

# AAPT SKILL Survey 2011

AAPT Skill Survey 2010 - 2011

## Respondent Profile

### Question 1

Response	Chart	Percentage	Count
New Brunswick		12%	5
Nova Scotia		82%	33
Newfoundland and Labrador		5%	2
Prince Edward Island		0%	0
Total Responses			40








### Question 2

Response	Chart	Percentage	Count
Private Planning Consultant		0%	0
GIS, IT or Engineering Consultant		5%	2
Private Development / Economic Agency		2%	1
Rural / Small Town Municipal Government		40%	16
Urban / City Government		15%	6
Provincial or Regional Government		25%	10
Federal / Inter-provincial Government		2%	1
Other, please specify:		10%	4
Total Responses			40

### Question 2 (Other, please specify:)

#	Response
1.	Planning Commission
2.	Education
3.	COGS
4.	Education



### Question 3

Response	Chart	Percentage	Count
Cartographic or Graphics Technician		2%	1
Planning Technician		20%	8
Development Control Technician		2%	1
Engineering technician		5%	2
GIS/ Information Technician		32%	13
Research Assistant		0%	0
MIS Coordinator		0%	0
Junior or Assistant Planner		2%	1
Other : Please Specify		35%	14
Total Responses			40

### Question 3 (Other : Please Specify)

#	Response
1.	GIS/Planning Technologist
2.	Development Officer
3.	Civic Addressing Technician
4.	Faculty
5.	watershed coordinator
6.	Faculty
7.	Public Works Manager
8.	Civic Addressing Coordinator
9.	Development Officer
10.	GIS/Planning Technician
11.	Planning Director
12.	Faculty
13.	Cartographic/GIS Technician
14.	civic address technician

### Question 4

Response	Chart	Percentage	Count
Yes		85%	34
No		15%	6
Total Responses			40

## Skills Section:

For the Skills Section, please score each skill 3 ways: 1. Importance as a current and desirable skill for "Planning Technicians". 2. Competency for cooperative employment positions. (summer student employment) 3. Competency for a graduate entering the workforce. Scoring Skill Importance and Competency Importance Competency 1 Least importance 1 Requires assistance or supervision 2 Less importance 2 Requires some assistance or supervision 3 Average importance 3 Without assistance or supervision 4 More importance 4 With initiative, adaptability in various situations 5 Most Importance 5 Expertly and can train others

### 1. 1 Create/Maintain Geographic Data Sets | Current Importance

	1	2	3	4	5	Total	Mean
Research Data Sources	0 (0%)	1 (3%)	6 (16%)	19 (50%)	12 (32%)	38	4.1
Acquire Data	1 (3%)	2 (5%)	4 (10%)	14 (36%)	18 (46%)	39	4.2
Design Database Structure	3 (8%)	5 (14%)	11 (30%)	11 (30%)	7 (19%)	37	3.4
Create Database Tables	3 (8%)	1 (3%)	11 (29%)	10 (26%)	13 (34%)	38	3.8
Digitize geographic features	3 (8%)	5 (13%)	4 (11%)	11 (29%)	15 (39%)	38	3.8
Collect, process, transfer GPS data	4 (11%)	3 (8%)	6 (16%)	12 (32%)	13 (34%)	38	3.7
Perform Differential Correction on GPS data	5 (13%)	4 (11%)	10 (26%)	13 (34%)	6 (16%)	38	3.3
Convert Data Source (e.g. CAD to GIS)	2 (5%)	4 (11%)	11 (29%)	9 (24%)	12 (32%)	38	3.7
Perform Geo-coding	6 (16%)	7 (19%)	15 (41%)	6 (16%)	3 (8%)	37	2.8
Update Existing Data	1 (3%)	0 (0%)	6 (16%)	9 (24%)	21 (57%)	37	4.3
Author/maintain metadata	6 (16%)	8 (21%)	10 (26%)	5 (13%)	9 (24%)	38	3.1
Watershed Delineation (manual)	9 (24%)	9 (24%)	7 (18%)	6 (16%)	7 (18%)	38	2.8
Land use/land cover classification	4 (11%)	3 (8%)	6 (16%)	11 (29%)	14 (37%)	38	3.7
Digitize property boundaries from survey plans	9 (24%)	5 (14%)	8 (22%)	5 (14%)	10 (27%)	37	3.1

## 1. 1 Create/Maintain Geographic Data Sets | Competency for summer student

	1	2	3	4	5	Total	Mean
Research Data Sources	3 (8%)	10 (28%)	15 (42%)	6 (17%)	2 (6%)	36	2.8
Acquire Data	4 (11%)	9 (25%)	14 (39%)	8 (22%)	1 (3%)	36	2.8
Design Database Structure	10 (29%)	10 (29%)	13 (38%)	1 (3%)	0 (0%)	34	2.1
Create Database Tables	4 (11%)	10 (29%)	16 (46%)	3 (9%)	2 (6%)	35	2.7
Digitize geographic features	2 (6%)	7 (19%)	13 (36%)	10 (28%)	4 (11%)	36	3.2
Collect, process, transfer GPS data	5 (14%)	7 (19%)	13 (36%)	9 (25%)	2 (6%)	36	2.9
Perform Differential Correction on GPS data	4 (11%)	16 (44%)	10 (28%)	4 (11%)	2 (6%)	36	2.6
Convert Data Source (e.g. CAD to GIS)	3 (9%)	13 (37%)	10 (29%)	6 (17%)	3 (9%)	35	2.8
Perform Geo-coding	6 (17%)	15 (42%)	12 (33%)	2 (6%)	1 (3%)	36	2.4
Update Existing Data	2 (6%)	12 (34%)	14 (40%)	3 (9%)	4 (11%)	35	2.9
Author/maintain metadata	10 (28%)	12 (33%)	11 (31%)	2 (6%)	1 (3%)	36	2.2
Watershed Delineation (manual)	10 (28%)	8 (22%)	12 (33%)	3 (8%)	3 (8%)	36	2.5
Land use/land cover classification	5 (14%)	11 (31%)	12 (33%)	5 (14%)	3 (8%)	36	2.7
Digitize property boundaries from survey plans	9 (25%)	11 (31%)	11 (31%)	3 (8%)	2 (6%)	36	2.4

## 1. 1 Create/Maintain Geographic Data Sets | Competency entering workforce

	1	2	3	4	5	Total	Mean
Research Data Sources	0 (0%)	3 (8%)	14 (38%)	16 (43%)	4 (11%)	37	3.6
Acquire Data	1 (3%)	2 (6%)	12 (33%)	15 (42%)	6 (17%)	36	3.6
Design Database Structure	2 (6%)	6 (17%)	11 (31%)	10 (28%)	7 (19%)	36	3.4
Create Database Tables	2 (6%)	1 (3%)	13 (36%)	12 (33%)	8 (22%)	36	3.6
Digitize geographic features	1 (3%)	3 (8%)	11 (30%)	11 (30%)	11 (30%)	37	3.8
Collect, process, transfer GPS data	2 (5%)	2 (5%)	12 (32%)	16 (43%)	5 (14%)	37	3.5
Perform Differential Correction on GPS data	2 (5%)	5 (14%)	15 (41%)	12 (32%)	3 (8%)	37	3.2
Convert Data Source (e.g. CAD to GIS)	1 (3%)	2 (6%)	6 (18%)	16 (47%)	9 (26%)	34	3.9
Perform Geo-coding	4 (11%)	5 (14%)	12 (32%)	12 (32%)	4 (11%)	37	3.2
Update Existing Data	0 (0%)	2 (6%)	11 (31%)	13 (36%)	10 (28%)	36	3.9
Author/maintain metadata	4 (11%)	4 (11%)	14 (38%)	12 (32%)	3 (8%)	37	3.2
Watershed Delineation (manual)	4 (11%)	4 (11%)	15 (41%)	9 (24%)	5 (14%)	37	3.2
Land use/land cover classification	2 (5%)	4 (11%)	13 (35%)	13 (35%)	5 (14%)	37	3.4
Digitize property boundaries from survey plans	4 (11%)	5 (14%)	15 (41%)	9 (24%)	4 (11%)	37	3.1

## 1. 2 Access and Use of Local, Regional and Nationa... | Current Importance

	1	2	3	4	5	Total	Mean
Municipal Planning Strategy mapping: Land Use, Future Land Use, Zoning	2 (5%)	1 (3%)	2 (5%)	6 (15%)	28 (72%)	39	4.5
Provincial Topographic Bases	0 (0%)	4 (10%)	8 (21%)	8 (21%)	19 (49%)	39	4.1
Provincial Property Databases	1 (3%)	3 (8%)	2 (5%)	11 (29%)	21 (55%)	38	4.3
Provincial Forestry Databases	7 (18%)	11 (29%)	9 (24%)	7 (18%)	4 (11%)	38	2.7
Provincial Civic Address File	4 (10%)	2 (5%)	3 (8%)	6 (15%)	24 (62%)	39	4.1
Provincial Orthophotos	1 (3%)	7 (18%)	7 (18%)	10 (26%)	13 (34%)	38	3.7
Provincial/National Soils and Agricultural Databases	7 (18%)	10 (26%)	9 (24%)	8 (21%)	4 (11%)	38	2.8
Provincial/National Street Network files	4 (10%)	5 (13%)	5 (13%)	13 (33%)	12 (31%)	39	3.6
Provincial Mineral and Resource Databases (water/well etc)	9 (24%)	7 (18%)	14 (37%)	6 (16%)	2 (5%)	38	2.6
Provincial DEMS	4 (11%)	7 (19%)	13 (35%)	8 (22%)	5 (14%)	37	3.1
Provincial Gazetteers	5 (13%)	9 (24%)	15 (39%)	4 (11%)	5 (13%)	38	2.9
National Topographic Databases (CanVec)	9 (24%)	10 (27%)	10 (27%)	6 (16%)	2 (5%)	37	2.5

## 1. 2 Access and Use of Local, Regional and Nationa... | Competency for summer student

	1	2	3	4	5	Total	Mean
Municipal Planning Strategy mapping: Land Use, Future Land Use, Zoning	5 (14%)	13 (35%)	12 (32%)	6 (16%)	1 (3%)	37	2.6
Provincial Topographic Bases	2 (5%)	11 (30%)	17 (46%)	7 (19%)	0 (0%)	37	2.8
Provincial Property Databases	3 (8%)	10 (27%)	20 (54%)	4 (11%)	0 (0%)	37	2.7
Provincial Forestry Databases	10 (29%)	13 (37%)	11 (31%)	1 (3%)	0 (0%)	35	2.1
Provincial Civic Address File	1 (3%)	14 (39%)	17 (47%)	2 (6%)	2 (6%)	36	2.7
Provincial Orthophotos	2 (5%)	10 (27%)	19 (51%)	5 (14%)	1 (3%)	37	2.8
Provincial/National Soils and Agricultural Databases	9 (26%)	12 (34%)	13 (37%)	1 (3%)	0 (0%)	35	2.2
Provincial/National Street Network files	4 (11%)	11 (31%)	16 (44%)	3 (8%)	2 (6%)	36	2.7
Provincial Mineral and Resource Databases (water/well etc)	9 (26%)	12 (34%)	13 (37%)	1 (3%)	0 (0%)	35	2.2
Provincial DEMS	6 (17%)	10 (28%)	17 (47%)	3 (8%)	0 (0%)	36	2.5
Provincial Gazetteers	6 (16%)	17 (46%)	13 (35%)	0 (0%)	1 (3%)	37	2.3
National Topographic Databases (CanVec)	6 (17%)	17 (49%)	10 (29%)	2 (6%)	0 (0%)	35	2.2

## 1. 2 Access and Use of Local, Regional and Nationa... | Competency entering workforce

	1	2	3	4	5	Total	Mean
Municipal Planning Strategy mapping: Land Use, Future Land Use, Zoning	1 (3%)	5 (13%)	14 (37%)	11 (29%)	7 (18%)	38	3.5
Provincial Topographic Bases	1 (3%)	1 (3%)	15 (41%)	13 (35%)	7 (19%)	37	3.6
Provincial Property Databases	2 (5%)	1 (3%)	12 (32%)	16 (42%)	7 (18%)	38	3.7
Provincial Forestry Databases	5 (14%)	6 (17%)	15 (42%)	8 (22%)	2 (6%)	36	2.9
Provincial Civic Address File	1 (3%)	4 (11%)	15 (39%)	10 (26%)	8 (21%)	38	3.5
Provincial Orthophotos	2 (5%)	2 (5%)	15 (39%)	13 (34%)	6 (16%)	38	3.5
Provincial/National Soils and Agricultural Databases	5 (14%)	6 (16%)	16 (43%)	8 (22%)	2 (5%)	37	2.9
Provincial/National Street Network files	3 (8%)	3 (8%)	15 (39%)	11 (29%)	6 (16%)	38	3.4
Provincial Mineral and Resource Databases (water/well etc)	4 (11%)	6 (16%)	18 (49%)	7 (19%)	2 (5%)	37	2.9
Provincial DEMS	3 (8%)	3 (8%)	15 (41%)	12 (32%)	4 (11%)	37	3.3
Provincial Gazetteers	3 (8%)	6 (16%)	22 (58%)	5 (13%)	2 (5%)	38	2.9
National Topographic Databases (CanVec)	3 (8%)	11 (31%)	12 (33%)	9 (25%)	1 (3%)	36	2.8



### 1.3 Geographic Information Systems Interpretation ... | Current Importance

	1	2	3	4	5	Total	Mean
Use appropriate geoprocessing tools	0 (0%)	2 (5%)	2 (5%)	15 (38%)	20 (51%)	39	4.4
Understands GIS terminology/jargon	0 (0%)	2 (5%)	5 (13%)	11 (28%)	21 (54%)	39	4.3
Familiarity with low cost (freeware, open source) alternative geoprocessing tools	1 (3%)	9 (24%)	12 (32%)	10 (27%)	5 (14%)	37	3.2
Design Geographic Queries	2 (5%)	4 (10%)	8 (21%)	13 (33%)	12 (31%)	39	3.7
Query by Attribute and Location Queries and Calculations	2 (5%)	1 (3%)	6 (15%)	7 (18%)	23 (59%)	39	4.2
Perform Basic Overlay (identity, erase, intersect, union)	0 (0%)	3 (8%)	6 (16%)	10 (26%)	19 (50%)	38	4.2
Perform Proximity Analysis (Buffer and Near)	1 (3%)	1 (3%)	7 (18%)	10 (26%)	20 (51%)	39	4.2
Assemble area features from line primitives	2 (5%)	5 (14%)	13 (35%)	12 (32%)	5 (14%)	37	3.4
Create and Manage Annotation	1 (3%)	3 (8%)	10 (26%)	10 (26%)	14 (37%)	38	3.9
Create and Manage multiple data structures	2 (5%)	2 (5%)	6 (16%)	11 (29%)	17 (45%)	38	4.0
Create and Manage Simple to Complex/compound Symbol Sets	4 (11%)	8 (21%)	14 (37%)	7 (18%)	5 (13%)	38	3.0
Work and translate varied projections and datums	2 (5%)	3 (8%)	9 (24%)	10 (26%)	14 (37%)	38	3.8
Create TIN Surfaces	6 (16%)	8 (21%)	8 (21%)	10 (26%)	6 (16%)	38	3.1
Create DEM Surfaces	6 (16%)	7 (18%)	9 (24%)	10 (26%)	6 (16%)	38	3.1
Analyze Tin and DEM Surfaces (Slope, Aspect, Elevation, Visibility, Watersheds, Drainage, Profiles)	4 (11%)	5 (13%)	12 (32%)	10 (26%)	7 (18%)	38	3.3
Perform Hydrographic Modelling	6 (16%)	12 (32%)	13 (34%)	4 (11%)	3 (8%)	38	2.6
Static and Dynamic Flood Modelling	5 (13%)	12 (32%)	10 (26%)	9 (24%)	2 (5%)	38	2.8
Grid and Vector modeling for Suitability/Capability models	8 (22%)	11 (30%)	9 (24%)	6 (16%)	3 (8%)	37	2.6
Perform appropriate Weighting and Ranking for Suitability/Capability models	7 (18%)	12 (32%)	12 (32%)	4 (11%)	3 (8%)	38	2.6

Create, manage and model Geometric Networks	7 (18%)	12 (32%)	13 (34%)	5 (13%)	1 (3%)	38	2.5
Network Modelling and Analysis	9 (24%)	8 (21%)	15 (39%)	4 (11%)	2 (5%)	38	2.5
Create and Manage Address Ranges	8 (21%)	7 (18%)	8 (21%)	7 (18%)	8 (21%)	38	3.0
Apply Dynamic Segmentation for point and range events on Network	10 (27%)	11 (30%)	14 (38%)	2 (5%)	0 (0%)	37	2.2
Habitat Modelling	10 (26%)	16 (42%)	9 (24%)	3 (8%)	0 (0%)	38	2.1
Create Development and Suitability Models and Scenarios	4 (11%)	15 (39%)	11 (29%)	5 (13%)	3 (8%)	38	2.7
Automate Manual Processes	4 (11%)	9 (24%)	8 (21%)	13 (34%)	4 (11%)	38	3.1
Create/Modify/Design GIS tools for specialized or repetitive tasks: Scripting, VB, Python	7 (18%)	6 (16%)	11 (29%)	13 (34%)	1 (3%)	38	2.9

### 1.3 Geographic Information Systems Interpretation ... | Competency for summer student

	1	2	3	4	5	Total	Mean
Use appropriate geoprocessing tools	1 (3%)	12 (32%)	14 (38%)	6 (16%)	4 (11%)	37	3.0
Understands GIS terminology/jargon	0 (0%)	9 (25%)	12 (33%)	10 (28%)	5 (14%)	36	3.3
Familiarity with low cost (freeware, open source) alternative geoprocessing tools	7 (19%)	11 (31%)	15 (42%)	3 (8%)	0 (0%)	36	2.4
Design Geographic Queries	4 (11%)	13 (36%)	14 (39%)	3 (8%)	2 (6%)	36	2.6
Query by Attribute and Location Queries and Calculations	3 (8%)	7 (19%)	20 (54%)	4 (11%)	3 (8%)	37	2.9
Perform Basic Overlay (identity, erase, intersect, union)	0 (0%)	8 (22%)	19 (53%)	6 (17%)	3 (8%)	36	3.1
Perform Proximity Analysis (Buffer and Near)	0 (0%)	10 (27%)	20 (54%)	5 (14%)	2 (5%)	37	3.0
Assemble area features from line primitives	3 (9%)	12 (35%)	16 (47%)	3 (9%)	0 (0%)	34	2.6
Create and Manage Annotation	5 (14%)	9 (25%)	17 (47%)	4 (11%)	1 (3%)	36	2.6
Create and Manage multiple data structures	3 (8%)	14 (39%)	15 (42%)	3 (8%)	1 (3%)	36	2.6
Create and Manage Simple to Complex/compound Symbol Sets	7 (20%)	16 (46%)	9 (26%)	3 (9%)	0 (0%)	35	2.2
Work and translate varied projections and datums	3 (8%)	13 (36%)	11 (31%)	5 (14%)	4 (11%)	36	2.8
Create TIN Surfaces	6 (17%)	14 (39%)	11 (31%)	4 (11%)	1 (3%)	36	2.4
Create DEM Surfaces	6 (17%)	14 (39%)	11 (31%)	4 (11%)	1 (3%)	36	2.4
Analyze Tin and DEM Surfaces (Slope, Aspect, Elevation, Visibility, Watersheds, Drainage, Profiles)	8 (22%)	18 (50%)	6 (17%)	3 (8%)	1 (3%)	36	2.2
Perform Hydrographic Modelling	14 (39%)	16 (44%)	3 (8%)	3 (8%)	0 (0%)	36	1.9
Static and Dynamic Flood Modelling	11 (31%)	17 (47%)	5 (14%)	3 (8%)	0 (0%)	36	2.0
Grid and Vector modeling for Suitability/Capability models	12 (34%)	18 (51%)	3 (9%)	2 (6%)	0 (0%)	35	1.9
Perform appropriate Weighting and Ranking for Suitability/Capability models	16 (44%)	15 (42%)	3 (8%)	2 (6%)	0 (0%)	36	1.8

Create, manage and model Geometric Networks	17 (47%)	14 (39%)	2 (6%)	3 (8%)	0 (0%)	36	1.8
Network Modelling and Analysis	14 (40%)	15 (43%)	4 (11%)	2 (6%)	0 (0%)	35	1.8
Create and Manage Address Ranges	13 (36%)	16 (44%)	4 (11%)	3 (8%)	0 (0%)	36	1.9
Apply Dynamic Segmentation for point and range events on Network	14 (41%)	18 (53%)	0 (0%)	1 (3%)	1 (3%)	34	1.7
Habitat Modelling	20 (57%)	12 (34%)	0 (0%)	2 (6%)	1 (3%)	35	1.6
Create Development and Suitability Models and Scenarios	13 (36%)	14 (39%)	5 (14%)	2 (6%)	2 (6%)	36	2.1
Automate Manual Processes	12 (33%)	13 (36%)	6 (17%)	3 (8%)	2 (6%)	36	2.2
Create/Modify/Design GIS tools for specialized or repetitive tasks: Scripting, VB, Python	16 (44%)	10 (28%)	7 (19%)	2 (6%)	1 (3%)	36	1.9

### 1.3 Geographic Information Systems Interpretation ... | Competency entering workforce

	1	2	3	4	5	Total	Mean
Use appropriate geoprocessing tools	1 (3%)	1 (3%)	9 (24%)	13 (34%)	14 (37%)	38	4.0
Understands GIS terminology/jargon	0 (0%)	1 (3%)	11 (29%)	14 (37%)	12 (32%)	38	4.0
Familiarity with low cost (freeware, open source) alternative geoprocessing tools	3 (8%)	2 (5%)	18 (49%)	12 (32%)	2 (5%)	37	3.2
Design Geographic Queries	3 (8%)	0 (0%)	11 (29%)	17 (45%)	7 (18%)	38	3.7
Query by Attribute and Location Queries and Calculations	3 (8%)	0 (0%)	8 (21%)	18 (47%)	9 (24%)	38	3.8
Perform Basic Overlay (identity, erase, intersect, union)	0 (0%)	1 (3%)	9 (24%)	17 (46%)	10 (27%)	37	4.0
Perform Proximity Analysis (Buffer and Near)	0 (0%)	0 (0%)	13 (34%)	16 (42%)	9 (24%)	38	3.9
Assemble area features from line primitives	1 (3%)	0 (0%)	14 (40%)	18 (51%)	2 (6%)	35	3.6
Create and Manage Annotation	2 (5%)	1 (3%)	11 (30%)	17 (46%)	6 (16%)	37	3.6
Create and Manage multiple data structures	2 (6%)	0 (0%)	11 (31%)	17 (47%)	6 (17%)	36	3.7
Create and Manage Simple to Complex/compound Symbol Sets	4 (11%)	1 (3%)	15 (42%)	14 (39%)	2 (6%)	36	3.2
Work and translate varied projections and datums	2 (6%)	1 (3%)	9 (25%)	12 (33%)	12 (33%)	36	3.9
Create TIN Surfaces	2 (5%)	5 (14%)	16 (43%)	10 (27%)	4 (11%)	37	3.2
Create DEM Surfaces	2 (6%)	4 (11%)	17 (47%)	10 (28%)	3 (8%)	36	3.2
Analyze Tin and DEM Surfaces (Slope, Aspect, Elevation, Visibility, Watersheds, Drainage, Profiles)	2 (6%)	5 (14%)	15 (42%)	11 (31%)	3 (8%)	36	3.2
Perform Hydrographic Modelling	2 (5%)	9 (24%)	19 (51%)	7 (19%)	0 (0%)	37	2.8
Static and Dynamic Flood Modelling	2 (6%)	7 (19%)	18 (50%)	8 (22%)	1 (3%)	36	3.0
Grid and Vector modeling for Suitability/Capability models	3 (8%)	5 (14%)	18 (50%)	9 (25%)	1 (3%)	36	3.0
Perform appropriate Weighting and Ranking for Suitability/Capability models	4 (11%)	8 (22%)	17 (46%)	7 (19%)	1 (3%)	37	2.8

Create, manage and model Geometric Networks	3 (8%)	9 (24%)	17 (46%)	7 (19%)	1 (3%)	37	2.8
Network Modelling and Analysis	2 (5%)	7 (19%)	16 (43%)	12 (32%)	0 (0%)	37	3.0
Create and Manage Address Ranges	4 (11%)	7 (19%)	10 (28%)	12 (33%)	3 (8%)	36	3.1
Apply Dynamic Segmentation for point and range events on Network	5 (14%)	9 (25%)	15 (42%)	6 (17%)	1 (3%)	36	2.7
Habitat Modelling	5 (14%)	11 (31%)	14 (39%)	5 (14%)	1 (3%)	36	2.6
Create Development and Suitability Models and Scenarios	3 (8%)	8 (22%)	18 (49%)	4 (11%)	4 (11%)	37	2.9
Automate Manual Processes	4 (11%)	4 (11%)	13 (35%)	10 (27%)	6 (16%)	37	3.3
Create/Modify/Design GIS tools for specialized or repetitive tasks: Scripting, VB, Python	6 (17%)	6 (17%)	13 (36%)	6 (17%)	5 (14%)	36	2.9

#### 1.4. Technical Office Procedures | Current Importance

	1	2	3	4	5	Total	Mean
Fulfill Map/Data Requests	0 (0%)	0 (0%)	4 (11%)	10 (26%)	24 (63%)	38	4.5
Gather User Requirements	0 (0%)	5 (13%)	7 (18%)	12 (32%)	14 (37%)	38	3.9
Research Data Sources	0 (0%)	0 (0%)	8 (21%)	16 (42%)	14 (37%)	38	4.2
Disseminate Map Products	0 (0%)	5 (13%)	9 (24%)	13 (34%)	11 (29%)	38	3.8
Create Presentation Materials	0 (0%)	1 (3%)	7 (18%)	12 (31%)	19 (49%)	39	4.3
Load/Burn Data onto Various Media	0 (0%)	3 (8%)	12 (31%)	10 (26%)	14 (36%)	39	3.9
Create/Automate Mail Lists	4 (11%)	5 (13%)	12 (32%)	8 (21%)	9 (24%)	38	3.3
Electronic Data Distribution - File transfer (FTP)	2 (5%)	6 (16%)	14 (37%)	6 (16%)	10 (26%)	38	3.4
Computer/File Backup	5 (13%)	3 (8%)	7 (18%)	11 (29%)	12 (32%)	38	3.6

#### 1.4. Technical Office Procedures | Competency for summer student

	1	2	3	4	5	Total	Mean
Fulfill Map/Data Requests	3 (9%)	7 (20%)	16 (46%)	6 (17%)	3 (9%)	35	3.0
Gather User Requirements	4 (12%)	11 (32%)	15 (44%)	4 (12%)	0 (0%)	34	2.6
Research Data Sources	1 (3%)	11 (31%)	16 (46%)	6 (17%)	1 (3%)	35	2.9
Disseminate Map Products	3 (9%)	12 (36%)	13 (39%)	5 (15%)	0 (0%)	33	2.6
Create Presentation Materials	2 (6%)	8 (23%)	16 (46%)	6 (17%)	3 (9%)	35	3.0
Load/Burn Data onto Various Media	0 (0%)	6 (16%)	20 (54%)	8 (22%)	3 (8%)	37	3.2
Create/Automate Mail Lists	3 (9%)	9 (26%)	19 (56%)	2 (6%)	1 (3%)	34	2.7
Electronic Data Distribution - File transfer (FTP)	4 (11%)	11 (31%)	14 (39%)	5 (14%)	2 (6%)	36	2.7
Computer/File Backup	4 (11%)	7 (19%)	16 (44%)	7 (19%)	2 (6%)	36	2.9

#### 1.4. Technical Office Procedures | Competency entering workforce

	1	2	3	4	5	Total	Mean
Fulfill Map/Data Requests	0 (0%)	1 (3%)	10 (27%)	14 (38%)	12 (32%)	37	4.0
Gather User Requirements	0 (0%)	5 (14%)	9 (25%)	14 (39%)	8 (22%)	36	3.7
Research Data Sources	0 (0%)	2 (5%)	13 (35%)	14 (38%)	8 (22%)	37	3.8
Disseminate Map Products	0 (0%)	4 (11%)	13 (36%)	12 (33%)	7 (19%)	36	3.6
Create Presentation Materials	0 (0%)	2 (5%)	10 (26%)	14 (37%)	12 (32%)	38	3.9
Load/Burn Data onto Various Media	0 (0%)	1 (3%)	14 (37%)	13 (34%)	10 (26%)	38	3.8
Create/Automate Mail Lists	2 (6%)	5 (14%)	10 (28%)	12 (33%)	7 (19%)	36	3.5
Electronic Data Distribution - File transfer (FTP)	1 (3%)	5 (14%)	12 (32%)	11 (30%)	8 (22%)	37	3.5
Computer/File Backup	1 (3%)	3 (8%)	10 (28%)	15 (42%)	7 (19%)	36	3.7

## 1.5 Map and Image Interpretation and Analysis | Current Importance

	1	2	3	4	5	Total	Mean
Basic Map Interpretation	0 (0%)	0 (0%)	1 (3%)	10 (26%)	28 (72%)	39	4.7
Basic Air Photo Interpretation	0 (0%)	4 (10%)	4 (10%)	8 (21%)	23 (59%)	39	4.3
Interpret Landform from Maps and Images	0 (0%)	6 (15%)	9 (23%)	8 (21%)	16 (41%)	39	3.9
Interpret Land Use / Cultural Features from Maps and Images	0 (0%)	3 (8%)	11 (28%)	8 (21%)	17 (44%)	39	4.0
Interpret Drainage from Maps and Images	1 (3%)	6 (15%)	9 (23%)	10 (26%)	13 (33%)	39	3.7
Scanned photo image analysis	0 (0%)	9 (24%)	8 (21%)	13 (34%)	8 (21%)	38	3.5
Basic remote sensing theory	9 (24%)	13 (35%)	9 (24%)	4 (11%)	2 (5%)	37	2.4
Satellite image analysis	7 (19%)	10 (28%)	9 (25%)	6 (17%)	4 (11%)	36	2.7
Supervised classification of imagery	10 (28%)	12 (33%)	9 (25%)	4 (11%)	1 (3%)	36	2.3
Processing and interpreting LiDAR and LiDAR derived datasets	8 (21%)	8 (21%)	10 (26%)	5 (13%)	7 (18%)	38	2.9
Calculate building heights from LiDAR	8 (21%)	11 (29%)	12 (32%)	5 (13%)	2 (5%)	38	2.5
Read and interpret LiDAR LAS files	10 (26%)	8 (21%)	12 (32%)	5 (13%)	3 (8%)	38	2.6
Convert point ASCII SDF, CDF, CSF files to SHAPE (or DBF)	5 (13%)	8 (21%)	5 (13%)	10 (26%)	10 (26%)	38	3.3
Remote Sensing: Interpret Satellite Imagery (LandSat 5/7 TM, Spot, Ikonos etc)	13 (34%)	12 (32%)	11 (29%)	1 (3%)	1 (3%)	38	2.1
Image Registration/Georeferencing	2 (5%)	1 (3%)	11 (29%)	11 (29%)	13 (34%)	38	3.8
Produce False colour / False Colour IR	14 (38%)	11 (30%)	10 (27%)	2 (5%)	0 (0%)	37	2.0
Conduct ground truthing	8 (21%)	5 (13%)	3 (8%)	8 (21%)	15 (38%)	39	3.4
Understand and convert map and image distance, area and scale	0 (0%)	4 (10%)	3 (8%)	12 (31%)	20 (51%)	39	4.2
Calculate area, scale and distance manually	1 (3%)	5 (13%)	7 (18%)	4 (10%)	22 (56%)	39	4.1



Calculate area, scale and distance with calculator	2 (5%)	2 (5%)	8 (21%)	7 (18%)	20 (51%)	39	4.1
Work in Imperial and Metric systems	1 (3%)	3 (8%)	3 (8%)	7 (19%)	23 (62%)	37	4.3

## 1.5 Map and Image Interpretation and Analysis | Competency for summer student

	1	2	3	4	5	Total	Mean
Basic Map Interpretation	0 (0%)	9 (26%)	14 (40%)	8 (23%)	4 (11%)	35	3.2
Basic Air Photo Interpretation	0 (0%)	12 (33%)	14 (39%)	7 (19%)	3 (8%)	36	3.0
Interpret Landform from Maps and Images	1 (3%)	16 (46%)	10 (29%)	6 (17%)	2 (6%)	35	2.8
Interpret Land Use / Cultural Features from Maps and Images	1 (3%)	15 (42%)	13 (36%)	6 (17%)	1 (3%)	36	2.8
Interpret Drainage from Maps and Images	4 (11%)	15 (42%)	12 (33%)	4 (11%)	1 (3%)	36	2.5
Scanned photo image analysis	5 (14%)	11 (31%)	12 (34%)	6 (17%)	1 (3%)	35	2.6
Basic remote sensing theory	10 (31%)	16 (50%)	6 (19%)	0 (0%)	0 (0%)	32	1.9
Satellite image analysis	9 (28%)	13 (41%)	8 (25%)	2 (6%)	0 (0%)	32	2.1
Supervised classification of imagery	16 (50%)	10 (31%)	6 (19%)	0 (0%)	0 (0%)	32	1.7
Processing and interpreting LiDAR and LiDAR derived datasets	17 (50%)	10 (29%)	5 (15%)	1 (3%)	1 (3%)	34	1.8
Calculate building heights from LiDAR	16 (47%)	10 (29%)	6 (18%)	1 (3%)	1 (3%)	34	1.9
Read and interpret LiDAR LAS files	18 (55%)	8 (24%)	6 (18%)	0 (0%)	1 (3%)	33	1.7
Convert point ASCII SDF, CDF, CSF files to SHAPE (or DBF)	10 (29%)	7 (20%)	14 (40%)	4 (11%)	0 (0%)	35	2.3
Remote Sensing: Interpret Satellite Imagery (LandSat 5/7 TM, Spot, Ikonos etc)	17 (49%)	10 (29%)	8 (23%)	0 (0%)	0 (0%)	35	1.7
Image Registration/Georeferencing	4 (11%)	9 (25%)	17 (47%)	4 (11%)	2 (6%)	36	2.8
Produce False colour / False Colour IR	17 (50%)	10 (29%)	7 (21%)	0 (0%)	0 (0%)	34	1.7
Conduct ground truthing	7 (21%)	9 (26%)	14 (41%)	3 (9%)	1 (3%)	34	2.5
Understand and convert map and image distance, area and scale	2 (6%)	7 (19%)	16 (44%)	7 (19%)	4 (11%)	36	3.1
Calculate area, scale and distance manually	1 (3%)	9 (25%)	17 (47%)	5 (14%)	4 (11%)	36	3.1

Calculate area, scale and distance with calculator	0 (0%)	8 (22%)	18 (50%)	6 (17%)	4 (11%)	36	3.2
Work in Imperial and Metric systems	1 (3%)	7 (19%)	16 (44%)	6 (17%)	6 (17%)	36	3.2

## 1.5 Map and Image Interpretation and Analysis | Competency entering workforce

	1	2	3	4	5	Total	Mean
Basic Map Interpretation	0 (0%)	1 (3%)	7 (18%)	15 (39%)	15 (39%)	38	4.2
Basic Air Photo Interpretation	0 (0%)	2 (5%)	9 (24%)	16 (42%)	11 (29%)	38	3.9
Interpret Landform from Maps and Images	0 (0%)	6 (16%)	13 (34%)	11 (29%)	8 (21%)	38	3.6
Interpret Land Use / Cultural Features from Maps and Images	0 (0%)	3 (8%)	17 (45%)	11 (29%)	7 (18%)	38	3.6
Interpret Drainage from Maps and Images	1 (3%)	5 (13%)	14 (37%)	12 (32%)	6 (16%)	38	3.4
Scanned photo image analysis	1 (3%)	4 (11%)	14 (39%)	12 (33%)	5 (14%)	36	3.4
Basic remote sensing theory	5 (14%)	6 (16%)	16 (43%)	9 (24%)	1 (3%)	37	2.9
Satellite image analysis	4 (11%)	3 (9%)	19 (54%)	8 (23%)	1 (3%)	35	3.0
Supervised classification of imagery	6 (17%)	10 (29%)	13 (37%)	6 (17%)	0 (0%)	35	2.5
Processing and interpreting LiDAR and LiDAR derived datasets	6 (17%)	8 (22%)	11 (31%)	9 (25%)	2 (6%)	36	2.8
Calculate building heights from LiDAR	5 (14%)	9 (25%)	11 (31%)	8 (22%)	3 (8%)	36	2.9
Read and interpret LiDAR LAS files	7 (19%)	7 (19%)	14 (39%)	3 (8%)	5 (14%)	36	2.8
Convert point ASCII SDF, CDF, CSF files to SHAPE (or DBF)	3 (8%)	6 (16%)	14 (38%)	8 (22%)	6 (16%)	37	3.2
Remote Sensing: Interpret Satellite Imagery (LandSat 5/7 TM, Spot, Ikonos etc)	8 (22%)	10 (27%)	12 (32%)	7 (19%)	0 (0%)	37	2.5
Image Registration/Georeferencing	1 (3%)	5 (13%)	12 (32%)	11 (29%)	9 (24%)	38	3.6
Produce False colour / False Colour IR	10 (29%)	7 (20%)	12 (34%)	5 (14%)	1 (3%)	35	2.4
Conduct ground truthing	6 (17%)	2 (6%)	10 (28%)	11 (31%)	7 (19%)	36	3.3
Understand and convert map and image distance, area and scale	1 (3%)	2 (5%)	9 (24%)	11 (29%)	15 (39%)	38	4.0
Calculate area, scale and distance manually	0 (0%)	4 (11%)	12 (32%)	10 (26%)	12 (32%)	38	3.8

Calculate area, scale and distance with calculator	0 (0%)	2 (5%)	11 (29%)	13 (34%)	12 (32%)	38	3.9
Work in Imperial and Metric systems	1 (3%)	2 (5%)	7 (19%)	12 (32%)	15 (41%)	37	4.0

### 1.6. Basic Geodesy | Current Importance

	1	2	3	4	5	Total	Mean
Understand basic geodesy terminology	2 (5%)	5 (13%)	12 (31%)	10 (26%)	10 (26%)	39	3.5
Knowledge of local, regional and national coordinate systems and datums	1 (3%)	3 (8%)	7 (18%)	10 (26%)	18 (46%)	39	4.1
Define and Apply Map Projections	1 (3%)	2 (5%)	9 (24%)	10 (26%)	16 (42%)	38	4.0
Re-project map datasets	2 (5%)	1 (3%)	6 (16%)	12 (32%)	17 (45%)	38	4.1
Apply appropriate provincial and national horizontal datums	4 (11%)	4 (11%)	7 (19%)	11 (31%)	10 (28%)	36	3.5
Apply appropriate provincial and vertical vertical datums	5 (13%)	5 (13%)	11 (29%)	7 (18%)	10 (26%)	38	3.3
Define and Apply Map Datum transformations	4 (11%)	4 (11%)	8 (21%)	12 (32%)	10 (26%)	38	3.5
Define appropriate Datum Conversions	5 (14%)	3 (8%)	9 (24%)	11 (30%)	9 (24%)	37	3.4
Convert orthometric to ellipsoid heights	9 (25%)	7 (19%)	11 (31%)	7 (19%)	2 (6%)	36	2.6

### 1.6. Basic Geodesy | Competency for summer student

	1	2	3	4	5	Total	Mean
Understand basic geodesy terminology	4 (11%)	12 (33%)	17 (47%)	3 (8%)	0 (0%)	36	2.5
Knowledge of local, regional and national coordinate systems and datums	3 (8%)	12 (33%)	15 (42%)	4 (11%)	2 (6%)	36	2.7
Define and Apply Map Projections	4 (11%)	9 (26%)	15 (43%)	4 (11%)	3 (9%)	35	2.8
Re-project map datasets	4 (11%)	8 (23%)	16 (46%)	4 (11%)	3 (9%)	35	2.8
Apply appropriate provincial and national horizontal datums	8 (24%)	7 (21%)	14 (42%)	4 (12%)	0 (0%)	33	2.4
Apply appropriate provincial and vertical vertical datums	9 (26%)	7 (21%)	16 (47%)	2 (6%)	0 (0%)	34	2.3
Define and Apply Map Datum transformations	7 (20%)	9 (26%)	13 (37%)	6 (17%)	0 (0%)	35	2.5
Define appropriate Datum Conversions	7 (21%)	9 (26%)	12 (35%)	5 (15%)	1 (3%)	34	2.5
Convert orthometric to ellipsoid heights	12 (35%)	10 (29%)	11 (32%)	1 (3%)	0 (0%)	34	2.0

### 1.6. Basic Geodesy | Competency entering workforce

	1	2	3	4	5	Total	Mean
Understand basic geodesy terminology	2 (5%)	2 (5%)	14 (37%)	13 (34%)	7 (18%)	38	3.6
Knowledge of local, regional and national coordinate systems and datums	1 (3%)	3 (8%)	12 (32%)	16 (42%)	6 (16%)	38	3.6
Define and Apply Map Projections	1 (3%)	3 (8%)	9 (24%)	15 (41%)	9 (24%)	37	3.8
Re-project map datasets	2 (5%)	1 (3%)	8 (22%)	17 (46%)	9 (24%)	37	3.8
Apply appropriate provincial and national horizontal datums	4 (11%)	3 (9%)	7 (20%)	16 (46%)	5 (14%)	35	3.4
Apply appropriate provincial and vertical vertical datums	5 (14%)	3 (8%)	8 (22%)	17 (46%)	4 (11%)	37	3.3
Define and Apply Map Datum transformations	4 (11%)	3 (8%)	9 (25%)	17 (47%)	3 (8%)	36	3.3
Define appropriate Datum Conversions	3 (8%)	3 (8%)	11 (31%)	14 (39%)	5 (14%)	36	3.4
Convert orthometric to ellipsoid heights	7 (19%)	6 (17%)	10 (28%)	11 (31%)	2 (6%)	36	2.9

## 1.7 Surveys and Statistics | Current Importance

	1	2	3	4	5	Total	Mean
Understand Statistical terminology	1 (3%)	7 (19%)	12 (33%)	10 (28%)	6 (17%)	36	3.4
Apply Statistical measure of central tendency and distribution	4 (11%)	9 (26%)	17 (49%)	2 (6%)	3 (9%)	35	2.7
Perform Demographic Analysis	1 (3%)	8 (22%)	14 (39%)	8 (22%)	5 (14%)	36	3.2
Assess Development/Permit related Data	5 (14%)	3 (8%)	8 (22%)	7 (19%)	14 (38%)	37	3.6
Perform Trends Analysis	5 (14%)	9 (25%)	12 (33%)	8 (22%)	2 (6%)	36	2.8
Conduct Population Projections: Linear Regression - Cohort Survival	8 (23%)	10 (29%)	13 (37%)	3 (9%)	1 (3%)	35	2.4
Windshield Surveys - Design, Conduct/Organize, Analyze/Report	7 (20%)	10 (29%)	6 (17%)	6 (17%)	6 (17%)	35	2.8
GPS surveys - Design (Create Data Dictionaries/ Interface Etc), Conduct/Organize	5 (14%)	5 (14%)	6 (16%)	12 (32%)	9 (24%)	37	3.4
Attitude and Opinion Surveys - Design, Conduct/Organize, Analyze/Report	6 (16%)	16 (43%)	8 (22%)	6 (16%)	1 (3%)	37	2.5
Other Electronic field data collection - Laser Rangefinder, Data Logger, GPS Camera	6 (17%)	7 (19%)	12 (33%)	7 (19%)	4 (11%)	36	2.9
Can assess statistical Significance survey results	6 (17%)	8 (22%)	12 (33%)	7 (19%)	3 (8%)	36	2.8

## 1.7 Surveys and Statistics | Competency for summer student

	1	2	3	4	5	Total	Mean
Understand Statistical terminology	8 (24%)	13 (39%)	7 (21%)	4 (12%)	1 (3%)	33	2.3
Apply Statistical measure of central tendency and distribution	10 (31%)	13 (41%)	8 (25%)	1 (3%)	0 (0%)	32	2.0
Perform Demographic Analysis	12 (36%)	11 (33%)	8 (24%)	1 (3%)	1 (3%)	33	2.0
Assess Development/Permit related Data	11 (32%)	10 (29%)	10 (29%)	2 (6%)	1 (3%)	34	2.2
Perform Trends Analysis	12 (36%)	11 (33%)	9 (27%)	1 (3%)	0 (0%)	33	2.0
Conduct Population Projections: Linear Regression - Cohort Survival	15 (47%)	9 (28%)	7 (22%)	0 (0%)	1 (3%)	32	1.8
Windshield Surveys - Design, Conduct/Organize, Analyze/Report	12 (39%)	8 (26%)	6 (19%)	5 (16%)	0 (0%)	31	2.1
GPS surveys - Design (Create Data Dictionaries/ Interface Etc), Conduct/Organize	11 (32%)	9 (26%)	10 (29%)	3 (9%)	1 (3%)	34	2.2
Attitude and Opinion Surveys - Design, Conduct/Organize, Analyze/Report	13 (39%)	15 (45%)	4 (12%)	0 (0%)	1 (3%)	33	1.8
Other Electronic field data collection - Laser Rangefinder, Data Logger, GPS Camera	13 (39%)	9 (27%)	10 (30%)	1 (3%)	0 (0%)	33	2.0
Can assess statistical Significance survey results	15 (45%)	10 (30%)	8 (24%)	0 (0%)	0 (0%)	33	1.8



## 1.7 Surveys and Statistics | Competency entering workforce

	1	2	3	4	5	Total	Mean
Understand Statistical terminology	2 (6%)	7 (19%)	11 (31%)	13 (36%)	3 (8%)	36	3.2
Apply Statistical measure of central tendency and distribution	3 (9%)	8 (23%)	12 (34%)	11 (31%)	1 (3%)	35	3.0
Perform Demographic Analysis	4 (11%)	6 (17%)	13 (37%)	9 (26%)	3 (9%)	35	3.0
Assess Development/Permit related Data	3 (8%)	7 (19%)	14 (39%)	8 (22%)	4 (11%)	36	3.1
Perform Trends Analysis	5 (14%)	7 (20%)	11 (31%)	10 (29%)	2 (6%)	35	2.9
Conduct Population Projections: Linear Regression - Cohort Survival	6 (17%)	8 (23%)	12 (34%)	7 (20%)	2 (6%)	35	2.7
Windshield Surveys - Design, Conduct/Organize, Analyze/Report	4 (11%)	9 (26%)	10 (29%)	9 (26%)	3 (9%)	35	2.9
GPS surveys - Design (Create Data Dictionaries/ Interface Etc), Conduct/Organize	4 (11%)	5 (14%)	14 (39%)	8 (22%)	5 (14%)	36	3.1
Attitude and Opinion Surveys - Design, Conduct/Organize, Analyze/Report	5 (14%)	11 (31%)	13 (36%)	5 (14%)	2 (6%)	36	2.7
Other Electronic field data collection - Laser Rangefinder, Data Logger, GPS Camera	4 (11%)	9 (26%)	13 (37%)	7 (20%)	2 (6%)	35	2.8
Can assess statistical Significance survey results	5 (15%)	8 (24%)	15 (44%)	5 (15%)	1 (3%)	34	2.7

## 1.8 Create Technical Documentation | Current Importance

	1	2	3	4	5	Total	Mean
Technical Report writing	2 (5%)	3 (8%)	11 (29%)	8 (21%)	14 (37%)	38	3.8
Maintain Data Dictionaries	2 (5%)	8 (22%)	10 (27%)	6 (16%)	11 (30%)	37	3.4
Interpret and document Metadata	4 (11%)	5 (14%)	13 (35%)	10 (27%)	5 (14%)	37	3.2
Document Project Results	0 (0%)	6 (17%)	9 (25%)	10 (28%)	11 (31%)	36	3.7
Document Progress Reports	1 (3%)	4 (11%)	8 (22%)	11 (31%)	12 (33%)	36	3.8
Create user procedural guides	4 (11%)	4 (11%)	7 (19%)	8 (22%)	14 (38%)	37	3.6

### 1.8 Create Technical Documentation | Competency for summer student

	1	2	3	4	5	Total	Mean
Technical Report writing	8 (22%)	10 (28%)	15 (42%)	3 (8%)	0 (0%)	36	2.4
Maintain Data Dictionaries	12 (34%)	9 (26%)	11 (31%)	3 (9%)	0 (0%)	35	2.1
Interpret and document Metadata	12 (35%)	7 (21%)	10 (29%)	5 (15%)	0 (0%)	34	2.2
Document Project Results	8 (24%)	8 (24%)	15 (44%)	3 (9%)	0 (0%)	34	2.4
Document Progress Reports	8 (24%)	9 (26%)	13 (38%)	4 (12%)	0 (0%)	34	2.4
Create user procedural guides	10 (30%)	5 (15%)	15 (45%)	2 (6%)	1 (3%)	33	2.4

### 1.8 Create Technical Documentation | Competency entering workforce

	1	2	3	4	5	Total	Mean
Technical Report writing	0 (0%)	4 (11%)	14 (39%)	15 (42%)	3 (8%)	36	3.5
Maintain Data Dictionaries	4 (11%)	4 (11%)	11 (31%)	11 (31%)	5 (14%)	35	3.3
Interpret and document Metadata	2 (6%)	7 (19%)	10 (28%)	15 (42%)	2 (6%)	36	3.2
Document Project Results	1 (3%)	5 (14%)	11 (31%)	14 (40%)	4 (11%)	35	3.4
Document Progress Reports	1 (3%)	4 (11%)	13 (37%)	12 (34%)	5 (14%)	35	3.5
Create user procedural guides	2 (6%)	6 (17%)	8 (23%)	13 (37%)	6 (17%)	35	3.4

## 1.9. Geospatial Management | Current Importance

	1	2	3	4	5	Total	Mean
Manage Geospatial Databases and Files	2 (5%)	2 (5%)	5 (14%)	14 (38%)	14 (38%)	37	4.0
Design Database Structure/Schema	3 (8%)	4 (11%)	10 (26%)	15 (39%)	6 (16%)	38	3.4
Create Database Tables	3 (8%)	1 (3%)	5 (13%)	14 (37%)	15 (39%)	38	4.0
Create Database Queries	2 (5%)	4 (11%)	5 (13%)	13 (34%)	14 (37%)	38	3.9
Create Database Reports	4 (11%)	4 (11%)	6 (16%)	14 (37%)	10 (26%)	38	3.6
Database administration	4 (11%)	6 (16%)	12 (32%)	9 (24%)	6 (16%)	37	3.2
Automate Manual Processes (Geoprocessing)	4 (11%)	6 (16%)	9 (24%)	11 (29%)	8 (21%)	38	3.3
Ensure Data Quality (Quality Control, Quality Assurance)	1 (3%)	1 (3%)	3 (8%)	10 (26%)	23 (61%)	38	4.4
Experience with relational databases	4 (11%)	4 (11%)	8 (21%)	9 (24%)	13 (34%)	38	3.6
Experience with computer programming concepts	4 (11%)	12 (32%)	13 (34%)	5 (13%)	4 (11%)	38	2.8
Ensure Data Quality (Quality Control, Quality Assurance)	1 (3%)	2 (5%)	6 (16%)	6 (16%)	23 (61%)	38	4.3

## 1.9. Geospatial Management | Competency for summer student

	1	2	3	4	5	Total	Mean
Manage Geospatial Databases and Files	5 (14%)	11 (31%)	15 (43%)	4 (11%)	0 (0%)	35	2.5
Design Database Structure/Schema	12 (34%)	10 (29%)	11 (31%)	2 (6%)	0 (0%)	35	2.1
Create Database Tables	4 (11%)	9 (26%)	18 (51%)	4 (11%)	0 (0%)	35	2.6
Create Database Queries	4 (11%)	10 (29%)	16 (46%)	5 (14%)	0 (0%)	35	2.6
Create Database Reports	8 (23%)	10 (29%)	14 (40%)	3 (9%)	0 (0%)	35	2.3
Database administration	15 (43%)	9 (26%)	10 (29%)	1 (3%)	0 (0%)	35	1.9
Automate Manual Processes (Geoprocessing)	12 (34%)	7 (20%)	14 (40%)	2 (6%)	0 (0%)	35	2.2
Ensure Data Quality (Quality Control, Quality Assurance)	3 (9%)	10 (29%)	15 (43%)	5 (14%)	2 (6%)	35	2.8
Experience with relational databases	12 (34%)	6 (17%)	14 (40%)	1 (3%)	2 (6%)	35	2.3
Experience with computer programming concepts	18 (51%)	7 (20%)	10 (29%)	0 (0%)	0 (0%)	35	1.8
Ensure Data Quality (Quality Control, Quality Assurance)	6 (17%)	8 (23%)	11 (31%)	7 (20%)	3 (9%)	35	2.8

### 1.9. Geospatial Management | Competency entering workforce

	1	2	3	4	5	Total	Mean
Manage Geospatial Databases and Files	2 (6%)	2 (6%)	10 (28%)	16 (44%)	6 (17%)	36	3.6
Design Database Structure/Schema	2 (6%)	6 (17%)	11 (31%)	14 (39%)	3 (8%)	36	3.3
Create Database Tables	2 (5%)	1 (3%)	12 (32%)	14 (38%)	8 (22%)	37	3.7
Create Database Queries	2 (5%)	1 (3%)	11 (30%)	17 (46%)	6 (16%)	37	3.6
Create Database Reports	2 (5%)	2 (5%)	14 (38%)	15 (41%)	4 (11%)	37	3.5
Database administration	4 (11%)	10 (27%)	7 (19%)	14 (38%)	2 (5%)	37	3.0
Automate Manual Processes (Geoprocessing)	3 (8%)	7 (19%)	10 (27%)	14 (38%)	3 (8%)	37	3.2
Ensure Data Quality (Quality Control, Quality Assurance)	1 (3%)	2 (5%)	10 (27%)	15 (41%)	9 (24%)	37	3.8
Experience with relational databases	4 (11%)	6 (16%)	10 (27%)	12 (32%)	5 (14%)	37	3.2
Experience with computer programming concepts	5 (14%)	7 (19%)	15 (42%)	7 (19%)	2 (6%)	36	2.8
Ensure Data Quality (Quality Control, Quality Assurance)	3 (8%)	2 (5%)	9 (24%)	15 (41%)	8 (22%)	37	3.6

### 1.10. Perform Project Management | Current Importance

	1	2	3	4	5	Total	Mean
Develop Project Plan	0 (0%)	5 (14%)	8 (23%)	11 (31%)	11 (31%)	35	3.8
Estimate Task Schedule (Gantt Charts, Flow Charts)	2 (6%)	8 (23%)	10 (29%)	6 (17%)	9 (26%)	35	3.3
Coordinate with Project Team	0 (0%)	3 (8%)	11 (31%)	8 (22%)	14 (39%)	36	3.9
Coordinate Projects with Stakeholders	2 (6%)	3 (9%)	10 (29%)	10 (29%)	10 (29%)	35	3.7
Coordinate work with Consultants	1 (3%)	3 (8%)	13 (36%)	9 (25%)	10 (28%)	36	3.7

### 1.10. Perform Project Management | Competency for summer student

	1	2	3	4	5	Total	Mean
Develop Project Plan	15 (47%)	8 (25%)	7 (22%)	1 (3%)	1 (3%)	32	1.9
Estimate Task Schedule (Gantt Charts, Flow Charts)	14 (44%)	9 (28%)	6 (19%)	3 (9%)	0 (0%)	32	1.9
Coordinate with Project Team	10 (30%)	9 (27%)	12 (36%)	2 (6%)	0 (0%)	33	2.2
Coordinate Projects with Stakeholders	13 (39%)	10 (30%)	7 (21%)	3 (9%)	0 (0%)	33	2.0
Coordinate work with Consultants	12 (38%)	12 (38%)	6 (19%)	2 (6%)	0 (0%)	32	1.9

### 1.10. Perform Project Management | Competency entering workforce

	1	2	3	4	5	Total	Mean
Develop Project Plan	3 (9%)	6 (18%)	11 (33%)	8 (24%)	5 (15%)	33	3.2
Estimate Task Schedule (Gantt Charts, Flow Charts)	3 (9%)	8 (24%)	9 (27%)	9 (27%)	4 (12%)	33	3.1
Coordinate with Project Team	2 (6%)	4 (12%)	14 (41%)	9 (26%)	5 (15%)	34	3.3
Coordinate Projects with Stakeholders	3 (9%)	5 (15%)	12 (36%)	9 (27%)	4 (12%)	33	3.2
Coordinate work with Consultants	3 (9%)	7 (21%)	11 (32%)	9 (26%)	4 (12%)	34	3.1

### 1.11. Manage Office Equipment and Supplies | Current Importance

	1	2	3	4	5	Total	Mean
Maintain Plotters and Printers	3 (8%)	0 (0%)	5 (13%)	15 (39%)	15 (39%)	38	4.0
Take and Maintain Inventory and Order Supplies	3 (8%)	8 (21%)	9 (24%)	7 (18%)	11 (29%)	38	3.4
Schedule Equipment Maintenance	6 (16%)	5 (14%)	9 (24%)	8 (22%)	9 (24%)	37	3.2
Install, upgrade and maintain software	4 (11%)	8 (22%)	8 (22%)	7 (19%)	10 (27%)	37	3.3
Install, upgrade and maintain hardware and peripherals	6 (16%)	9 (24%)	8 (22%)	7 (19%)	7 (19%)	37	3.0
Manage Peer to Peer Networks	15 (42%)	8 (22%)	7 (19%)	2 (6%)	4 (11%)	36	2.2
Manage Client Server Networks	19 (53%)	10 (28%)	3 (8%)	2 (6%)	2 (6%)	36	1.8
Perform and Manage Local and System backups	12 (32%)	4 (11%)	11 (30%)	7 (19%)	3 (8%)	37	2.6

### 1.11. Manage Office Equipment and Supplies | Competency for summer student

	1	2	3	4	5	Total	Mean
Maintain Plotters and Printers	8 (24%)	15 (44%)	9 (26%)	1 (3%)	1 (3%)	34	2.2
Take and Maintain Inventory and Order Supplies	12 (36%)	13 (39%)	7 (21%)	1 (3%)	0 (0%)	33	1.9
Schedule Equipment Maintenance	14 (44%)	14 (44%)	3 (9%)	1 (3%)	0 (0%)	32	1.7
Install, upgrade and maintain software	14 (45%)	10 (32%)	4 (13%)	3 (10%)	0 (0%)	31	1.9
Install, upgrade and maintain hardware and peripherals	16 (50%)	8 (25%)	5 (16%)	3 (9%)	0 (0%)	32	1.8
Manage Peer to Peer Networks	22 (69%)	7 (22%)	2 (6%)	1 (3%)	0 (0%)	32	1.4
Manage Client Server Networks	24 (75%)	6 (19%)	1 (3%)	1 (3%)	0 (0%)	32	1.3
Perform and Manage Local and System backups	20 (65%)	6 (19%)	4 (13%)	0 (0%)	1 (3%)	31	1.6

### 1.11. Manage Office Equipment and Supplies | Competency entering workforce

	1	2	3	4	5	Total	Mean
Maintain Plotters and Printers	2 (5%)	5 (14%)	14 (38%)	12 (32%)	4 (11%)	37	3.3
Take and Maintain Inventory and Order Supplies	3 (8%)	6 (17%)	15 (42%)	9 (25%)	3 (8%)	36	3.1
Schedule Equipment Maintenance	4 (11%)	7 (20%)	17 (49%)	5 (14%)	2 (6%)	35	2.8
Install, upgrade and maintain software	1 (3%)	9 (26%)	11 (31%)	11 (31%)	3 (9%)	35	3.2
Install, upgrade and maintain hardware and peripherals	4 (11%)	10 (29%)	7 (20%)	13 (37%)	1 (3%)	35	2.9
Manage Peer to Peer Networks	12 (34%)	12 (34%)	7 (20%)	2 (6%)	2 (6%)	35	2.1
Manage Client Server Networks	16 (47%)	7 (21%)	8 (24%)	2 (6%)	1 (3%)	34	2.0
Perform and Manage Local and System backups	9 (26%)	9 (26%)	13 (37%)	2 (6%)	2 (6%)	35	2.4

### 1.12. Participate in Training and Outreach | Current Importance

	1	2	3	4	5	Total	Mean
Create Presentation Materials	0 (0%)	0 (0%)	8 (21%)	10 (26%)	21 (54%)	39	4.3
Educate and Promote Planning and GIS Capabilities	5 (13%)	3 (8%)	10 (26%)	12 (32%)	8 (21%)	38	3.4
Give Informational Presentations	2 (5%)	6 (15%)	13 (33%)	10 (26%)	8 (21%)	39	3.4
Organize Staff/Department Training	3 (8%)	11 (29%)	15 (39%)	5 (13%)	4 (11%)	38	2.9
Train Other Staff	5 (14%)	8 (22%)	14 (38%)	7 (19%)	3 (8%)	37	2.9
Participate in User Groups	3 (8%)	7 (18%)	12 (32%)	12 (32%)	4 (11%)	38	3.2

### 1.12. Participate in Training and Outreach | Competency for summer student

	1	2	3	4	5	Total	Mean
Create Presentation Materials	1 (3%)	7 (20%)	19 (54%)	8 (23%)	0 (0%)	35	3.0
Educate and Promote Planning and GIS Capabilities	8 (24%)	14 (41%)	11 (32%)	1 (3%)	0 (0%)	34	2.1
Give Informational Presentations	5 (15%)	16 (47%)	10 (29%)	2 (6%)	1 (3%)	34	2.4
Organize Staff/Department Training	14 (42%)	15 (45%)	4 (12%)	0 (0%)	0 (0%)	33	1.7
Train Other Staff	13 (39%)	15 (45%)	5 (15%)	0 (0%)	0 (0%)	33	1.8
Participate in User Groups	8 (24%)	13 (38%)	10 (29%)	2 (6%)	1 (3%)	34	2.3

### 1.12. Participate in Training and Outreach | Competency entering workforce

	1	2	3	4	5	Total	Mean
Create Presentation Materials	0 (0%)	0 (0%)	12 (32%)	17 (45%)	9 (24%)	38	3.9
Educate and Promote Planning and GIS Capabilities	4 (11%)	6 (16%)	9 (24%)	14 (38%)	4 (11%)	37	3.2
Give Informational Presentations	0 (0%)	7 (19%)	12 (33%)	13 (36%)	4 (11%)	36	3.4
Organize Staff/Department Training	4 (12%)	7 (21%)	13 (38%)	8 (24%)	2 (6%)	34	2.9
Train Other Staff	5 (14%)	9 (26%)	9 (26%)	9 (26%)	3 (9%)	35	2.9
Participate in User Groups	4 (11%)	4 (11%)	15 (42%)	9 (25%)	4 (11%)	36	3.1



### 1.13. Perform Related Technical Duties | Current Importance

	1	2	3	4	5	Total	Mean
Translate technical jargon to general audience	3 (8%)	3 (8%)	9 (23%)	8 (21%)	16 (41%)	39	3.8
Technical report interpretation	2 (5%)	4 (11%)	11 (29%)	9 (24%)	12 (32%)	38	3.7
Electronic publishing, design and data distribution (WWW, IMS, PDF, KML, etc)	2 (5%)	5 (13%)	6 (15%)	9 (23%)	17 (44%)	39	3.9
Manage Web Content and development	10 (26%)	8 (21%)	9 (23%)	7 (18%)	5 (13%)	39	2.7
Prioritize Work Load	0 (0%)	3 (8%)	3 (8%)	9 (24%)	23 (61%)	38	4.4
Respond to Public Records Request	3 (8%)	3 (8%)	7 (18%)	15 (39%)	10 (26%)	38	3.7
Provide Technical Support	0 (0%)	3 (8%)	10 (26%)	17 (45%)	8 (21%)	38	3.8
Provide Technology Recommendations	1 (3%)	6 (16%)	6 (16%)	15 (39%)	10 (26%)	38	3.7
Participate in Hiring and Supervisory Activities	12 (32%)	7 (18%)	6 (16%)	10 (26%)	3 (8%)	38	2.6
Coordinate with Information Technology (IT)	3 (8%)	4 (11%)	13 (35%)	9 (24%)	8 (22%)	37	3.4
Research GIS Technology Trends	7 (18%)	8 (21%)	9 (24%)	7 (18%)	7 (18%)	38	3.0
Maintain civic address files	8 (20%)	4 (10%)	6 (15%)	5 (12%)	17 (42%)	40	3.5

### 1.13. Perform Related Technical Duties | Competency for summer student

	1	2	3	4	5	Total	Mean
Translate technical jargon to general audience	2 (6%)	14 (40%)	17 (49%)	1 (3%)	1 (3%)	35	2.6
Technical report interpretation	3 (9%)	15 (44%)	13 (38%)	3 (9%)	0 (0%)	34	2.5
Electronic publishing, design and data distribution (WWW, IMS, PDF, KML, etc)	6 (17%)	3 (9%)	21 (60%)	5 (14%)	0 (0%)	35	2.7
Manage Web Content and development	11 (32%)	13 (38%)	10 (29%)	0 (0%)	0 (0%)	34	2.0
Prioritize Work Load	1 (3%)	10 (29%)	12 (34%)	9 (26%)	3 (9%)	35	3.1
Respond to Public Records Request	11 (31%)	6 (17%)	13 (37%)	4 (11%)	1 (3%)	35	2.4
Provide Technical Support	6 (18%)	12 (35%)	15 (44%)	0 (0%)	1 (3%)	34	2.4
Provide Technology Recommendations	12 (35%)	9 (26%)	12 (35%)	0 (0%)	1 (3%)	34	2.1
Participate in Hiring and Supervisory Activities	26 (81%)	3 (9%)	3 (9%)	0 (0%)	0 (0%)	32	1.3
Coordinate with Information Technology (IT)	14 (44%)	10 (31%)	8 (25%)	0 (0%)	0 (0%)	32	1.8
Research GIS Technology Trends	10 (29%)	8 (24%)	13 (38%)	2 (6%)	1 (3%)	34	2.3
Maintain civic address files	12 (34%)	11 (31%)	9 (26%)	3 (9%)	0 (0%)	35	2.1

### 1.13. Perform Related Technical Duties | Competency entering workforce

	1	2	3	4	5	Total	Mean
Translate technical jargon to general audience	0 (0%)	3 (8%)	15 (41%)	15 (41%)	4 (11%)	37	3.5
Technical report interpretation	0 (0%)	4 (11%)	14 (40%)	12 (34%)	5 (14%)	35	3.5
Electronic publishing, design and data distribution (WWW, IMS, PDF, KML, etc)	2 (5%)	5 (14%)	9 (24%)	17 (46%)	4 (11%)	37	3.4
Manage Web Content and development	6 (17%)	5 (14%)	14 (39%)	11 (31%)	0 (0%)	36	2.8
Prioritize Work Load	0 (0%)	3 (8%)	12 (32%)	14 (37%)	9 (24%)	38	3.8
Respond to Public Records Request	1 (3%)	6 (16%)	12 (32%)	12 (32%)	6 (16%)	37	3.4
Provide Technical Support	1 (3%)	5 (14%)	16 (43%)	11 (30%)	4 (11%)	37	3.3
Provide Technology Recommendations	2 (5%)	8 (22%)	10 (27%)	13 (35%)	4 (11%)	37	3.2
Participate in Hiring and Supervisory Activities	12 (34%)	5 (14%)	9 (26%)	9 (26%)	0 (0%)	35	2.4
Coordinate with Information Technology (IT)	3 (8%)	9 (25%)	12 (33%)	10 (28%)	2 (6%)	36	3.0
Research GIS Technology Trends	5 (14%)	7 (19%)	9 (24%)	11 (30%)	5 (14%)	37	3.1
Maintain civic address files	4 (11%)	6 (16%)	9 (24%)	9 (24%)	10 (26%)	38	3.4

### Skills Section: continued

Importance Competency Scoring Skill Importance and Competency 1 Least importance 1 Requires assistance or supervision 2 Less importance 2 Requires some assistance or supervision 3 Average importance 3 Without assistance or supervision 4 More importance 4 With initiative, adaptability in various situations 5 Most Importance 5 Expertly and can train others

### 1.14. Graphic Communication Design | Current Importance

	1	2	3	4	5	Total	Mean
Understands Applies Graphic Design theory	3 (8%)	1 (3%)	13 (33%)	10 (26%)	12 (31%)	39	3.7
Develop Design Vocabulary	5 (13%)	6 (15%)	15 (38%)	9 (23%)	4 (10%)	39	3.0
Typography	4 (11%)	7 (18%)	9 (24%)	11 (29%)	7 (18%)	38	3.3
Apply Principles of Graphic design and Layout: Balance	1 (3%)	4 (10%)	8 (21%)	13 (33%)	13 (33%)	39	3.8
Use Measurable attributes of point, line, pattern tone and colour for graphic Communication	3 (8%)	3 (8%)	7 (18%)	15 (38%)	11 (28%)	39	3.7
Knowledge of colour theory: Harmony, Value, Saturation, hue	4 (10%)	10 (26%)	8 (21%)	9 (23%)	8 (21%)	39	3.2
Working knowledge of colour systems: RGB, CMYK, HSV, LAB, HVC	3 (8%)	9 (23%)	13 (33%)	9 (23%)	5 (13%)	39	3.1
Working Knowledge of Colour Printing	2 (5%)	8 (21%)	14 (36%)	11 (28%)	4 (10%)	39	3.2
Expertise Using Desktop publishing software	4 (11%)	6 (16%)	7 (19%)	15 (41%)	5 (14%)	37	3.3
Assess/Critique Graphic Products	5 (13%)	7 (18%)	6 (16%)	11 (29%)	9 (24%)	38	3.3
Produce, edit and integrate Scanning and Digital Photography into graphic design	3 (8%)	4 (11%)	9 (24%)	11 (29%)	11 (29%)	38	3.6
Design of Charts and Diagrams for Technical Reports	1 (3%)	5 (13%)	8 (21%)	15 (39%)	9 (24%)	38	3.7
Design of Brochures, poster presentations and multimedia products	2 (5%)	7 (18%)	8 (21%)	11 (29%)	10 (26%)	38	3.5

### 1.14. Graphic Communication Design | Competency for summer student

	1	2	3	4	5	Total	Mean
Understands Applies Graphic Design theory	4 (11%)	12 (34%)	10 (29%)	9 (26%)	0 (0%)	35	2.7
Develop Design Vocabulary	7 (20%)	16 (46%)	6 (17%)	6 (17%)	0 (0%)	35	2.3
Typography	5 (14%)	14 (40%)	12 (34%)	3 (9%)	1 (3%)	35	2.5
Apply Principles of Graphic design and Layout: Balance	2 (6%)	9 (26%)	16 (46%)	7 (20%)	1 (3%)	35	2.9
Use Measurable attributes of point, line, pattern tone and colour for graphic Communication	2 (6%)	11 (31%)	15 (43%)	6 (17%)	1 (3%)	35	2.8
Knowledge of colour theory: Harmony, Value, Saturation, hue	4 (11%)	15 (43%)	11 (31%)	5 (14%)	0 (0%)	35	2.5
Working knowledge of colour systems: RGB, CMYK, HSV, LAB, HVC	4 (11%)	15 (43%)	13 (37%)	3 (9%)	0 (0%)	35	2.4
Working Knowledge of Colour Printing	4 (11%)	13 (37%)	15 (43%)	3 (9%)	0 (0%)	35	2.5
Expertise Using Desktop publishing software	4 (12%)	9 (28%)	14 (44%)	5 (16%)	0 (0%)	32	2.6
Assess/Critique Graphic Products	6 (18%)	12 (36%)	12 (36%)	3 (9%)	0 (0%)	33	2.4
Produce, edit and integrate Scanning and Digital Photography into graphic design	4 (12%)	9 (26%)	14 (41%)	6 (18%)	1 (3%)	34	2.7
Design of Charts and Diagrams for Technical Reports	2 (6%)	11 (32%)	16 (47%)	3 (9%)	2 (6%)	34	2.8
Design of Brochures, poster presentations and multimedia products	2 (6%)	10 (30%)	17 (52%)	2 (6%)	2 (6%)	33	2.8

### 1.14. Graphic Communication Design | Competency entering workforce

	1	2	3	4	5	Total	Mean
Understands Applies Graphic Design theory	2 (5%)	2 (5%)	13 (35%)	13 (35%)	7 (19%)	37	3.6
Develop Design Vocabulary	2 (5%)	7 (19%)	17 (46%)	8 (22%)	3 (8%)	37	3.1
Typography	1 (3%)	6 (16%)	16 (43%)	12 (32%)	2 (5%)	37	3.2
Apply Principles of Graphic design and Layout: Balance	0 (0%)	3 (8%)	14 (38%)	14 (38%)	6 (16%)	37	3.6
Use Measurable attributes of point, line, pattern tone and colour for graphic Communication	0 (0%)	2 (6%)	14 (39%)	16 (44%)	4 (11%)	36	3.6
Knowledge of colour theory: Harmony, Value, Saturation, hue	0 (0%)	5 (14%)	13 (36%)	14 (39%)	4 (11%)	36	3.5
Working knowledge of colour systems: RGB, CMYK, HSV, LAB, HVC	1 (3%)	5 (14%)	14 (38%)	16 (43%)	1 (3%)	37	3.3
Working Knowledge of Colour Printing	0 (0%)	6 (17%)	15 (42%)	13 (36%)	2 (6%)	36	3.3
Expertise Using Desktop publishing software	1 (3%)	7 (20%)	12 (34%)	14 (40%)	1 (3%)	35	3.2
Assess/Critique Graphic Products	1 (3%)	8 (23%)	13 (37%)	8 (23%)	5 (14%)	35	3.2
Produce, edit and integrate Scanning and Digital Photography into graphic design	1 (3%)	4 (11%)	14 (39%)	12 (33%)	5 (14%)	36	3.4
Design of Charts and Diagrams for Technical Reports	0 (0%)	5 (14%)	12 (33%)	14 (39%)	5 (14%)	36	3.5
Design of Brochures, poster presentations and multimedia products	0 (0%)	6 (17%)	10 (28%)	16 (44%)	4 (11%)	36	3.5

### 1.15. Cartographic Principles/theory | Current Importance

	1	2	3	4	5	Total	Mean
Create and Design Maps from a variety of digital data sources	0 (0%)	1 (3%)	3 (8%)	11 (29%)	23 (61%)	38	4.5
Appropriate use of scale	0 (0%)	0 (0%)	4 (10%)	7 (18%)	28 (72%)	39	4.6
Design and apply Cartographic Elements	1 (3%)	0 (0%)	7 (18%)	13 (33%)	18 (46%)	39	4.2
Select Appropriate Symbolizations/Representations	0 (0%)	1 (3%)	6 (15%)	11 (28%)	21 (54%)	39	4.3
Knowledge and application of measurable attributes of point, line, area and volume symbolization	1 (3%)	0 (0%)	5 (13%)	15 (38%)	18 (46%)	39	4.3
Appropriate use of Statistical representations	0 (0%)	4 (11%)	12 (32%)	13 (35%)	8 (22%)	37	3.7
Creation of legends: point, line, area and volume - use of live legends	0 (0%)	1 (3%)	7 (18%)	9 (23%)	22 (56%)	39	4.3
Appropriate use of colour	0 (0%)	1 (3%)	7 (18%)	11 (28%)	20 (51%)	39	4.3
Appropriate use of labelling	0 (0%)	2 (5%)	3 (8%)	12 (32%)	21 (55%)	38	4.4
Output map to plotter/printer/service provider	0 (0%)	1 (3%)	5 (13%)	12 (32%)	20 (53%)	38	4.3
Describe, Assess/Critique Cartographic Layouts	1 (3%)	1 (3%)	8 (21%)	15 (39%)	13 (34%)	38	4.0

### 1.15. Cartographic Principles/theory | Competency for summer student

	1	2	3	4	5	Total	Mean
Create and Design Maps from a variety of digital data sources	2 (5%)	7 (19%)	17 (46%)	10 (27%)	1 (3%)	37	3.0
Appropriate use of scale	2 (6%)	5 (14%)	18 (50%)	7 (19%)	4 (11%)	36	3.2
Design and apply Cartographic Elements	4 (11%)	6 (16%)	17 (46%)	10 (27%)	0 (0%)	37	2.9
Select Appropriate Symbolizations/Representations	4 (11%)	6 (16%)	18 (49%)	8 (22%)	1 (3%)	37	2.9
Knowledge and application of measurable attributes of point, line, area and volume symbolization	4 (11%)	6 (16%)	19 (51%)	7 (19%)	1 (3%)	37	2.9
Appropriate use of Statistical representations	4 (11%)	11 (31%)	17 (47%)	3 (8%)	1 (3%)	36	2.6
Creation of legends: point, line, area and volume - use of live legends	3 (8%)	6 (17%)	18 (50%)	8 (22%)	1 (3%)	36	2.9
Appropriate use of colour	2 (5%)	8 (22%)	18 (49%)	5 (14%)	4 (11%)	37	3.0
Appropriate use of labelling	2 (5%)	8 (22%)	18 (49%)	5 (14%)	4 (11%)	37	3.0
Output map to plotter/printer/service provider	2 (5%)	12 (32%)	14 (38%)	6 (16%)	3 (8%)	37	2.9
Describe, Assess/Critique Cartographic Layouts	4 (11%)	14 (39%)	14 (39%)	2 (6%)	2 (6%)	36	2.6



### 1.15. Cartographic Principles/theory | Competency entering workforce

	1	2	3	4	5	Total	Mean
Create and Design Maps from a variety of digital data sources	0 (0%)	2 (5%)	6 (16%)	21 (55%)	9 (24%)	38	4.0
Appropriate use of scale	0 (0%)	1 (3%)	8 (22%)	18 (49%)	10 (27%)	37	4.0
Design and apply Cartographic Elements	1 (3%)	1 (3%)	10 (26%)	20 (53%)	6 (16%)	38	3.8
Select Appropriate Symbolizations/Representations	1 (3%)	2 (5%)	9 (24%)	18 (47%)	8 (21%)	38	3.8
Knowledge and application of measurable attributes of point, line, area and volume symbolization	1 (3%)	1 (3%)	9 (24%)	24 (63%)	3 (8%)	38	3.7
Appropriate use of Statistical representations	1 (3%)	5 (14%)	12 (32%)	16 (43%)	3 (8%)	37	3.4
Creation of legends: point, line, area and volume - use of live legends	0 (0%)	2 (5%)	10 (26%)	18 (47%)	8 (21%)	38	3.8
Appropriate use of colour	0 (0%)	1 (3%)	11 (29%)	18 (47%)	8 (21%)	38	3.9
Appropriate use of labelling	0 (0%)	1 (3%)	9 (24%)	20 (53%)	8 (21%)	38	3.9
Output map to plotter/printer/service provider	0 (0%)	1 (3%)	11 (30%)	16 (43%)	9 (24%)	37	3.9
Describe, Assess/Critique Cartographic Layouts	2 (5%)	3 (8%)	14 (38%)	12 (32%)	6 (16%)	37	3.5

### 1.17. Development Control, Planning Law and Legis... | Current Importance

	1	2	3	4	5	Total
Interpret Regional Development Plans and/or Municipal Planning Strategies	3 (8%)	3 (8%)	6 (16%)	6 (16%)	19 (51%)	37
Familiar with legal terminology	0 (0%)	7 (18%)	12 (32%)	9 (24%)	10 (26%)	38
Knowledge of Property Law and property rights	2 (5%)	6 (16%)	11 (29%)	9 (24%)	10 (26%)	38
Provide technical support in MPS mapping requirement and demographics	4 (11%)	4 (11%)	6 (16%)	8 (21%)	16 (42%)	38
General Knowledge on Provincial Subdivision Regulations / Model Bylaws	5 (13%)	3 (8%)	10 (26%)	11 (28%)	10 (26%)	39
Procedures for Subdivision applications	5 (13%)	5 (13%)	7 (18%)	8 (21%)	14 (36%)	39
Requirements for Subdivision applications	5 (13%)	6 (15%)	8 (21%)	7 (18%)	13 (33%)	39
Basic familiarity with development related provincial and federal legislation	4 (11%)	5 (13%)	14 (37%)	4 (11%)	11 (29%)	38
Knowledge and Interpretation of Provincial Planning and Municipal Government Legislation	6 (15%)	4 (10%)	10 (26%)	8 (21%)	11 (28%)	39
Understands amendments and appeal procedures	5 (13%)	6 (16%)	7 (18%)	10 (26%)	10 (26%)	38
Knowledge of Provincial Property Registries	3 (8%)	4 (10%)	10 (26%)	11 (28%)	11 (28%)	39
Conduct property document research	5 (13%)	5 (13%)	7 (18%)	11 (29%)	10 (26%)	38
Knowledge of Municipal Planning Strategies	5 (13%)	0 (0%)	7 (18%)	13 (33%)	14 (36%)	39
Adoption and Review Procedures for Municipal Planning Strategies	6 (16%)	5 (14%)	3 (8%)	15 (41%)	8 (22%)	37
Familiarity with the role of government in the decision making process	3 (8%)	4 (11%)	8 (22%)	9 (24%)	13 (35%)	37
Familiarity with the role of public participation in the decision making process	4 (11%)	1 (3%)	9 (24%)	9 (24%)	14 (38%)	37
Familiarity with the role of planners in the decision making process	4 (11%)	1 (3%)	9 (24%)	10 (26%)	14 (37%)	38
Familiarity with the role of the development industry in the decision making process	5 (13%)	2 (5%)	10 (26%)	9 (24%)	12 (32%)	38
Familiarity with the role of demographics in the decision making process	4 (11%)	3 (8%)	13 (34%)	8 (21%)	10 (26%)	38
Read and interpret legal/policy documents	5 (13%)	4 (11%)	11 (29%)	10 (26%)	8 (21%)	38

Administer regulations, by-laws and planning strategies	8 (21%)	7 (18%)	7 (18%)	5 (13%)	11 (29%)	38
Review and assess development proposals	9 (24%)	8 (22%)	6 (16%)	4 (11%)	10 (27%)	37
Determine impact of policies	8 (22%)	9 (24%)	8 (22%)	5 (14%)	7 (19%)	37
Review legal documents	9 (25%)	7 (19%)	10 (28%)	4 (11%)	6 (17%)	36
Perform site inspections	7 (19%)	5 (14%)	4 (11%)	11 (30%)	10 (27%)	37
Prepare graphic presentations and displays of draft subdivision and site plans	4 (11%)	4 (11%)	4 (11%)	10 (28%)	14 (39%)	36
Flow Chart Processes and Procedures	5 (14%)	6 (16%)	10 (27%)	9 (24%)	7 (19%)	37
Interpret legal property descriptions	4 (11%)	6 (16%)	7 (18%)	10 (26%)	11 (29%)	38
Familiarity with Municipal Government processes and procedures	3 (8%)	4 (11%)	8 (21%)	11 (29%)	12 (32%)	38
Basic familiarity with provincial and federal legislation as it relates to development	6 (16%)	6 (16%)	11 (29%)	11 (29%)	4 (11%)	38
Procedures and local rules for Civic Addressing	3 (8%)	2 (5%)	6 (16%)	13 (34%)	14 (37%)	38
Basic knowledge with the provincial and federal building codes	14 (37%)	10 (26%)	5 (13%)	8 (21%)	1 (3%)	38
Basic knowledge of energy efficient building programs. (Energuide, R2000, Energy Star)	13 (35%)	10 (27%)	8 (22%)	5 (14%)	1 (3%)	37
Familiarity with environmental legal terminology	6 (16%)	11 (30%)	12 (32%)	6 (16%)	2 (5%)	37
Knowledge of environmental laws	5 (14%)	14 (38%)	10 (27%)	5 (14%)	3 (8%)	37

### 1.17. Development Control, Planning Law and Legislat... | Competency for summer student

	1	2	3	4	5	Total	Mean
Interpret Regional Development Plans and/or Municipal Planning Strategies	11 (33%)	14 (42%)	5 (15%)	3 (9%)	0 (0%)	33	2.0
Familiar with legal terminology	10 (29%)	14 (41%)	8 (24%)	2 (6%)	0 (0%)	34	2.1
Knowledge of Property Law and property rights	11 (32%)	14 (41%)	7 (21%)	2 (6%)	0 (0%)	34	2.0
Provide technical support in MPS mapping requirement and demographics	6 (18%)	18 (55%)	6 (18%)	3 (9%)	0 (0%)	33	2.2
General Knowledge on Provincial Subdivision Regulations / Model Bylaws	11 (33%)	14 (42%)	6 (18%)	2 (6%)	0 (0%)	33	2.0
Procedures for Subdivision applications	11 (32%)	16 (47%)	5 (15%)	2 (6%)	0 (0%)	34	1.9
Requirements for Subdivision applications	12 (35%)	16 (47%)	4 (12%)	2 (6%)	0 (0%)	34	1.9
Basic familiarity with development related provincial and federal legislation	11 (33%)	17 (52%)	4 (12%)	1 (3%)	0 (0%)	33	1.8
Knowledge and Interpretation of Provincial Planning and Municipal Government Legislation	13 (38%)	16 (47%)	4 (12%)	1 (3%)	0 (0%)	34	1.8
Understands amendments and appeal procedures	11 (33%)	17 (52%)	2 (6%)	3 (9%)	0 (0%)	33	1.9
Knowledge of Provincial Property Registries	8 (23%)	15 (43%)	9 (26%)	2 (6%)	1 (3%)	35	2.2
Conduct property document research	12 (34%)	15 (43%)	5 (14%)	3 (9%)	0 (0%)	35	2.0
Knowledge of Municipal Planning Strategies	9 (26%)	17 (49%)	6 (17%)	3 (9%)	0 (0%)	35	2.1
Adoption and Review Procedures for Municipal Planning Strategies	12 (35%)	17 (50%)	3 (9%)	2 (6%)	0 (0%)	34	1.9
Familiarity with the role of government in the decision making process	7 (21%)	18 (53%)	7 (21%)	2 (6%)	0 (0%)	34	2.1
Familiarity with the role of public participation in the decision making process	9 (26%)	16 (47%)	7 (21%)	2 (6%)	0 (0%)	34	2.1
Familiarity with the role of planners in the decision making process	8 (24%)	14 (41%)	10 (29%)	2 (6%)	0 (0%)	34	2.2
Familiarity with the role of the development industry in the decision making process	11 (32%)	15 (44%)	6 (18%)	2 (6%)	0 (0%)	34	2.0
Familiarity with the role of demographics in the decision making process	11 (32%)	17 (50%)	4 (12%)	2 (6%)	0 (0%)	34	1.9

Read and interpret legal/policy documents	14 (41%)	13 (38%)	6 (18%)	1 (3%)	0 (0%)	34	1.8
Administer regulations, by-laws and planning strategies	17 (50%)	14 (41%)	2 (6%)	1 (3%)	0 (0%)	34	1.6
Review and assess development proposals	16 (48%)	11 (33%)	5 (15%)	1 (3%)	0 (0%)	33	1.7
Determine impact of policies	17 (52%)	12 (36%)	3 (9%)	1 (3%)	0 (0%)	33	1.6
Review legal documents	16 (48%)	13 (39%)	3 (9%)	1 (3%)	0 (0%)	33	1.7
Perform site inspections	11 (33%)	12 (36%)	7 (21%)	3 (9%)	0 (0%)	33	2.1
Prepare graphic presentations and displays of draft subdivision and site plans	8 (24%)	13 (38%)	7 (21%)	5 (15%)	1 (3%)	34	2.4
Flow Chart Processes and Procedures	10 (29%)	13 (38%)	8 (24%)	3 (9%)	0 (0%)	34	2.1
Interpret legal property descriptions	11 (32%)	16 (47%)	4 (12%)	3 (9%)	0 (0%)	34	2.0
Familiarity with Municipal Government processes and procedures	11 (32%)	15 (44%)	5 (15%)	3 (9%)	0 (0%)	34	2.0
Basic familiarity with provincial and federal legislation as it relates to development	12 (35%)	14 (41%)	7 (21%)	1 (3%)	0 (0%)	34	1.9
Procedures and local rules for Civic Addressing	12 (35%)	9 (26%)	8 (24%)	4 (12%)	1 (3%)	34	2.2
Basic knowledge with the provincial and federal building codes	21 (62%)	10 (29%)	2 (6%)	1 (3%)	0 (0%)	34	1.5
Basic knowledge of energy efficient building programs. (Energuide, R2000, Energy Star)	21 (62%)	9 (26%)	3 (9%)	1 (3%)	0 (0%)	34	1.5
Familiarity with environmental legal terminology	16 (47%)	13 (38%)	4 (12%)	1 (3%)	0 (0%)	34	1.7
Knowledge of environmental laws	19 (56%)	10 (29%)	4 (12%)	1 (3%)	0 (0%)	34	1.6

### 1.17. Development Control, Planning Law and Legis... | Competency entering workforce

	1	2	3	4	5	Total	Mean
Interpret Regional Development Plans and/or Municipal Planning Strategies	3 (9%)	6 (17%)	16 (46%)	6 (17%)	4 (11%)	35	3.1
Familiar with legal terminology	3 (8%)	8 (22%)	18 (50%)	5 (14%)	2 (6%)	36	2.9
Knowledge of Property Law and property rights	4 (11%)	7 (19%)	16 (44%)	8 (22%)	1 (3%)	36	2.9
Provide technical support in MPS mapping requirement and demographics	4 (11%)	5 (14%)	14 (39%)	10 (28%)	3 (8%)	36	3.1
General Knowledge on Provincial Subdivision Regulations / Model Bylaws	4 (11%)	7 (19%)	18 (50%)	5 (14%)	2 (6%)	36	2.8
Procedures for Subdivision applications	4 (11%)	5 (14%)	20 (56%)	4 (11%)	3 (8%)	36	2.9
Requirements for Subdivision applications	3 (8%)	8 (22%)	17 (47%)	5 (14%)	3 (8%)	36	2.9
Basic familiarity with development related provincial and federal legislation	5 (14%)	8 (23%)	15 (43%)	5 (14%)	2 (6%)	35	2.7
Knowledge and Interpretation of Provincial Planning and Municipal Government Legislation	5 (14%)	10 (28%)	14 (39%)	5 (14%)	2 (6%)	36	2.7
Understands amendments and appeal procedures	4 (11%)	8 (23%)	16 (46%)	3 (9%)	4 (11%)	35	2.9
Knowledge of Provincial Property Registries	3 (8%)	9 (24%)	14 (38%)	6 (16%)	5 (14%)	37	3.0
Conduct property document research	4 (11%)	6 (16%)	19 (51%)	6 (16%)	2 (5%)	37	2.9
Knowledge of Municipal Planning Strategies	2 (5%)	9 (24%)	16 (43%)	7 (19%)	3 (8%)	37	3.0
Adoption and Review Procedures for Municipal Planning Strategies	4 (11%)	12 (33%)	13 (36%)	5 (14%)	2 (6%)	36	2.7
Familiarity with the role of government in the decision making process	3 (8%)	6 (17%)	18 (50%)	6 (17%)	3 (8%)	36	3.0
Familiarity with the role of public participation in the decision making process	4 (11%)	4 (11%)	17 (47%)	8 (22%)	3 (8%)	36	3.1
Familiarity with the role of planners in the decision making process	4 (11%)	3 (8%)	16 (44%)	9 (25%)	4 (11%)	36	3.2
Familiarity with the role of the development industry in the decision making process	5 (14%)	3 (8%)	20 (56%)	5 (14%)	3 (8%)	36	2.9
Familiarity with the role of demographics in the decision making process	4 (11%)	6 (17%)	19 (53%)	6 (17%)	1 (3%)	36	2.8

Read and interpret legal/policy documents	5 (14%)	7 (19%)	14 (39%)	9 (25%)	1 (3%)	36	2.8
Administer regulations, by-laws and planning strategies	8 (24%)	7 (21%)	13 (38%)	5 (15%)	1 (3%)	34	2.5
Review and assess development proposals	7 (20%)	9 (26%)	14 (40%)	3 (9%)	2 (6%)	35	2.5
Determine impact of policies	7 (21%)	10 (29%)	12 (35%)	3 (9%)	2 (6%)	34	2.5
Review legal documents	8 (24%)	9 (26%)	11 (32%)	5 (15%)	1 (3%)	34	2.5
Perform site inspections	4 (12%)	9 (26%)	12 (35%)	5 (15%)	4 (12%)	34	2.9
Prepare graphic presentations and displays of draft subdivision and site plans	2 (6%)	6 (17%)	14 (39%)	9 (25%)	5 (14%)	36	3.2
Flow Chart Processes and Procedures	5 (14%)	7 (19%)	13 (36%)	8 (22%)	3 (8%)	36	2.9
Interpret legal property descriptions	2 (6%)	10 (28%)	14 (39%)	7 (19%)	3 (8%)	36	3.0
Familiarity with Municipal Government processes and procedures	1 (3%)	11 (31%)	15 (42%)	5 (14%)	4 (11%)	36	3.0
Basic familiarity with provincial and federal legislation as it relates to development	4 (11%)	11 (31%)	14 (39%)	5 (14%)	2 (6%)	36	2.7
Procedures and local rules for Civic Addressing	5 (14%)	4 (11%)	11 (31%)	10 (28%)	6 (17%)	36	3.2
Basic knowledge with the provincial and federal building codes	10 (28%)	14 (39%)	11 (31%)	0 (0%)	1 (3%)	36	2.1
Basic knowledge of energy efficient building programs. (Energuide, R2000, Energy Star)	11 (31%)	11 (31%)	11 (31%)	1 (3%)	1 (3%)	35	2.1
Familiarity with environmental legal terminology	6 (17%)	12 (34%)	14 (40%)	2 (6%)	1 (3%)	35	2.4
Knowledge of environmental laws	6 (17%)	14 (39%)	13 (36%)	2 (6%)	1 (3%)	36	2.4

### 1.18. Environmental and Resource Management | Current Importance

	1	2	3	4	5	Total	Mean
Perform preliminary Landscape Assessment for Environmental and Resource Management	11 (31%)	10 (28%)	8 (22%)	4 (11%)	3 (8%)	36	2.4
Basic Knowledge of Site Development Issues	6 (17%)	8 (22%)	8 (22%)	7 (19%)	7 (19%)	36	3.0
Basic Knowledge of Resource Management Principles	8 (22%)	10 (28%)	9 (25%)	6 (17%)	3 (8%)	36	2.6
Basic Understanding of Environmental Theory	8 (22%)	8 (22%)	10 (28%)	4 (11%)	6 (17%)	36	2.8
Understands Concepts on Sustainability (Economics, Social/Cultural, Environment)	6 (17%)	6 (17%)	9 (25%)	8 (22%)	7 (19%)	36	3.1
Understands and applies Ecological Principles	7 (19%)	9 (25%)	9 (25%)	7 (19%)	4 (11%)	36	2.8
Understand the need for environmental protection	1 (3%)	6 (17%)	13 (36%)	6 (17%)	10 (28%)	36	3.5
Basic understanding of property rights and environmental issues	4 (11%)	4 (11%)	13 (37%)	5 (14%)	9 (26%)	35	3.3

### 1.18. Environmental and Resource Management | Competency for summer student

	1	2	3	4	5	Total	Mean
Perform preliminary Landscape Assessment for Environmental and Resource Management	15 (47%)	13 (41%)	4 (12%)	0 (0%)	0 (0%)	32	1.7
Basic Knowledge of Site Development Issues	12 (36%)	16 (48%)	5 (15%)	0 (0%)	0 (0%)	33	1.8
Basic Knowledge of Resource Management Principles	13 (39%)	15 (45%)	5 (15%)	0 (0%)	0 (0%)	33	1.8
Basic Understanding of Environmental Theory	11 (33%)	14 (42%)	8 (24%)	0 (0%)	0 (0%)	33	1.9
Understands Concepts on Sustainability (Economics, Social/Cultural, Environment)	10 (30%)	14 (42%)	9 (27%)	0 (0%)	0 (0%)	33	2.0
Understands and applies Ecological Principles	11 (33%)	15 (45%)	7 (21%)	0 (0%)	0 (0%)	33	1.9
Understand the need for environmental protection	9 (27%)	11 (33%)	8 (24%)	4 (12%)	1 (3%)	33	2.3
Basic understanding of property rights and environmental issues	10 (30%)	14 (42%)	5 (15%)	4 (12%)	0 (0%)	33	2.1



### 1.18. Environmental and Resource Management | Competency entering workforce

	1	2	3	4	5	Total	Mean
Perform preliminary Landscape Assessment for Environmental and Resource Management	7 (21%)	7 (21%)	16 (48%)	3 (9%)	0 (0%)	33	2.5
Basic Knowledge of Site Development Issues	6 (17%)	6 (17%)	16 (46%)	7 (20%)	0 (0%)	35	2.7
Basic Knowledge of Resource Management Principles	7 (20%)	7 (20%)	15 (43%)	6 (17%)	0 (0%)	35	2.6
Basic Understanding of Environmental Theory	7 (20%)	7 (20%)	14 (40%)	7 (20%)	0 (0%)	35	2.6
Understands Concepts on Sustainability (Economics, Social/Cultural, Environment)	6 (17%)	6 (17%)	15 (43%)	7 (20%)	1 (3%)	35	2.7
Understands and applies Ecological Principles	7 (20%)	6 (17%)	18 (51%)	4 (11%)	0 (0%)	35	2.5
Understand the need for environmental protection	5 (14%)	5 (14%)	15 (43%)	7 (20%)	3 (9%)	35	2.9
Basic understanding of property rights and environmental issues	4 (11%)	5 (14%)	16 (46%)	8 (23%)	2 (6%)	35	3.0

### 1.19. Conceptual and Theoretical Domain | Current Importance

	1	2	3	4	5	Total	Mean
Thinks Spatially	1 (2%)	1 (2%)	5 (12%)	16 (40%)	17 (42%)	40	4.2
Understands legal concepts	3 (8%)	4 (10%)	10 (25%)	15 (38%)	8 (20%)	40	3.5
Applies graphic design theory	1 (3%)	2 (5%)	6 (15%)	22 (56%)	8 (21%)	39	3.9
Applies site planning theory	3 (8%)	3 (8%)	11 (28%)	14 (35%)	9 (22%)	40	3.6
Understands planning concepts	1 (2%)	1 (2%)	9 (22%)	13 (32%)	16 (40%)	40	4.0
Understands introductory economic and business concepts	5 (13%)	7 (18%)	17 (44%)	5 (13%)	5 (13%)	39	2.9
Understands environmental concepts	1 (3%)	6 (15%)	15 (38%)	11 (28%)	6 (15%)	39	3.4
Understands political concepts	2 (5%)	7 (18%)	14 (36%)	9 (23%)	7 (18%)	39	3.3
Appreciates multi-disciplinary concepts	2 (5%)	4 (11%)	13 (35%)	9 (24%)	9 (24%)	37	3.5

### 1.19. Conceptual and Theoretical Domain | Competency for summer student

	1	2	3	4	5	Total	Mean
Thinks Spatially	3 (8%)	11 (31%)	13 (36%)	6 (17%)	3 (8%)	36	2.9
Understands legal concepts	7 (20%)	18 (51%)	10 (29%)	0 (0%)	0 (0%)	35	2.1
Applies graphic design theory	4 (11%)	14 (39%)	12 (33%)	5 (14%)	1 (3%)	36	2.6
Applies site planning theory	8 (22%)	19 (53%)	7 (19%)	2 (6%)	0 (0%)	36	2.1
Understands planning concepts	3 (8%)	21 (58%)	9 (25%)	3 (8%)	0 (0%)	36	2.3
Understands introductory economic and business concepts	7 (21%)	18 (53%)	9 (26%)	0 (0%)	0 (0%)	34	2.1
Understands environmental concepts	4 (12%)	15 (44%)	14 (41%)	1 (3%)	0 (0%)	34	2.4
Understands political concepts	5 (15%)	16 (47%)	13 (38%)	0 (0%)	0 (0%)	34	2.2
Appreciates multi-disciplinary concepts	5 (15%)	13 (39%)	15 (45%)	0 (0%)	0 (0%)	33	2.3

### 1.19. Conceptual and Theoretical Domain | Competency entering workforce

	1	2	3	4	5	Total	Mean
Thinks Spatially	1 (3%)	4 (11%)	12 (32%)	14 (37%)	7 (18%)	38	3.6
Understands legal concepts	2 (5%)	10 (26%)	15 (39%)	10 (26%)	1 (3%)	38	2.9
Applies graphic design theory	1 (3%)	5 (13%)	12 (32%)	15 (39%)	5 (13%)	38	3.5
Applies site planning theory	2 (5%)	9 (24%)	16 (42%)	9 (24%)	2 (5%)	38	3.0
Understands planning concepts	1 (3%)	7 (18%)	13 (34%)	12 (32%)	5 (13%)	38	3.3
Understands introductory economic and business concepts	5 (14%)	10 (27%)	16 (43%)	5 (14%)	1 (3%)	37	2.6
Understands environmental concepts	0 (0%)	14 (39%)	11 (31%)	9 (25%)	2 (6%)	36	3.0
Understands political concepts	1 (3%)	13 (35%)	13 (35%)	9 (24%)	1 (3%)	37	2.9
Appreciates multi-disciplinary concepts	0 (0%)	11 (31%)	14 (39%)	10 (28%)	1 (3%)	36	3.0

### 1.20. Personal Skills | Current Importance

	1	2	3	4	5	Total	Mean
People skills	0 (0%)	0 (0%)	4 (10%)	8 (20%)	28 (70%)	40	4.6
Team building	0 (0%)	0 (0%)	7 (18%)	13 (32%)	20 (50%)	40	4.3
Team participation	0 (0%)	0 (0%)	3 (8%)	14 (35%)	23 (57%)	40	4.5
Leadership skills	0 (0%)	1 (2%)	11 (28%)	16 (40%)	12 (30%)	40	4.0
Ability to multi-task	0 (0%)	1 (2%)	3 (8%)	6 (15%)	30 (75%)	40	4.6
Time management skills	1 (2%)	0 (0%)	0 (0%)	11 (28%)	28 (70%)	40	4.6
Ability to learn	0 (0%)	1 (2%)	1 (2%)	6 (15%)	32 (80%)	40	4.7
Teaching skills	0 (0%)	2 (5%)	10 (25%)	13 (32%)	15 (38%)	40	4.0
Problem solve	0 (0%)	1 (2%)	2 (5%)	13 (32%)	24 (60%)	40	4.5
Analytical thinker	0 (0%)	1 (2%)	5 (12%)	14 (35%)	20 (50%)	40	4.3
Critical thinking	0 (0%)	1 (2%)	9 (22%)	12 (30%)	18 (45%)	40	4.2
Presentation/public speaking skills	1 (2%)	2 (5%)	9 (22%)	15 (38%)	13 (32%)	40	3.9
Other Communication skills, written, email	0 (0%)	1 (3%)	3 (8%)	11 (28%)	24 (62%)	39	4.5
Customer Service	0 (0%)	3 (8%)	1 (3%)	10 (26%)	25 (64%)	39	4.5

### 1.20. Personal Skills | Competency for summer student

	1	2	3	4	5	Total	Mean
People skills	1 (3%)	4 (11%)	18 (50%)	10 (28%)	3 (8%)	36	3.3
Team building	4 (11%)	13 (36%)	14 (39%)	5 (14%)	0 (0%)	36	2.6
Team participation	1 (3%)	9 (25%)	14 (39%)	10 (28%)	2 (6%)	36	3.1
Leadership skills	3 (8%)	18 (50%)	13 (36%)	2 (6%)	0 (0%)	36	2.4
Ability to multi-task	1 (3%)	8 (22%)	19 (53%)	6 (17%)	2 (6%)	36	3.0
Time management skills	1 (3%)	11 (31%)	15 (42%)	6 (17%)	3 (8%)	36	3.0
Ability to learn	1 (3%)	2 (6%)	17 (47%)	11 (31%)	5 (14%)	36	3.5
Teaching skills	7 (19%)	13 (36%)	11 (31%)	5 (14%)	0 (0%)	36	2.4
Problem solve	1 (3%)	8 (22%)	19 (53%)	7 (19%)	1 (3%)	36	3.0
Analytical thinker	1 (3%)	10 (28%)	17 (47%)	7 (19%)	1 (3%)	36	2.9
Critical thinking	2 (6%)	12 (34%)	14 (40%)	5 (14%)	2 (6%)	35	2.8
Presentation/public speaking skills	4 (11%)	13 (37%)	14 (40%)	4 (11%)	0 (0%)	35	2.5
Other Communication skills, written, email	1 (3%)	6 (17%)	17 (49%)	9 (26%)	2 (6%)	35	3.1
Customer Service	2 (6%)	9 (25%)	15 (42%)	6 (17%)	4 (11%)	36	3.0

## 1.20. Personal Skills | Competency entering workforce

	1	2	3	4	5	Total	Mean
People skills	0 (0%)	1 (3%)	13 (34%)	11 (29%)	13 (34%)	38	3.9
Team building	1 (3%)	4 (11%)	14 (37%)	10 (26%)	9 (24%)	38	3.6
Team participation	0 (0%)	2 (5%)	11 (29%)	16 (42%)	9 (24%)	38	3.8
Leadership skills	0 (0%)	7 (18%)	14 (37%)	10 (26%)	7 (18%)	38	3.4
Ability to multi-task	0 (0%)	2 (5%)	14 (37%)	8 (21%)	14 (37%)	38	3.9
Time management skills	0 (0%)	1 (3%)	11 (29%)	12 (32%)	14 (37%)	38	4.0
Ability to learn	0 (0%)	1 (3%)	10 (26%)	14 (37%)	13 (34%)	38	4.0
Teaching skills	2 (5%)	10 (26%)	9 (24%)	9 (24%)	8 (21%)	38	3.3
Problem solve	0 (0%)	3 (8%)	12 (32%)	11 (29%)	12 (32%)	38	3.8
Analytical thinker	0 (0%)	3 (8%)	16 (42%)	12 (32%)	7 (18%)	38	3.6
Critical thinking	0 (0%)	4 (11%)	16 (42%)	8 (21%)	10 (26%)	38	3.6
Presentation/public speaking skills	2 (5%)	5 (13%)	13 (34%)	10 (26%)	8 (21%)	38	3.4
Other Communication skills, written, email	0 (0%)	1 (3%)	12 (32%)	15 (39%)	10 (26%)	38	3.9
Customer Service	0 (0%)	5 (13%)	9 (24%)	14 (37%)	10 (26%)	38	3.8

### 1.21. Worker Behaviors | Current Importance

	1	2	3	4	5	Total	Mean
Follow procedures	0 (0%)	0 (0%)	2 (5%)	11 (28%)	27 (68%)	40	4.6
Communicate	0 (0%)	0 (0%)	3 (8%)	8 (20%)	29 (72%)	40	4.7
Use appropriate office etiquette - social, sexual and political correctness	0 (0%)	0 (0%)	2 (5%)	9 (23%)	28 (72%)	39	4.7
Value diversity	0 (0%)	0 (0%)	5 (12%)	8 (20%)	27 (68%)	40	4.5
Act with integrity	0 (0%)	0 (0%)	2 (5%)	6 (15%)	31 (79%)	39	4.7
Be accountable	0 (0%)	0 (0%)	2 (5%)	7 (18%)	31 (78%)	40	4.7
Deliver quality work	0 (0%)	0 (0%)	0 (0%)	9 (22%)	31 (78%)	40	4.8
Safety oriented	0 (0%)	0 (0%)	4 (10%)	12 (30%)	24 (60%)	40	4.5
Dependable	0 (0%)	0 (0%)	3 (8%)	7 (18%)	30 (75%)	40	4.7
Easy-going	0 (0%)	1 (2%)	5 (12%)	16 (40%)	18 (45%)	40	4.3
Hygienic	0 (0%)	0 (0%)	5 (12%)	9 (22%)	26 (65%)	40	4.5
Can-do, positive attitude	0 (0%)	0 (0%)	4 (10%)	8 (20%)	28 (70%)	40	4.6
Solution-oriented	0 (0%)	0 (0%)	3 (8%)	10 (25%)	27 (68%)	40	4.6
Attention to detail	0 (0%)	0 (0%)	2 (5%)	7 (18%)	31 (78%)	40	4.7
Flexible	0 (0%)	0 (0%)	3 (8%)	13 (32%)	24 (60%)	40	4.5
Adaptable	0 (0%)	0 (0%)	2 (5%)	13 (32%)	25 (62%)	40	4.6
Open-minded	0 (0%)	0 (0%)	4 (10%)	10 (25%)	26 (65%)	40	4.5
Good sense of humor	0 (0%)	2 (5%)	9 (22%)	9 (22%)	20 (50%)	40	4.2
Self-starter	0 (0%)	0 (0%)	3 (8%)	11 (28%)	26 (65%)	40	4.6
Respectful of others	0 (0%)	0 (0%)	3 (8%)	8 (20%)	29 (72%)	40	4.7

Self-initiated learner	0 (0%)	0 (0%)	4 (10%)	12 (30%)	24 (60%)	40	4.5
Pride in work	0 (0%)	1 (2%)	3 (8%)	7 (18%)	29 (72%)	40	4.6
Can work independently and in team	0 (0%)	0 (0%)	2 (5%)	8 (20%)	30 (75%)	40	4.7
Open to new tasks, assignments, ideas	0 (0%)	0 (0%)	3 (8%)	11 (28%)	26 (65%)	40	4.6
Organized	0 (0%)	0 (0%)	4 (10%)	8 (20%)	28 (70%)	40	4.6
Participate outside of office (e.g. within user groups, community)	0 (0%)	3 (8%)	6 (15%)	11 (28%)	20 (50%)	40	4.2
Tact	0 (0%)	0 (0%)	6 (15%)	9 (23%)	24 (62%)	39	4.5

### 1.21. Worker Behaviors | Competency for summer student

	1	2	3	4	5	Total	Mean
Follow procedures	0 (0%)	5 (14%)	12 (34%)	8 (23%)	10 (29%)	35	3.7
Communicate	0 (0%)	4 (12%)	12 (35%)	9 (26%)	9 (26%)	34	3.7
Use appropriate office etiquette - social, sexual and political correctness	1 (3%)	2 (6%)	12 (34%)	9 (26%)	11 (31%)	35	3.8
Value diversity	0 (0%)	1 (3%)	15 (43%)	9 (26%)	10 (29%)	35	3.8
Act with integrity	0 (0%)	1 (3%)	15 (43%)	9 (26%)	10 (29%)	35	3.8
Be accountable	0 (0%)	4 (11%)	13 (37%)	8 (23%)	10 (29%)	35	3.7
Deliver quality work	0 (0%)	4 (11%)	12 (34%)	11 (31%)	8 (23%)	35	3.7
Safety oriented	0 (0%)	5 (14%)	12 (34%)	11 (31%)	7 (20%)	35	3.6
Dependable	0 (0%)	1 (3%)	16 (46%)	9 (26%)	9 (26%)	35	3.7
Easy-going	0 (0%)	6 (17%)	13 (37%)	12 (34%)	4 (11%)	35	3.4
Hygienic	0 (0%)	1 (3%)	15 (43%)	8 (23%)	11 (31%)	35	3.8
Can-do, positive attitude	0 (0%)	1 (3%)	16 (46%)	9 (26%)	9 (26%)	35	3.7
Solution-oriented	0 (0%)	6 (18%)	13 (38%)	9 (26%)	6 (18%)	34	3.4
Attention to detail	0 (0%)	4 (12%)	13 (38%)	11 (32%)	6 (18%)	34	3.6
Flexible	0 (0%)	2 (6%)	14 (41%)	12 (35%)	6 (18%)	34	3.6
Adaptable	0 (0%)	2 (6%)	15 (44%)	10 (29%)	7 (21%)	34	3.6
Open-minded	0 (0%)	3 (9%)	14 (41%)	10 (29%)	7 (21%)	34	3.6
Good sense of humor	0 (0%)	4 (11%)	18 (51%)	8 (23%)	5 (14%)	35	3.4
Self-starter	0 (0%)	4 (11%)	15 (43%)	11 (31%)	5 (14%)	35	3.5
Respectful of others	0 (0%)	1 (3%)	14 (41%)	11 (32%)	8 (24%)	34	3.8

Self-initiated learner	0 (0%)	5 (15%)	13 (38%)	11 (32%)	5 (15%)	34	3.5
Pride in work	0 (0%)	2 (6%)	15 (43%)	10 (29%)	8 (23%)	35	3.7
Can work independently and in team	0 (0%)	3 (9%)	14 (40%)	9 (26%)	9 (26%)	35	3.7
Open to new tasks, assignments, ideas	0 (0%)	2 (6%)	15 (43%)	8 (23%)	10 (29%)	35	3.7
Organized	0 (0%)	4 (11%)	15 (43%)	7 (20%)	9 (26%)	35	3.6
Participate outside of office (e.g. within user groups, community)	3 (9%)	4 (11%)	17 (49%)	5 (14%)	6 (17%)	35	3.2
Tact	0 (0%)	4 (11%)	15 (43%)	8 (23%)	8 (23%)	35	3.6



### 1.21. Worker Behaviors | Competency entering workforce

	1	2	3	4	5	Total	Mean
Follow procedures	0 (0%)	0 (0%)	9 (24%)	15 (41%)	13 (35%)	37	4.1
Communicate	0 (0%)	0 (0%)	12 (32%)	12 (32%)	13 (35%)	37	4.0
Use appropriate office etiquette - social, sexual and political correctness	0 (0%)	1 (3%)	9 (24%)	13 (35%)	14 (38%)	37	4.1
Value diversity	0 (0%)	0 (0%)	11 (30%)	12 (32%)	14 (38%)	37	4.1
Act with integrity	0 (0%)	0 (0%)	9 (24%)	13 (35%)	15 (41%)	37	4.2
Be accountable	0 (0%)	1 (3%)	8 (22%)	14 (38%)	14 (38%)	37	4.1
Deliver quality work	0 (0%)	1 (3%)	8 (22%)	14 (38%)	14 (38%)	37	4.1
Safety oriented	0 (0%)	2 (5%)	11 (30%)	11 (30%)	13 (35%)	37	3.9
Dependable	0 (0%)	0 (0%)	10 (27%)	12 (32%)	15 (41%)	37	4.1
Easy-going	0 (0%)	2 (6%)	12 (34%)	11 (31%)	10 (29%)	35	3.8
Hygienic	0 (0%)	0 (0%)	11 (30%)	10 (27%)	16 (43%)	37	4.1
Can-do, positive attitude	0 (0%)	0 (0%)	8 (22%)	14 (38%)	15 (41%)	37	4.2
Solution-oriented	0 (0%)	1 (3%)	9 (25%)	13 (36%)	13 (36%)	36	4.1
Attention to detail	0 (0%)	0 (0%)	8 (22%)	13 (36%)	15 (42%)	36	4.2
Flexible	0 (0%)	0 (0%)	9 (25%)	16 (44%)	11 (31%)	36	4.1
Adaptable	0 (0%)	0 (0%)	9 (25%)	15 (42%)	12 (33%)	36	4.1
Open-minded	0 (0%)	1 (3%)	9 (25%)	14 (39%)	12 (33%)	36	4.0
Good sense of humor	0 (0%)	1 (3%)	17 (47%)	8 (22%)	10 (28%)	36	3.8
Self-starter	0 (0%)	0 (0%)	9 (24%)	16 (43%)	12 (32%)	37	4.1
Respectful of others	0 (0%)	0 (0%)	9 (25%)	13 (36%)	14 (39%)	36	4.1

Self-initiated learner	0 (0%)	0 (0%)	11 (30%)	14 (38%)	12 (32%)	37	4.0
Pride in work	0 (0%)	1 (3%)	7 (19%)	15 (41%)	14 (38%)	37	4.1
Can work independently and in team	0 (0%)	0 (0%)	8 (22%)	14 (38%)	15 (41%)	37	4.2
Open to new tasks, assignments, ideas	0 (0%)	0 (0%)	7 (19%)	17 (46%)	13 (35%)	37	4.2
Organized	0 (0%)	0 (0%)	11 (30%)	12 (32%)	14 (38%)	37	4.1
Participate outside of office (e.g. within user groups, community)	2 (5%)	1 (3%)	12 (32%)	11 (30%)	11 (30%)	37	3.8
Tact	0 (0%)	0 (0%)	12 (32%)	12 (32%)	13 (35%)	37	4.0

### 1.22. Use Office Equipment | Current Importance

	1	2	3	4	5	Total	Mean
Plotter	1 (2%)	2 (5%)	2 (5%)	6 (15%)	29 (72%)	40	4.5
Scanner	0 (0%)	4 (10%)	4 (10%)	6 (15%)	26 (65%)	40	4.3
Desktop Printers	1 (2%)	3 (8%)	4 (10%)	4 (10%)	28 (70%)	40	4.4
Computer/Laptop	0 (0%)	0 (0%)	0 (0%)	7 (18%)	32 (82%)	39	4.8
GPS	3 (8%)	3 (8%)	6 (15%)	7 (18%)	20 (51%)	39	4.0
Laser Range Finder	12 (32%)	8 (22%)	9 (24%)	5 (14%)	3 (8%)	37	2.4
Geobeacon	9 (24%)	3 (8%)	15 (41%)	5 (14%)	5 (14%)	37	2.8
Camera – digital (GPS)	3 (8%)	2 (5%)	13 (34%)	8 (21%)	12 (32%)	38	3.6
Compass	11 (31%)	7 (20%)	10 (29%)	3 (9%)	4 (11%)	35	2.5
Fax machine	4 (10%)	5 (12%)	8 (20%)	8 (20%)	15 (38%)	40	3.6
Postage Machine	16 (42%)	11 (29%)	5 (13%)	3 (8%)	3 (8%)	38	2.1
Phone	0 (0%)	1 (2%)	3 (8%)	6 (15%)	30 (75%)	40	4.6
Photocopiers	0 (0%)	2 (5%)	1 (2%)	10 (25%)	27 (68%)	40	4.5
Map Filing Systems	3 (8%)	3 (8%)	9 (22%)	9 (22%)	16 (40%)	40	3.8
Data Projector	4 (10%)	5 (13%)	12 (31%)	5 (13%)	13 (33%)	39	3.5
Audio Visual systems (setup, operation, room layout)	3 (8%)	10 (26%)	9 (23%)	5 (13%)	12 (31%)	39	3.3
Digital voice recorders	16 (42%)	6 (16%)	8 (21%)	4 (11%)	4 (11%)	38	2.3

### 1.22. Use Office Equipment | Competency for summer student

	1	2	3	4	5	Total	Mean
Plotter	5 (14%)	2 (6%)	19 (53%)	4 (11%)	6 (17%)	36	3.1
Scanner	3 (8%)	5 (14%)	20 (56%)	2 (6%)	6 (17%)	36	3.1
Desktop Printers	3 (9%)	4 (11%)	19 (54%)	3 (9%)	6 (17%)	35	3.1
Computer/Laptop	0 (0%)	2 (6%)	18 (50%)	5 (14%)	11 (31%)	36	3.7
GPS	3 (9%)	5 (14%)	20 (57%)	5 (14%)	2 (6%)	35	2.9
Laser Range Finder	9 (27%)	11 (33%)	13 (39%)	0 (0%)	0 (0%)	33	2.1
Geobeacon	7 (21%)	11 (32%)	13 (38%)	1 (3%)	2 (6%)	34	2.4
Camera – digital (GPS)	4 (11%)	7 (20%)	17 (49%)	4 (11%)	3 (9%)	35	2.9
Compass	12 (38%)	11 (34%)	7 (22%)	0 (0%)	2 (6%)	32	2.0
Fax machine	4 (11%)	5 (14%)	23 (64%)	2 (6%)	2 (6%)	36	2.8
Postage Machine	16 (50%)	6 (19%)	8 (25%)	0 (0%)	2 (6%)	32	1.9
Phone	0 (0%)	3 (8%)	20 (56%)	4 (11%)	9 (25%)	36	3.5
Photocopiers	1 (3%)	4 (11%)	22 (61%)	5 (14%)	4 (11%)	36	3.2
Map Filing Systems	5 (14%)	7 (19%)	19 (53%)	3 (8%)	2 (6%)	36	2.7
Data Projector	3 (9%)	8 (24%)	20 (59%)	1 (3%)	2 (6%)	34	2.7
Audio Visual systems (setup, operation, room layout)	7 (21%)	9 (26%)	15 (44%)	1 (3%)	2 (6%)	34	2.5
Digital voice recorders	13 (39%)	5 (15%)	13 (39%)	1 (3%)	1 (3%)	33	2.2

## 1.22. Use Office Equipment | Competency entering workforce

	1	2	3	4	5	Total	Mean
Plotter	2 (5%)	0 (0%)	9 (24%)	15 (41%)	11 (30%)	37	3.9
Scanner	1 (3%)	1 (3%)	11 (30%)	14 (38%)	10 (27%)	37	3.8
Desktop Printers	0 (0%)	2 (5%)	10 (27%)	14 (38%)	11 (30%)	37	3.9
Computer/Laptop	0 (0%)	0 (0%)	8 (22%)	11 (30%)	18 (49%)	37	4.3
GPS	1 (3%)	4 (11%)	9 (25%)	14 (39%)	8 (22%)	36	3.7
Laser Range Finder	7 (20%)	8 (23%)	12 (34%)	7 (20%)	1 (3%)	35	2.6
Geobeacon	8 (23%)	6 (17%)	11 (31%)	7 (20%)	3 (9%)	35	2.7
Camera – digital (GPS)	2 (6%)	3 (8%)	15 (42%)	9 (25%)	7 (19%)	36	3.4
Compass	8 (24%)	5 (15%)	12 (35%)	6 (18%)	3 (9%)	34	2.7
Fax machine	2 (5%)	4 (11%)	15 (41%)	11 (30%)	5 (14%)	37	3.4
Postage Machine	13 (38%)	8 (24%)	6 (18%)	5 (15%)	2 (6%)	34	2.3
Phone	0 (0%)	1 (3%)	12 (32%)	9 (24%)	15 (41%)	37	4.0
Photocopiers	0 (0%)	3 (8%)	13 (35%)	10 (27%)	11 (30%)	37	3.8
Map Filing Systems	2 (5%)	3 (8%)	15 (41%)	11 (30%)	6 (16%)	37	3.4
Data Projector	1 (3%)	4 (11%)	16 (44%)	8 (22%)	7 (19%)	36	3.4
Audio Visual systems (setup, operation, room layout)	4 (11%)	3 (8%)	15 (42%)	8 (22%)	6 (17%)	36	3.2
Digital voice recorders	10 (29%)	6 (17%)	10 (29%)	7 (20%)	2 (6%)	35	2.6

### Skills Section: continued

Importance Competency Scoring Skill Importance and Competency 1 Least importance 1 Requires assistance or supervision 2 Less importance 2 Requires some assistance or supervision 3 Average importance 3 Without assistance or supervision 4 More importance 4 With initiative, adaptability in various situations 5 Most Importance 5 Expertly and can train others

### 1.23. Use Computer Software | Current Importance

	1	2	3	4	5	Total	Mean
Microsoft Office Suite	0 (0%)	1 (2%)	2 (5%)	9 (22%)	28 (70%)	40	4.6
Wordperfect Office Suite	12 (33%)	7 (19%)	4 (11%)	7 (19%)	6 (17%)	36	2.7
Adobe Photoshop / Illustrator	6 (16%)	5 (13%)	14 (37%)	10 (26%)	3 (8%)	38	3.0
CorelDraw / Paint	6 (16%)	8 (21%)	6 (16%)	10 (26%)	8 (21%)	38	3.2
Statistics Canada Software (CANSIM, Beyond 20/20, Geosuite)	13 (35%)	9 (24%)	5 (14%)	7 (19%)	3 (8%)	37	2.4
DNR Garmin	19 (58%)	5 (15%)	5 (15%)	3 (9%)	1 (3%)	33	1.8
Garmin MapSource	16 (53%)	5 (17%)	6 (20%)	2 (7%)	1 (3%)	30	1.9
Trimble Office	11 (34%)	5 (16%)	8 (25%)	4 (12%)	4 (12%)	32	2.5
GPSH	21 (68%)	4 (13%)	5 (16%)	1 (3%)	0 (0%)	31	1.5
Google Sketchup	10 (28%)	5 (14%)	9 (25%)	6 (17%)	6 (17%)	36	2.8
Sketchup Pro	15 (45%)	2 (6%)	9 (27%)	4 (12%)	3 (9%)	33	2.3
Sketchup Layout	15 (45%)	3 (9%)	8 (24%)	5 (15%)	2 (6%)	33	2.3
Pictometry	17 (55%)	6 (19%)	6 (19%)	1 (3%)	1 (3%)	31	1.8
Google Earth	3 (8%)	0 (0%)	11 (29%)	13 (34%)	11 (29%)	38	3.8
Google Earth Pro	6 (18%)	4 (12%)	9 (26%)	9 (26%)	6 (18%)	34	3.1
Open Source and Freeware GIS	13 (38%)	11 (32%)	3 (9%)	7 (21%)	0 (0%)	34	2.1
ArcGIS Map	2 (5%)	2 (5%)	0 (0%)	8 (20%)	28 (70%)	40	4.5
ArcInfo Workstation	12 (33%)	1 (3%)	13 (36%)	6 (17%)	4 (11%)	36	2.7
Spatial Analyst	5 (13%)	9 (24%)	11 (29%)	7 (18%)	6 (16%)	38	3.0
3D Analyst	8 (22%)	9 (24%)	8 (22%)	5 (14%)	7 (19%)	37	2.8

ArcScene	13 (36%)	5 (14%)	10 (28%)	6 (17%)	2 (6%)	36	2.4
ArcGlobe	17 (50%)	5 (15%)	7 (21%)	5 (15%)	0 (0%)	34	2.0
Network Analyst	14 (39%)	5 (14%)	8 (22%)	6 (17%)	3 (8%)	36	2.4
Geometric Networks	15 (44%)	5 (15%)	11 (32%)	1 (3%)	2 (6%)	34	2.1
ArcGIS Mobile, ArcPAD	14 (41%)	5 (15%)	8 (24%)	4 (12%)	3 (9%)	34	2.3
ArcScan, Vextractor	19 (54%)	9 (26%)	4 (11%)	2 (6%)	1 (3%)	35	1.8
Maplex (annotation)	16 (47%)	6 (18%)	6 (18%)	5 (15%)	1 (3%)	34	2.1
Model Builder	13 (38%)	5 (15%)	6 (18%)	6 (18%)	4 (12%)	34	2.5
Cadastral Editor	22 (71%)	5 (16%)	2 (6%)	2 (6%)	0 (0%)	31	1.5
Ianko's Geowizards, Geotools	16 (48%)	3 (9%)	4 (12%)	4 (12%)	6 (18%)	33	2.4
Hawths Tools	24 (75%)	2 (6%)	2 (6%)	3 (9%)	1 (3%)	32	1.6
Xtools	18 (55%)	3 (9%)	6 (18%)	4 (12%)	2 (6%)	33	2.1
Map/Info	16 (52%)	6 (19%)	4 (13%)	3 (10%)	2 (6%)	31	2.0
CARIS	24 (77%)	1 (3%)	2 (6%)	3 (10%)	1 (3%)	31	1.6
Vertical Mapper	21 (68%)	5 (16%)	3 (10%)	2 (6%)	0 (0%)	31	1.5
Idrisi	26 (84%)	1 (3%)	4 (13%)	0 (0%)	0 (0%)	31	1.3
Grass	26 (81%)	3 (9%)	3 (9%)	0 (0%)	0 (0%)	32	1.3
PCI	25 (78%)	3 (9%)	3 (9%)	1 (3%)	0 (0%)	32	1.4
ERDAS	24 (77%)	3 (10%)	4 (13%)	0 (0%)	0 (0%)	31	1.4
SQL	14 (40%)	5 (14%)	7 (20%)	7 (20%)	2 (6%)	35	2.4
Oracle	22 (71%)	3 (10%)	5 (16%)	1 (3%)	0 (0%)	31	1.5

SQL Server	17 (49%)	3 (9%)	10 (29%)	5 (14%)	0 (0%)	35	2.1
Paradox	25 (83%)	2 (7%)	3 (10%)	0 (0%)	0 (0%)	30	1.3
Quattro Pro	19 (56%)	4 (12%)	6 (18%)	2 (6%)	3 (9%)	34	2.0
Access	5 (14%)	6 (16%)	7 (19%)	9 (24%)	10 (27%)	37	3.4
Excel	0 (0%)	1 (3%)	5 (13%)	6 (15%)	27 (69%)	39	4.5
Statistical Package for the Social Sciences (SPSS)	19 (59%)	3 (9%)	6 (19%)	3 (9%)	1 (3%)	32	1.9
Publisher (web pages, newsletters)	13 (38%)	4 (12%)	7 (21%)	4 (12%)	6 (18%)	34	2.6
HTML	12 (35%)	5 (15%)	8 (24%)	5 (15%)	4 (12%)	34	2.5
Java	19 (61%)	5 (16%)	4 (13%)	2 (6%)	1 (3%)	31	1.7
Front Page	19 (61%)	3 (10%)	6 (19%)	2 (6%)	1 (3%)	31	1.8
Macromedia Dreamweaver / Contribute	21 (66%)	4 (12%)	1 (3%)	2 (6%)	4 (12%)	32	1.9
Auto CAD	7 (19%)	5 (14%)	12 (32%)	5 (14%)	8 (22%)	37	3.1
Auto CAD Civil 3D	13 (42%)	1 (3%)	9 (29%)	6 (19%)	2 (6%)	31	2.5
Auto CAD Map	10 (29%)	3 (9%)	10 (29%)	6 (18%)	5 (15%)	34	2.8
Microstation	21 (68%)	5 (16%)	3 (10%)	2 (6%)	0 (0%)	31	1.5
Internet Browsers	4 (11%)	2 (5%)	3 (8%)	6 (16%)	22 (59%)	37	4.1
Mr. Sid	20 (65%)	1 (3%)	6 (19%)	2 (6%)	2 (6%)	31	1.9
ER mapper	25 (86%)	0 (0%)	3 (10%)	0 (0%)	1 (3%)	29	1.3
Pathfinder Pro	21 (70%)	2 (7%)	3 (10%)	3 (10%)	1 (3%)	30	1.7
Pathfinder Office	14 (42%)	2 (6%)	6 (18%)	7 (21%)	4 (12%)	33	2.5
Trimble Office	13 (41%)	5 (16%)	9 (28%)	2 (6%)	3 (9%)	32	2.3

Data Modeling Tools – Visio	20 (62%)	3 (9%)	6 (19%)	3 (9%)	0 (0%)	32	1.8
Python	17 (49%)	6 (17%)	5 (14%)	5 (14%)	2 (6%)	35	2.1
VB, VBA	17 (52%)	6 (18%)	6 (18%)	3 (9%)	1 (3%)	33	1.9
AML	24 (75%)	4 (12%)	3 (9%)	1 (3%)	0 (0%)	32	1.4
PageMaker	26 (87%)	0 (0%)	3 (10%)	1 (3%)	0 (0%)	30	1.3
Flash	20 (67%)	3 (10%)	5 (17%)	1 (3%)	1 (3%)	30	1.7
Adobe Acrobat (pdf)	0 (0%)	1 (2%)	7 (18%)	7 (18%)	25 (62%)	40	4.4
Unix/Linux	24 (80%)	3 (10%)	3 (10%)	0 (0%)	0 (0%)	30	1.3
Nova Scotia Property On-line	4 (10%)	2 (5%)	4 (10%)	6 (15%)	23 (59%)	39	4.1
Geonova	6 (17%)	4 (11%)	8 (22%)	9 (25%)	9 (25%)	36	3.3
Geogratias	12 (38%)	6 (19%)	8 (25%)	2 (6%)	4 (12%)	32	2.4
Image Servers	19 (59%)	4 (12%)	7 (22%)	2 (6%)	0 (0%)	32	1.8
ArcServer, Flex	21 (66%)	2 (6%)	4 (12%)	2 (6%)	3 (9%)	32	1.9
MapServer	21 (68%)	3 (10%)	5 (16%)	1 (3%)	1 (3%)	31	1.6
MapGuide	21 (72%)	2 (7%)	4 (14%)	1 (3%)	1 (3%)	29	1.6
Java Script	21 (70%)	1 (3%)	6 (20%)	2 (7%)	0 (0%)	30	1.6
XML	16 (50%)	3 (9%)	8 (25%)	4 (12%)	1 (3%)	32	2.1
XSL	21 (72%)	2 (7%)	5 (17%)	1 (3%)	0 (0%)	29	1.5
KML, KMZ	15 (44%)	4 (12%)	7 (21%)	7 (21%)	1 (3%)	34	2.3
MS Project	17 (57%)	7 (23%)	4 (13%)	1 (3%)	1 (3%)	30	1.7
Social Networking such as Facebook	21 (70%)	2 (7%)	4 (13%)	1 (3%)	2 (7%)	30	1.7



Twitter	23 (77%)	2 (7%)	4 (13%)	0 (0%)	1 (3%)	30	1.5
Blogs	22 (73%)	2 (7%)	5 (17%)	0 (0%)	1 (3%)	30	1.5
Personal Geodatabase	10 (27%)	2 (5%)	7 (19%)	8 (22%)	10 (27%)	37	3.2
File Based Geodatabase	11 (30%)	3 (8%)	3 (8%)	9 (24%)	11 (30%)	37	3.2
Enterprise Geodatabase (SDE)	13 (41%)	4 (12%)	4 (12%)	4 (12%)	7 (22%)	32	2.6

### 1.23. Use Computer Software | Competency for summer student

	1	2	3	4	5	Total	Mean
Microsoft Office Suite	0 (0%)	3 (9%)	21 (60%)	6 (17%)	5 (14%)	35	3.4
Wordperfect Office Suite	13 (39%)	6 (18%)	10 (30%)	2 (6%)	2 (6%)	33	2.2
Adobe Photoshop / Illustrator	7 (21%)	9 (27%)	14 (42%)	1 (3%)	2 (6%)	33	2.5
CorelDraw / Paint	8 (24%)	3 (9%)	20 (61%)	1 (3%)	1 (3%)	33	2.5
Statistics Canada Software (CANSIM, Beyond 20/20, Geosuite)	10 (30%)	10 (30%)	12 (36%)	1 (3%)	0 (0%)	33	2.1
DNR Garmin	16 (50%)	7 (22%)	8 (25%)	1 (3%)	0 (0%)	32	1.8
Garmin MapSource	16 (53%)	5 (17%)	8 (27%)	1 (3%)	0 (0%)	30	1.8
Trimble Office	12 (38%)	6 (19%)	11 (34%)	1 (3%)	2 (6%)	32	2.2
GPSH	18 (58%)	5 (16%)	7 (23%)	0 (0%)	1 (3%)	31	1.7
Google Sketchup	12 (36%)	6 (18%)	12 (36%)	2 (6%)	1 (3%)	33	2.2
Sketchup Pro	13 (42%)	4 (13%)	12 (39%)	2 (6%)	0 (0%)	31	2.1
Sketchup Layout	13 (43%)	4 (13%)	11 (37%)	2 (7%)	0 (0%)	30	2.1
Pictometry	15 (48%)	6 (19%)	9 (29%)	1 (3%)	0 (0%)	31	1.9
Google Earth	2 (6%)	5 (15%)	21 (64%)	0 (0%)	5 (15%)	33	3.0
Google Earth Pro	7 (23%)	4 (13%)	17 (55%)	2 (6%)	1 (3%)	31	2.5
Open Source and Freeware GIS	16 (48%)	4 (12%)	12 (36%)	1 (3%)	0 (0%)	33	1.9
ArcGIS Map	2 (6%)	3 (9%)	16 (46%)	6 (17%)	8 (23%)	35	3.4
ArcInfo Workstation	11 (33%)	11 (33%)	10 (30%)	1 (3%)	0 (0%)	33	2.0
Spatial Analyst	8 (24%)	10 (30%)	11 (33%)	4 (12%)	0 (0%)	33	2.3
3D Analyst	8 (24%)	12 (36%)	9 (27%)	4 (12%)	0 (0%)	33	2.3

ArcScene	13 (39%)	11 (33%)	6 (18%)	3 (9%)	0 (0%)	33	2.0
ArcGlobe	15 (45%)	10 (30%)	6 (18%)	2 (6%)	0 (0%)	33	1.8
Network Analyst	12 (36%)	10 (30%)	9 (27%)	2 (6%)	0 (0%)	33	2.0
Geometric Networks	15 (45%)	9 (27%)	7 (21%)	2 (6%)	0 (0%)	33	1.9
ArcGIS Mobile, ArcPAD	15 (45%)	8 (24%)	7 (21%)	2 (6%)	1 (3%)	33	2.0
ArcScan, Vextractor	17 (52%)	9 (27%)	6 (18%)	1 (3%)	0 (0%)	33	1.7
Maplex (annotation)	13 (39%)	11 (33%)	8 (24%)	1 (3%)	0 (0%)	33	1.9
Model Builder	11 (32%)	12 (35%)	9 (26%)	2 (6%)	0 (0%)	34	2.1
Cadastral Editor	20 (62%)	6 (19%)	5 (16%)	1 (3%)	0 (0%)	32	1.6
Ianko's Geowizards, Geotools	15 (45%)	4 (12%)	11 (33%)	2 (6%)	1 (3%)	33	2.1
Hawths Tools	19 (59%)	5 (16%)	7 (22%)	1 (3%)	0 (0%)	32	1.7
Xtools	16 (50%)	7 (22%)	8 (25%)	1 (3%)	0 (0%)	32	1.8
Map/Info	17 (53%)	7 (22%)	7 (22%)	0 (0%)	1 (3%)	32	1.8
CARIS	19 (63%)	5 (17%)	6 (20%)	0 (0%)	0 (0%)	30	1.6
Vertical Mapper	21 (70%)	3 (10%)	6 (20%)	0 (0%)	0 (0%)	30	1.5
Idrisi	23 (77%)	3 (10%)	4 (13%)	0 (0%)	0 (0%)	30	1.4
Grass	22 (73%)	4 (13%)	4 (13%)	0 (0%)	0 (0%)	30	1.4
PCI	22 (73%)	3 (10%)	5 (17%)	0 (0%)	0 (0%)	30	1.4
ERDAS	23 (77%)	3 (10%)	4 (13%)	0 (0%)	0 (0%)	30	1.4
SQL	18 (56%)	6 (19%)	8 (25%)	0 (0%)	0 (0%)	32	1.7
Oracle	20 (67%)	4 (13%)	6 (20%)	0 (0%)	0 (0%)	30	1.5

SQL Server	21 (68%)	4 (13%)	6 (19%)	0 (0%)	0 (0%)	31	1.5
Paradox	22 (73%)	5 (17%)	3 (10%)	0 (0%)	0 (0%)	30	1.4
Quattro Pro	17 (55%)	7 (23%)	5 (16%)	1 (3%)	1 (3%)	31	1.8
Access	8 (24%)	6 (18%)	13 (39%)	4 (12%)	2 (6%)	33	2.6
Excel	4 (11%)	4 (11%)	16 (46%)	5 (14%)	6 (17%)	35	3.1
Statistical Package for the Social Sciences (SPSS)	18 (58%)	5 (16%)	8 (26%)	0 (0%)	0 (0%)	31	1.7
Publisher (web pages, newsletters)	15 (47%)	4 (12%)	10 (31%)	2 (6%)	1 (3%)	32	2.1
HTML	14 (44%)	6 (19%)	11 (34%)	1 (3%)	0 (0%)	32	2.0
Java	19 (59%)	5 (16%)	7 (22%)	1 (3%)	0 (0%)	32	1.7
Front Page	16 (53%)	7 (23%)	5 (17%)	2 (7%)	0 (0%)	30	1.8
Macromedia Dreamweaver / Contribute	20 (65%)	6 (19%)	5 (16%)	0 (0%)	0 (0%)	31	1.5
Auto CAD	9 (29%)	10 (32%)	8 (26%)	3 (10%)	1 (3%)	31	2.3
Auto CAD Civil 3D	14 (47%)	7 (23%)	8 (27%)	0 (0%)	1 (3%)	30	1.9
Auto CAD Map	13 (42%)	8 (26%)	9 (29%)	0 (0%)	1 (3%)	31	2.0
Microstation	19 (63%)	7 (23%)	4 (13%)	0 (0%)	0 (0%)	30	1.5
Internet Browsers	5 (15%)	1 (3%)	13 (39%)	6 (18%)	8 (24%)	33	3.3
Mr. Sid	19 (63%)	4 (13%)	6 (20%)	0 (0%)	1 (3%)	30	1.7
ER mapper	22 (76%)	2 (7%)	5 (17%)	0 (0%)	0 (0%)	29	1.4
Pathfinder Pro	19 (63%)	4 (13%)	6 (20%)	1 (3%)	0 (0%)	30	1.6
Pathfinder Office	15 (45%)	4 (12%)	12 (36%)	2 (6%)	0 (0%)	33	2.0
Trimble Office	15 (52%)	4 (14%)	8 (28%)	2 (7%)	0 (0%)	29	1.9

Data Modeling Tools – Visio	21 (70%)	4 (13%)	5 (17%)	0 (0%)	0 (0%)	30	1.5
Python	18 (56%)	6 (19%)	8 (25%)	0 (0%)	0 (0%)	32	1.7
VB, VBA	18 (56%)	7 (22%)	7 (22%)	0 (0%)	0 (0%)	32	1.7
AML	21 (70%)	6 (20%)	3 (10%)	0 (0%)	0 (0%)	30	1.4
PageMaker	23 (79%)	2 (7%)	4 (14%)	0 (0%)	0 (0%)	29	1.3
Flash	21 (72%)	4 (14%)	4 (14%)	0 (0%)	0 (0%)	29	1.4
Adobe Acrobat (pdf)	2 (6%)	0 (0%)	21 (64%)	6 (18%)	4 (12%)	33	3.3
Unix/Linux	21 (72%)	6 (21%)	2 (7%)	0 (0%)	0 (0%)	29	1.3
Nova Scotia Property On-line	5 (15%)	7 (21%)	14 (41%)	6 (18%)	2 (6%)	34	2.8
Geonova	6 (18%)	7 (21%)	12 (36%)	6 (18%)	2 (6%)	33	2.7
Geogratias	13 (43%)	4 (13%)	10 (33%)	2 (7%)	1 (3%)	30	2.1
Image Servers	20 (65%)	5 (16%)	6 (19%)	0 (0%)	0 (0%)	31	1.5
ArcServer, Flex	22 (73%)	5 (17%)	3 (10%)	0 (0%)	0 (0%)	30	1.4
MapServer	20 (69%)	4 (14%)	5 (17%)	0 (0%)	0 (0%)	29	1.5
MapGuide	21 (72%)	3 (10%)	5 (17%)	0 (0%)	0 (0%)	29	1.4
Java Script	21 (70%)	6 (20%)	3 (10%)	0 (0%)	0 (0%)	30	1.4
XML	17 (57%)	7 (23%)	6 (20%)	0 (0%)	0 (0%)	30	1.6
XSL	21 (72%)	4 (14%)	4 (14%)	0 (0%)	0 (0%)	29	1.4
KML, KMZ	13 (41%)	11 (34%)	5 (16%)	3 (9%)	0 (0%)	32	1.9
MS Project	18 (62%)	7 (24%)	4 (14%)	0 (0%)	0 (0%)	29	1.5
Social Networking such as Facebook	19 (66%)	1 (3%)	7 (24%)	0 (0%)	2 (7%)	29	1.8

Twitter	19 (66%)	1 (3%)	8 (28%)	0 (0%)	1 (3%)	29	1.7
Blogs	18 (62%)	1 (3%)	9 (31%)	0 (0%)	1 (3%)	29	1.8
Personal Geodatabase	9 (28%)	5 (16%)	16 (50%)	1 (3%)	1 (3%)	32	2.4
File Based Geodatabase	10 (31%)	4 (12%)	12 (38%)	6 (19%)	0 (0%)	32	2.4
Enterprise Geodatabase (SDE)	14 (45%)	6 (19%)	10 (32%)	1 (3%)	0 (0%)	31	1.9

### 1.23. Use Computer Software | Competency entering workforce

	1	2	3	4	5	Total	Mean
Microsoft Office Suite	0 (0%)	1 (3%)	10 (28%)	12 (33%)	13 (36%)	36	4.0
Wordperfect Office Suite	12 (35%)	4 (12%)	7 (21%)	7 (21%)	4 (12%)	34	2.6
Adobe Photoshop / Illustrator	3 (9%)	7 (20%)	15 (43%)	7 (20%)	3 (9%)	35	3.0
CorelDraw / Paint	4 (11%)	6 (17%)	11 (31%)	11 (31%)	3 (9%)	35	3.1
Statistics Canada Software (CANSIM, Beyond 20/20, Geosuite)	7 (21%)	8 (24%)	12 (35%)	5 (15%)	2 (6%)	34	2.6
DNR Garmin	13 (41%)	4 (12%)	10 (31%)	5 (16%)	0 (0%)	32	2.2
Garmin MapSource	13 (45%)	4 (14%)	8 (28%)	4 (14%)	0 (0%)	29	2.1
Trimble Office	9 (28%)	6 (19%)	9 (28%)	6 (19%)	2 (6%)	32	2.6
GPSH	14 (47%)	7 (23%)	6 (20%)	3 (10%)	0 (0%)	30	1.9
Google Sketchup	7 (21%)	6 (18%)	11 (33%)	6 (18%)	3 (9%)	33	2.8
Sketchup Pro	9 (28%)	5 (16%)	11 (34%)	5 (16%)	2 (6%)	32	2.6
Sketchup Layout	9 (29%)	4 (13%)	10 (32%)	8 (26%)	0 (0%)	31	2.5
Pictometry	13 (43%)	5 (17%)	7 (23%)	5 (17%)	0 (0%)	30	2.1
Google Earth	0 (0%)	3 (9%)	17 (52%)	5 (15%)	8 (24%)	33	3.5
Google Earth Pro	5 (16%)	5 (16%)	11 (34%)	8 (25%)	3 (9%)	32	3.0
Open Source and Freeware GIS	11 (34%)	5 (16%)	12 (38%)	3 (9%)	1 (3%)	32	2.3
ArcGIS Map	1 (3%)	3 (8%)	8 (22%)	7 (19%)	17 (47%)	36	4.0
ArcInfo Workstation	8 (24%)	8 (24%)	11 (33%)	3 (9%)	3 (9%)	33	2.5
Spatial Analyst	5 (14%)	5 (14%)	13 (37%)	9 (26%)	3 (9%)	35	3.0
3D Analyst	6 (17%)	5 (14%)	13 (37%)	8 (23%)	3 (9%)	35	2.9

ArcScene	10 (29%)	5 (15%)	12 (35%)	5 (15%)	2 (6%)	34	2.5
ArcGlobe	13 (41%)	2 (6%)	10 (31%)	7 (22%)	0 (0%)	32	2.3
Network Analyst	9 (26%)	3 (9%)	14 (40%)	6 (17%)	3 (9%)	35	2.7
Geometric Networks	12 (36%)	3 (9%)	12 (36%)	4 (12%)	2 (6%)	33	2.4
ArcGIS Mobile, ArcPAD	12 (34%)	5 (14%)	9 (26%)	7 (20%)	2 (6%)	35	2.5
ArcScan, Vextractor	15 (44%)	8 (24%)	6 (18%)	5 (15%)	0 (0%)	34	2.0
Maplex (annotation)	12 (35%)	7 (21%)	10 (29%)	4 (12%)	1 (3%)	34	2.3
Model Builder	10 (29%)	1 (3%)	13 (38%)	7 (21%)	3 (9%)	34	2.8
Cadastral Editor	19 (61%)	4 (13%)	5 (16%)	3 (10%)	0 (0%)	31	1.7
Ianko's Geowizards, Geotools	13 (41%)	1 (3%)	9 (28%)	7 (22%)	2 (6%)	32	2.5
Hawths Tools	18 (58%)	1 (3%)	8 (26%)	4 (13%)	0 (0%)	31	1.9
Xtools	12 (39%)	5 (16%)	10 (32%)	4 (13%)	0 (0%)	31	2.2
Map/Info	12 (39%)	6 (19%)	9 (29%)	3 (10%)	1 (3%)	31	2.2
CARIS	18 (60%)	1 (3%)	9 (30%)	2 (7%)	0 (0%)	30	1.8
Vertical Mapper	17 (61%)	3 (11%)	5 (18%)	3 (11%)	0 (0%)	28	1.8
Idrisi	19 (66%)	4 (14%)	6 (21%)	0 (0%)	0 (0%)	29	1.6
Grass	19 (63%)	3 (10%)	7 (23%)	1 (3%)	0 (0%)	30	1.7
PCI	18 (62%)	4 (14%)	7 (24%)	0 (0%)	0 (0%)	29	1.6
ERDAS	19 (66%)	4 (14%)	6 (21%)	0 (0%)	0 (0%)	29	1.6
SQL	12 (38%)	5 (16%)	9 (28%)	5 (16%)	1 (3%)	32	2.3
Oracle	16 (53%)	5 (17%)	8 (27%)	1 (3%)	0 (0%)	30	1.8



SQL Server	15 (50%)	6 (20%)	7 (23%)	2 (7%)	0 (0%)	30	1.9
Paradox	20 (69%)	2 (7%)	7 (24%)	0 (0%)	0 (0%)	29	1.6
Quattro Pro	18 (55%)	3 (9%)	9 (27%)	2 (6%)	1 (3%)	33	1.9
Access	5 (14%)	6 (17%)	12 (34%)	7 (20%)	5 (14%)	35	3.0
Excel	1 (3%)	1 (3%)	14 (39%)	9 (25%)	11 (31%)	36	3.8
Statistical Package for the Social Sciences (SPSS)	15 (45%)	6 (18%)	9 (27%)	3 (9%)	0 (0%)	33	2.0
Publisher (web pages, newsletters)	12 (38%)	3 (9%)	11 (34%)	4 (12%)	2 (6%)	32	2.4
HTML	11 (34%)	4 (12%)	11 (34%)	5 (16%)	1 (3%)	32	2.4
Java	15 (48%)	7 (23%)	5 (16%)	3 (10%)	1 (3%)	31	2.0
Front Page	14 (47%)	5 (17%)	6 (20%)	4 (13%)	1 (3%)	30	2.1
Macromedia Dreamweaver / Contribute	14 (45%)	8 (26%)	7 (23%)	2 (6%)	0 (0%)	31	1.9
Auto CAD	6 (18%)	8 (24%)	10 (30%)	7 (21%)	2 (6%)	33	2.7
Auto CAD Civil 3D	10 (32%)	5 (16%)	12 (39%)	2 (6%)	2 (6%)	31	2.4
Auto CAD Map	12 (38%)	4 (12%)	10 (31%)	4 (12%)	2 (6%)	32	2.4
Microstation	15 (50%)	7 (23%)	8 (27%)	0 (0%)	0 (0%)	30	1.8
Internet Browsers	4 (12%)	0 (0%)	10 (29%)	5 (15%)	15 (44%)	34	3.8
Mr. Sid	17 (57%)	4 (13%)	5 (17%)	2 (7%)	2 (7%)	30	1.9
ER mapper	19 (66%)	3 (10%)	5 (17%)	2 (7%)	0 (0%)	29	1.7
Pathfinder Pro	17 (57%)	4 (13%)	6 (20%)	3 (10%)	0 (0%)	30	1.8
Pathfinder Office	12 (36%)	4 (12%)	12 (36%)	4 (12%)	1 (3%)	33	2.3
Trimble Office	14 (45%)	4 (13%)	8 (26%)	4 (13%)	1 (3%)	31	2.2

Data Modeling Tools – Visio	17 (57%)	4 (13%)	8 (27%)	1 (3%)	0 (0%)	30	1.8
Python	13 (38%)	7 (21%)	11 (32%)	1 (3%)	2 (6%)	34	2.2
VB, VBA	13 (42%)	7 (23%)	8 (26%)	1 (3%)	2 (6%)	31	2.1
AML	19 (61%)	4 (13%)	7 (23%)	1 (3%)	0 (0%)	31	1.7
PageMaker	21 (70%)	4 (13%)	4 (13%)	1 (3%)	0 (0%)	30	1.5
Flash	15 (52%)	9 (31%)	4 (14%)	1 (3%)	0 (0%)	29	1.7
Adobe Acrobat (pdf)	1 (3%)	0 (0%)	15 (42%)	10 (28%)	10 (28%)	36	3.8
Unix/Linux	19 (66%)	4 (14%)	6 (21%)	0 (0%)	0 (0%)	29	1.6
Nova Scotia Property On-line	4 (11%)	1 (3%)	15 (42%)	5 (14%)	11 (31%)	36	3.5
Geonova	5 (15%)	3 (9%)	12 (35%)	7 (21%)	7 (21%)	34	3.2
Geogratias	11 (35%)	3 (10%)	9 (29%)	5 (16%)	3 (10%)	31	2.5
Image Servers	16 (50%)	7 (22%)	4 (12%)	4 (12%)	1 (3%)	32	2.0
ArcServer, Flex	18 (60%)	6 (20%)	4 (13%)	1 (3%)	1 (3%)	30	1.7
MapServer	18 (62%)	5 (17%)	4 (14%)	2 (7%)	0 (0%)	29	1.7
MapGuide	19 (66%)	4 (14%)	5 (17%)	1 (3%)	0 (0%)	29	1.6
Java Script	18 (60%)	5 (17%)	6 (20%)	1 (3%)	0 (0%)	30	1.7
XML	10 (34%)	7 (24%)	9 (31%)	3 (10%)	0 (0%)	29	2.2
XSL	16 (57%)	5 (18%)	7 (25%)	0 (0%)	0 (0%)	28	1.7
KML, KMZ	10 (32%)	5 (16%)	10 (32%)	3 (10%)	3 (10%)	31	2.5
MS Project	15 (54%)	4 (14%)	8 (29%)	1 (4%)	0 (0%)	28	1.8
Social Networking such as Facebook	18 (62%)	1 (3%)	6 (21%)	2 (7%)	2 (7%)	29	1.9

Twitter	17 (63%)	1 (4%)	6 (22%)	3 (11%)	0 (0%)	27	1.8
Blogs	17 (59%)	1 (3%)	7 (24%)	3 (10%)	1 (3%)	29	2.0
Personal Geodatabase	8 (24%)	2 (6%)	14 (41%)	6 (18%)	4 (12%)	34	2.9
File Based Geodatabase	8 (24%)	2 (6%)	10 (30%)	5 (15%)	8 (24%)	33	3.1
Enterprise Geodatabase (SDE)	11 (34%)	4 (12%)	11 (34%)	5 (16%)	1 (3%)	32	2.4