TERMS OF REFERENCE

CANADIAN SOCIETIES FOR THE GEOPHYSICAL SCIENCES (CSGS)

1. THE IMPORTANCE OF EARTH SCIENCES

Applied earth sciences are key to Canada's prosperity, safety, sustainability and sovereignty. Understanding the processes involved in earth sciences forms the basis of efficient and effective management of earth's resources and underpins modes of lessening threats from devastating earth processes on society. Canadian fundamental science must remain socially relevant to ensure long-term competitiveness, prosperity and quality of life.

The advancement of geophysical science requires substantial and continued investment in research and development. The Natural Sciences and Engineering Research Council of Canada – NSERC – is the predominant and most important source of funding for fundamental geophysical science research in Canada.

Investing in NSERC must therefore be a national priority of all Canadian governments. Current funding levels are not commensurate with the needs and demands for the advancement of the geophysical sciences in Canada. A strong voice to government, funding agencies, industry and the public is needed.

2. THE SCOPE OF EARTH SCIENCES

Earth Science activities are coordinated through two International Unions and an International Commission:

- The **International Union of Geodesy and Geophysics (IUGG)** coordinates Geophysical Sciences
- The **International Union of Geological Sciences (IUGS)** coordinates Geological Sciences
- The **International Committee on Irrigation and Drainage (ICID)** coordinates the sharing of knowledge and transfer of agricultural water management technology.

Canadian membership fees for IUGG are paid by the National Research Council (NRC). Canadian membership fees for IUGS are paid by the Geological Survey of Canada (GSC). Canadian membership fees for ICID are paid by the Canadian Water Resources Association (CWRA).

3. THE SCOPE OF THE GEOPHYSICAL SCIENCES

The geophysical sciences are those branches of the Earth sciences in which the principles and practices of physics, mathematics and chemistry are used to study the Earth. Prominent amongst these sciences are the Atmospheric and Ocean Sciences, Hydrological Sciences, Solid Earth Sciences and Near-Earth Space Sciences. The scope of study for the geophysical sciences includes the lithosphere, deep Earth, cryosphere, hydrosphere, atmosphere, biosphere, pedosphere and near-Earth space environment, and the interactions amongst these components of the Earth, including interactions of these elements with the built environment.

Within the IUGG structure there are 8 International Associations representing the geophysical sciences:

- **IAG**: Geodesy
- **IAMAS**: Meteorology and Atmospheric Sciences
- **IAHS**: Hydrological Sciences
- **IAPSO**: Physical Sciences of the Oceans
- **IACS**: Cryospheric Sciences
- **IAGA**: Geomagnetism and Aeronomy
- **IASPEI**: Seismology and Physics of the Earth's Interior
- **IAVCEI**: Volcanology and Chemistry of the Earth's Interior

Within Canada the activities of IAMAS and IAPSO are coordinated by the Canadian Meteorological and Oceanographic Society (CMOS) and the activities of IAG, IAHS, IACS, IAGA and IASPEI are coordinated by the Canadian Geophysical Union (CGU). CWRA also has links to IAHS through one of its affiliates: the Canadian Society for Hydrological Sciences (CSHS). IAVCEI activities have yet to be fully coordinated within CGU.

4. CANADIAN SOCIETIES FOR THE GEOPHYSICAL SCIENCES (CSGS)

MISSION STATEMENT: The mission of the CSGS is to facilitate, coordinate and promote the advancement of the geophysical sciences in Canada. CSGS shall be the advocate for the geophysical sciences within Canada (while not precluding advocacy by its individual member societies on behalf of their members and/or as mandated by their own missions and objectives).

GOALS AND OBJECTIVES:

- Facilitate collaboration, and information exchange amongst Canadian geophysical societies, in particular those whose activities are aligned with the international associations comprising the IUGG in order to provide coordinated Canadian input into the IUGG, and
- Coordinate and promote a vision for the development of the geophysical sciences in Canada.

The CSGS will achieve its goals by

- Engaging Canadian geophysical societies that are represented in IUGG.
- Proposing joint meetings of member societies.
- Encouraging secondary and post-secondary educational programs in the geophysical sciences.
- Promoting the benefits of and discoveries made in the geophysical sciences to the public, industry and government.
- Articulating a vision for the advancement of the geophysical sciences in Canada.
- Identifying areas where geophysical science research is required in Canada and recommending the level of research support required to support geophysical science research in Canada.
- Making periodic recommendations to member societies through their national executives.
- Promoting collaborations with the Canadian Federation of Earth Sciences (CFES) and other Earth science societies to achieve common goals.

MEMBERSHIP:

Membership to CSGS is obtained by board approval of individual societies, upon invitation by existing CSGS members. Current members include the following societies:

- Canadian Meteorological and Oceanographic Society (CMOS)
- Canadian Geophysical Union (CGU)
- Canadian Society of Soil Science (CSSS)
- Canadian Water Resources Association (CWRA)
- Canadian Society for Agriculture and Forest Meteorology (CSAFM)

There are no membership fees.

Mode of Operation: CSGS will operate as an informal committee, with each member society designating committee members (normally the President and Past President of the society, or alternates). The Chair of the committee will be chosen by consensus of the committee. Most work will be done by email, with at least one main meeting or teleconference being held each year. Meeting preference will be given to any joint annual meetings of two or more member groups. Any public position or statement of CSGS must be approved by all member societies. If unanimity is not obtained, any number of individual societies can adopt a common position, state that they are members of CSGS, but it would not be deemed a CSGS position.