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**NATURAL EMERGENCY SITUATIONS,
CHARACTERISTIC REPUBLIC OF BELARUS FOR VITEBSK AREA****PAVEL KALININ, EVALD KALVAN**
Polotsk state university, Belarus

The analysis of possible natural emergency situations, characteristic for Vitebsk area of Republic of Belarus is carried out. Numerous consequences of adverse weather conditions are considered. Population actions are specified during dangerous meteorological processes and the phenomena.

According to numerous observations in the Vitebsk region may be hazardous meteorological processes and phenomena (hurricane force winds, snow blizzards, whirlwinds of large diameter, thunderstorms), dangerous hydrological phenomena and processes (floods anthropogenic and natural), wildfires.

Hurricanes usually form in the equatorial zone. Their appearance is due to the uneven heating of different areas of the rotating earth. Equator is heated more poles – less. The heated air rises, forming a region of high pressure, which combined with the rotation of the earth, the air mass by friction surface layer, the influence of the moon and other planets causes the nucleation of vortices of large diameter (hundreds of kilometers), which moved into the northern and southern latitudes and eventually scattered. Wind speed in the surface layer of such a vortex of hurricane force reaches 200 km / h and more.

Ravages of strong winds intensified loss of heavy rains, flying through the air objects. On the approximation of strong winds population notified storm warning. Upon receipt of such notice must close the windows, doors, hold fixing work, swept away by the wind objects sturdy shelter in the building.

With the approach of winter snowstorms is recommended that a number of the activities listed above, as well as stock up on food and water.

Vortices of large diameter – is an air funnel diameter 100 – 1500 m with a pressure drop between the center and the periphery to 8 kPa, which descended from the cloud, leave the terrain wide swath of destruction a few tens or hundreds of meters and a length of several hundred meters to tens of kilometers or more. These vortices cause very great destruction: scratching trees, destroy buildings, rip and move large objects on the ground. In the equatorial zone, these vortices are called tornadoes.

Approximation of such vortices cannot be long-term forecasting. In this case, you have to be very attentive. Seeing the approaching cloud of dust, the impending destruction of the countryside in a narrow band, you need to determine the direction of the vortex, quickly leave the area of his actions and thus save themselves. Rain – quite widespread and atmospheric phenomena associated with electrical discharges – lightning. The magnitude of the electric lightning is 20 – 30 Cl, in very rare cases up to 80 Kl, the force of the discharge current is 200 kA, temperatures up to 40,000°C. Teaching Stock thundercloud has a length of about 2 km, and the duration of the lightning cycle is 30 minutes or more. Lightning strikes cause destruction, causing fires, often lightning killing people and animals.

Ball lightning is in the form of a luminous ball of diameter 20 – 30 cm, driving on the rough path with silent disappearance or explosion, causing damage and casualties. With the approaching storm need to perform the same action (meropriyament), and that the approach of strong winds. Particular attention should be paid to the drafts, because of which the room can get a fireball.

The most dangerous places where you cannot hide from the rain during a thunderstorm are:

- Stand-alone buildings, trees, especially with a strong roofing system, oak, poplar, etc. (out of 100 lightning strikes 54 parishes in oak, poplar, on 24, 10 on the fir, pine 6 to 3 on the beach, lime and 2 for 1 on acacia).
- The hills with dense soils.
- Areas surrounding the lightning rod, etc.

During a thunderstorm, you cannot move on with protruding objects such as shoulder braid, forks, etc. You cannot swim during a thunderstorm. Upon detection of a fireball in any case cannot be run because the air flow can captivate her for a bit and call themselves. It is necessary to determine the trajectory of its total travel and without causing airflow exit zone location.

Flooding – flooding is a significant area in the destruction of hydraulic structures – dams, as well as the rise of the water level in rivers and lakes. Extent of flooding predicted by the intensity loss precipitation of snow, ice thickness, the intensity of their melting.

According to established practice flood is divided into three stages:

- disaster forecasting and organization of work to reduce harm, including notification management and population unit dams to limit the extent of flooding, the preparation of forces and means to fight ;
- implementation of measures to save the people, values, and strengthen the capacity of dams and embankments , survival evacuees;
- recovery housing ; facilities management, commissioning and operation, agricultural rehabilitation, works on flood (deepening riverbeds, dikes, embankments, etc.)

Upon receipt of notice of the flood should have already completed the protection of the population and in the ES (prepare documents, money, place the property, products, food in attics prepare for evacuation and cattle-like). At the announcement of the evacuation, need to come to the assembly point, register and wait for further instructions. A placement in evacuation must comply with the administration of the tent camp or settlement.

After the evacuation should first examine the general condition of buildings, if necessary, work to strengthen them and begin to flood relief .When approaching wave of release should take a hill or upper floors of buildings. Fire – uncontrolled combustion process entailing the destruction of wealth, people. The Republic is most often forest, peat fires and less wild. They occur as the fault of the person, and as a result of spontaneous combustion from the sun or a lightning strike. Statistics show that 80 % of fires occur because of the person, and only about 20% of the fault of nature.

If the hot weather there is no rain 15 – 18 days, the forest becomes a fire hazard. Spontaneous combustion of peat is very rare – in 5 cases out of 100. Most are flammable dead wood, pine young, cutting cluttered, less dangerous and mixed deciduous forests.

Forest fires are:

- Grassroots (lit litter, the propagation velocity of 0.3 to 1.0 m / min to 1 km / h);
- riding (burning crown, the speed of 8 – 25 km / h);
- Stable fires when all lit tree, the speed of 5 – 8km / h;
- Underground (burning peat layer extends at a speed (0.1 – 0.5 m / min);
- runaway fires when burning dry grass (usually in the spring);
- steppe (field) fires occur in the open countryside in the presence of mature breads, dry grass.

The main way to fight forest fires are entanglement, backfill soil, fill with water, creating a barrage band, start a fire at the oncoming wind direction changes by 180 °. With the threat of falling into a forest fire lane must go to the fields, the barrage band, ditches, water bodies. In dry weather, forest protection at the request of visiting forests prohibited.

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ENERGY CONSUMPTION REDUCING IN THE ASPIRATION SYSTEMS AT THE WOODWORKING ENTERPRICES

MARIA SELEZNIOVA, TATSIANA KARALIOVA
Polotsk State University, Belarus

The article deals with traditional and modernized aspiration systems at woodworking enterprises. It presents some activities for aspiration systems technology improvement, which help to reduce energy consumption. It researches a volume vertical packaged collector application in the aspiration system; it