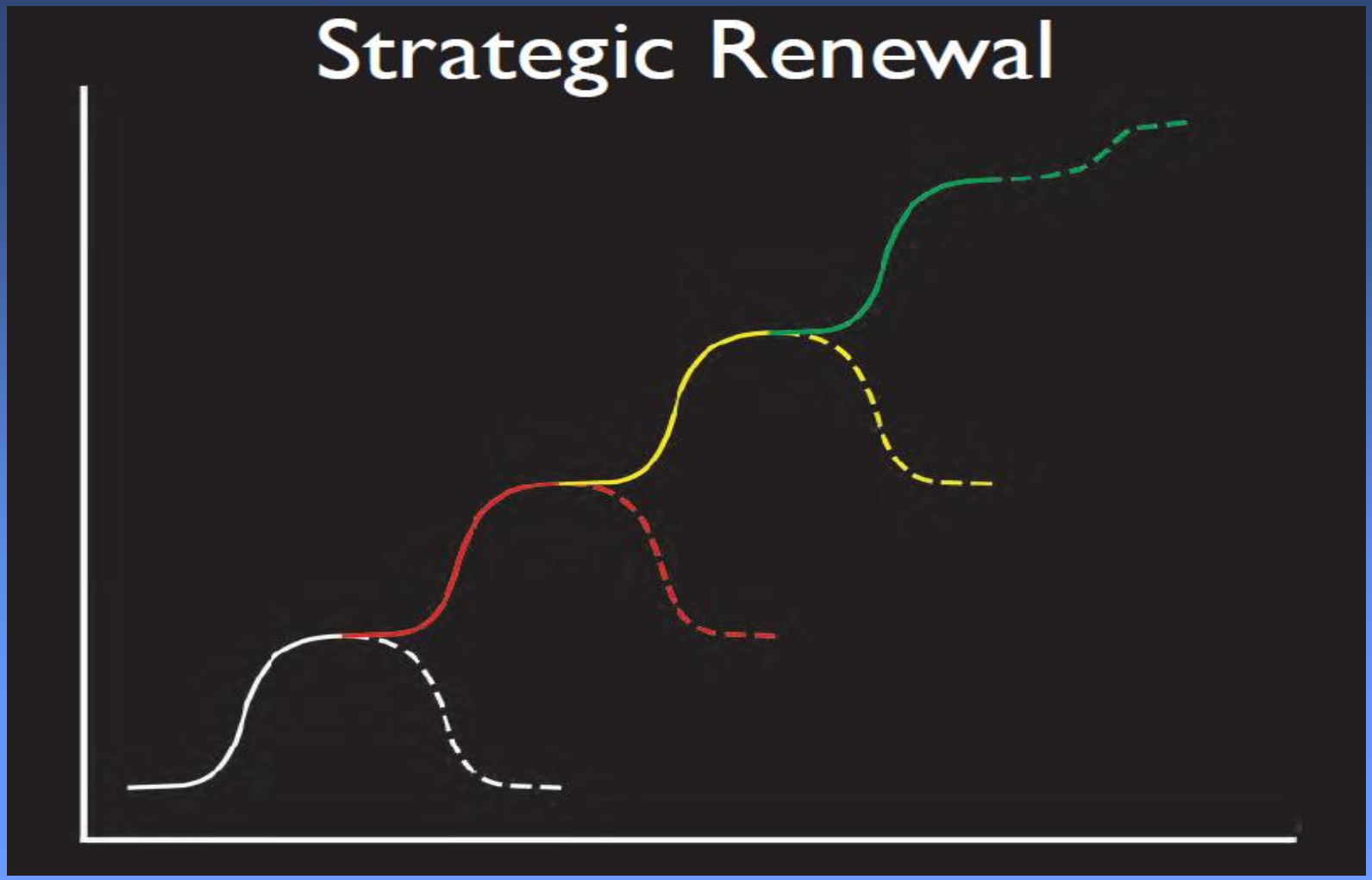
Summary/Conclusion

- National Organization is trying to standardize the registration process and add an educational requirement nation wide.
- Surrounding States have developed or proposed their own requirement.
- Verbiage and definitions do not align.
- Nebraska Surveyors need to understand the situation.
- Nebraska Board of Examiners is very appreciative of the Educational Committee gathering the wishes of the Nebraska Surveyors.

Life Cycle Analysis



Strategic Renewal



PROFESSIONAL SURVEYORS ASSOCIATION OF NEBRASKA ® FOUNDED 1964

SOUTHEAST NEBRASKA LAND SURVEYORS ASSOCIATION SENLSA

Questions
&
Answers

PSAN / SENLSA
EDUCATIONAL COMMITTEE

NEBRASKA
EDUCATION

Questionnaire

Must be completed and turned in to receive PDH certificate.

"THANK YOU" FOR YOUR INPUT TO DECIDE THE FUTURE OF LAND SURVEYING IN THE STATE OF NEBRASKA

1. What is your Professional Level of Practice?

Registered Land Surveyor _____

Surveyor In Training _____

Student _____

Other _____

NEBRASKA
EDUCATION

2. Providing your Nebraska Registration is your primary license, are you considering an additional license to survey in another jurisdiction?

Yes _____

No _____

3. If you hold multiple registrations to survey, please check the number of additional jurisdictions.

1 _____

2-3 _____

4 or More _____

4. Are you a registered Professional in another discipline?

Yes _____ No _____

Registered Engineer _____

Registered Architect _____

Attorney _____

Other _____

5. What level of education have you achieved?

High School Graduate/GED _____

High School course work in preparation for a career in land surveying _____

2 Year College Graduate _____ Field of Study _____

4 Year College Graduate _____ Field of Study _____

(Surveying/Engineering Degree) Yes _____ No _____

(Masters) _____ Field of Study _____

Experience in the Field _____ Number of Years _____

Online survey-related coursework _____ Name of Program _____

Home Study _____

NEBRASKA EDUCATION

6. Are the current requirements to become a Nebraska Registered Land Surveyor adequate to ensure that quality, qualified professionals obtain *and* retain the right to survey?

Yes _____

No _____

7. Which statement best describes your thoughts regarding the <u>future</u> process of obtaining a Nebraska Registration to practice Land Surveying?

__ Enact educational requirements equal to surround states.

___ Enact educational requirements more stringent than surrounding states.

__ Enact educational requirements less stringent than surrounding states.

8. Should there be different criteria for educational credit given to <u>qualify for examination</u> compared to credit given for <u>professional development hours</u> toward licensure?

_____ Yes, it should be stricter to qualify for examinations.

_____ No, it should be the same.

9. How many years of service <u>have you given</u> to the Profession of Surveying in Nebraska?

_____ 1-9

_____ 10-19

_____ 20-29

_____ 30 or more

10. How many years do you <u>expect to give</u> to the Profession of Surveying in Nebraska from this point forward?

_____ 1-9

_____ 10-19

_____ 20-29

_____ 30 or more

11. Please rank the following options of educational requirements to be a Registered Land Surveyor in Nebraska.

(Rank from 1 to 5, 1 being the best, and 5 being the last choice)

_____ 4 year Surveying Degree

_____ 4 year Degree (Related Field)

_____ 2 year Technical Surveying Degree

_____ Option of a Specified Number of Surveying Credits

_____ Leave requirements as they are